

STATE AGRICULTURE PLAN

UTTAR PRADESH

Rashtriya Krishi Vikas Yojana Eleventh Five Year Plan



**AIMING AT HIGHER PRODUCTIVITY AND
PROFITABILITY OF FARM SECTOR**



**Department of Agriculture
Government of Uttar Pradesh
Lucknow**

STATE AGRICULTURE PLAN

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Rashtriya Krishi Vikas Yojana

Eleventh Five Year Plan

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FOREWORD

Indian economy is predominately rural in character and is still dominated by the agriculture sector, which accounts for nearly one-fifth of the gross domestic product (GDP) and employs close to two-third of the labour force. Despite respectable GDP growth rates (around 5 per cent a year), India has unemployment rate of about 15 per cent. Looking into the grim situation of employment in the country in general and agriculture sector in particular, there is urgent need to give emphasis to generate avenues for creating more jobs in this sector. Agriculture in India is constitutionally a state subject and central government's role is restricted to formulating policy guidelines and providing financial resources for the sector.

Government of India has accorded high priority to the development of agriculture for increasing the agricultural production to sustain the food supply for the growing population. In spite of rapid development of non-agriculture sectors, farming continues to be critical for meeting the livelihood needs of a vast majority of small, marginal and tribal farmers. The new technologies have not filtered down amongst farmers to the desired extent. Although during the past ten years lot of efforts have been made to improve agriculture sector by introducing different schemes, yet the outcome has not been reflected to the desired level in the national agricultural production, productivity, income and equity indicators. This indicates some deficiencies in the implementation process of these programmes and therefore calls for improvement in implementation strategy. This also calls for a coordinated planning and prioritisation to explore the maximum benefit of the development programmes. The *Rashtriya Krishi Vikas Yojna* is the right kind of approach to supplement available resources for the potential development of specific production activities and to take up additional activities best suited to the specific agro-climatic and social conditions of different districts to make best use of the available resources for improving the growth of agriculture sector through overall district planning concept.

Uttar Pradesh is the largest state of the country in terms of population and second largest in area in the country. The reporting area of the state is 24.2 million ha, out of which cultivated area is 16.68 million ha. The gross cropped area is 25.5 million ha. The cropping intensity in the state is 153 percent. Farming community is dominated by small and marginal farmers. Average size of holding is only 0.83 ha per farmer. However, the average size of holding of marginal farmers is 0.40 hectare only. The state accounts for 11 per cent India's net sown area and contributes more than 41.1 million tonnes of foodgrain which is about 20 percent of the total foodgrain production of the country. The state produces 38 percent of India's Wheat, 20 percent of Paddy, 21 percent of Sugarcane, 34 percent of Groundnut, 17.5 percent of Rape-seed, 8 percent of Fruits and 16 percent of Vegetables. Uttar Pradesh is the largest potato producer in the country, contributing 43 per cent of the total production. The state is the largest milk producing state of the country with an annual milk production of 11.7 million kilo litres accounting for 16 percent of total milk production of the country. Keeping in view of vast potential, the state has major role to play in ushering in farm sector led economic growth of the country.

Despite largest contribution to agriculture produce of the country and achieving some improvement in the State's growth rate in the Tenth Five Year Plan, it is still lagging behind the national average and consequently, the gap in per capita income is increasing with the passage of time. There is tremendous scope for further development in every sub-sector of the agriculture sector including crops, horticulture, animal husbandry and pisciculture. The major challenges before the State are bridging the gap in per capita income, poverty alleviation, improvement in human development index, improving growth in primary sector specially agriculture and animal husbandry sub sectors.

The new initiatives like Rashtriya Krishi Vikas Yojana, National Food Security Mission, National Horticulture Mission are potent options for increasing farm productivity and for putting agricultural economy on a sustained growth path. Uttar Pradesh being the most populous state of India has a great influence on the economic growth of the country. For achieving the desired agriculture growth in the country, it is necessary to adopt area specific strategies for improving the agriculture sector growth in the states like UP.

In the above perspective one hundred and thirteen new programmes have been identified for farm sector under Rashtriya Krishi Vikas Yojana (RKVY) for Uttar Pradesh. Programmes both in crop sector and livestock & fishery sector have been proposed for obtaining holistic growth of farm sector considering the available resources of each district and its convergence with resources available from other developmental schemes/programmes. These activities/programmes have been identified based on the primary and secondary data collected from different reliable sources, district profiles and vision statements of individual districts and micro analysis of the district specific requirements. The analysis of different crops grown, availability of inputs, availability of water, existing farm mechanisation facilities, existing seed replacement rate, potential of livestock and fishery sector, potential for fruits and vegetable production, market and other infrastructure facilities etc. were carried out to derive a sustainable development plan considering all sub sectors in agriculture in the state. Strategies to boost farm production and profitability of farmers for each district have also been worked out. Accordingly the District Agriculture Plans have been developed with a bottom up approach starting from the Panchayati Raj Institutions (PRI) surveys and conducting of Participatory Rural Appraisal.

The details of the agricultural development plan for each district have been drawn in the following pages of the document. These plans include programmes leading to more efficient use of natural resources, use of quality seed and planting material, seed production, seed replacement and seed treatment, balanced fertilizer application, sustainable management of soil health, integrated nutrient & pest management, new approaches for agriculture extension and farm mechanisation etc. In the live stock sector, strategies like genetic upgradation of animals, fodder development and institutional strengthening, setting up of commercial dairy farming units, incentives for establishing mini-milk processing units etc. have been adopted. Average productivity in fishery sector is quite low at just 2.8 tonnes per ha and it has been planned to enhance it to 4 tones per ha through activities like renovation of old ponds, construction of new ponds and establishment of new hatcheries etc.

Though large area of the state is covered under irrigation, yet the expected returns from agriculture sector is not achieved due to lower water use efficiency. In the district plans possible strategies have been worked out to improve the water use efficiency by adopting latest on farm water management technologies, efficient delivery systems of surface water irrigation, encouraging drip and sprinkler irrigation in the high value crops and water scarce areas. Focus has also been placed on infrastructure and human resource development in the areas like ICT, soil analysis, seed treatment, storage, marketing, value addition etc. to translate the agriculture growth in to economic returns.

The over all growth rate has been projected taking in to account the potential of different districts in different sub sectors and their land use and social acceptance as a whole. These District Agriculture Plans will be instrumental in enhancing the growth rates in all the sectors. The annual growth rate in the crop sector including horticulture after adoption of DAPs has been estimated at 11.35 per cent if the projects and programmes are adopted in the designed manner. However, in dairy annual growth rate of 0.33 per cent and in fisheries 0.725 per cent only may be achievable with the addition of superior milch cattle and new renovated ponds. This low growth rate is due to the reason that in a short span of five years only limited number of dairies can be improved/established compared with total volume of dairy production in the state. Similarly a limited number of ponds can be constructed/improved for pisciculture in one plan period. Yet, in spite of this low growth, over all growth rate of farm sector as a whole is estimated at 8.80 per cent per annum after adoption of RKVY programmes during 2007 -2012 period as per the district development strategies worked out in the DAPs.

I would like to record my appreciation for the valuable suggestions of Hon'ble Agriculture Minister, Govt of Uttar Pradesh, Chief Secretary, Agriculture Production Commissioner, Principal Secretary Agriculture, Director Agriculture and other Line Department Officials and Panchayati Raj Institutions in developing District Agriculture Plans (DAP) and State Agriculture Plan (SAP) of Uttar Pradesh. The preparation of DAPs and SAP within the time frame would not have been possible without whole hearted dedication and making available of resources by Dr Sitaram Prasad Paikray, Mr A.K. Garg, Managing Director, AFC, Dr U. K. Kohli, Dr Shilpi Mittal and other team members and a couple of hundreds of field workers. The contribution is very significant in preparation of the documents.

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STATE AGRICULTURE PLAN SUMMARY AT A GLANCE

	PARTICULARS	TOTAL (RS. LAKHS)
A	CROP SECTOR INCLUDING HORTICULTURE	
1	Soil management and land use projects, Adoption of organic farming system, Adoption and Certification of Organic Agriculture Management System with Online Traceability System for Facilitation of Exports and Domestic Retail Chain Uttar Pradesh, Seed and planting material, Agri-clinic at block level for field crop advice and plant protection centre, Farm mechanization. Establishment of new laboratories, Arid and rainfed farming, Commercial fruits, Agroforestry Efficient use of water resources and management (Micro irrigation Projects, Underground Water conveyance)	2,93,726.3
2	Programmes For Small And Marginal Farmers And Women Empowerment	20,594.2
3	Entrepreneur Development Programmes	22,057.8
4	Technology Dissemination including the project on Customized farmers Training and Extension Programme	2,11,177.4
5	Sericulture	817.88
6	Post Harvest & Agriculture Marketing	5,982.9
TOTAL CROP SECTOR		5,54,356.48
B	LIVESTOCK, DAIRY, POULTRY AND FISHERIES	
7	Animal Husbandry	44,003.5
8	Dairy Development	66,577.9
9	Poultry Development	12,472.4
10	Development of Goat and Piggery	11,297.7
11	Fisheries Development	23,330.7
TOTAL ANIMAL SECTOR		1,57,682.3
C	Planning, Monitoring & Evaluation of Dap	1,650.0
GRAND TOTAL		7,13,688.78
	Projects approved in First SLSC *	10,900.00
	Projects approved in Second SLSC for Year 2008-09** including the Budget for DASP^{\$}	1,10,646.63
	NET GRAND TOTAL	8,35,235.41
Funds estimated to be made available from other schemes through convergence		2,442.384

*Details of the projects approved in First SLSC (State Level Sanctioning Committee) are given in *Annexure IV*

**Details of the projects approved in Second SLSC are given in *Annexure V*

^{\$}For detailed budget approved under DASP, see *Annexure VI*

1. PERSPECTIVE OF STATE ECONOMY IN RELATION TO FARM SECTOR

Broad based, sustainable, equitable and inclusive economic growth of the country and more so of Uttar Pradesh can only be achieved by accelerating growth of farm sector. Uttar Pradesh has a population of nearly 18.6 crore, of which nearly 70% is dependant on agriculture directly or indirectly. Therefore about 13 crore people are linked to farming activities, over 21 million land holdings and six to seven persons linked to each land holding. Agriculture is therefore the most crucial sector for socio economic development of state. It contributes the highest share of 33% to the total income of the state. A higher growth in the State's total economy cannot be achieved or sustained on a long term basis, without good growth in Agriculture.

New initiatives taken by Government of India and implemented by Government of Uttar Pradesh in the form of National Food Security Mission, National Horticulture Mission and now Rashtriya Krishi Vikas Yojana (RKVY) will be instrumental in increasing farm productivity and farmer profitability. Uttar Pradesh being the most populous and agriculturally dominant state of India, occupies an important position in terms of economic growth of the country that is led by growth of farm sector.

The average growth rate for overall economy of Uttar Pradesh during the Xth plan period remained 5 percent which was below the growth rate achieved by the country during this period. the primary , secondary and tertiary sector registered a growth of 2, 9.1 and 5.4 percent, respectively. **Agriculture and Animal Husbandry sector registered a growth of 1.4 percent during the tenth plan.**

The present status of the state with respect to important indicators is shown in Table 1.

Table-1: U.P. at a Glance

	Indicators	Year	Status
1	Annual growth rate of population (%)	2001	2.3
2	Decadal growth rate of population (%)	1991-01	25.85
3	Sex ratio (age group 0-6)	2001	916
4	Death Rate (per '000) (SRS 'oct07)	2006	8.6
5	Birth Rate (per '000) (SRS 'oct07)	2006	30.1
6	Infant Mortality rate (per '000) (SRS 'oct07)	2006	71
7	Life Expectancy at Birth	2001	63.8
8	Literacy Rate (%)	2001	56.3
9	Literacy Rate (Male) (%)	2001	68.8
10	Literacy Rate (Female) (%)	2001	42.2
11	Percentage of electrified populated village to total populated villages	2006-07	85.32
12	Per capita power consumption (kwh)	2006-07	180.4
13	Length of pucca road per lakh of population (km)	2005-06	88.85
14	Length of pucca road per 100 sq km (km)	2005-06	67.07
15	Total food grain production (lakh tones)	2005-06	411
16	Average production of food grains (kg/ha)	2005-06	2054
17	Percentage of forest area of total reported area	2004-05	7.0
18	Share of U.P. in India's GDP (%)	2006-07(Q)	8.3
19	Growth rate of GSDP (%)	2006-07(Q)	7.5
20	Growth rate of primary sector (%)	2006-07(Q)	5.4
21	Growth rate of secondary sector (%)	2006-07(Q)	10.0
22	Growth rate of tertiary sector (%)	2006-07(Q)	7.5
23	Per capita net domestic product at current prices (at 1999-00 base) (Rs)	2006-07(Q)	14685
24	Growth rate of per capita income (%)	2006-07(Q)	5.5
25	Percentage gap in per capita income of UP and India	2006-07(Q)	50.5

The 11th Plan provides an opportunity to restructure the state policies and strategy to achieve faster, broad-based and inclusive growth and focus on bridging the various inequities that continue to fragment the society. Its aim is to put the country's economy on a sustainable growth path with a targeted growth rate of 10 percent by the end of plan period. The highest growth rate ever achieved in UP was in sixth plan (8.7 percent). Close look at the past statistics reveal that in 1951, the gap between the country as a whole and the state in

various development indicators was much less than what it is today. Thus, compared with India, population density increased, population growth rate increased, sex ratio declined, death rate was higher, infant mortality decreased and birth rate increased. All demographic factors worked together to increase the population pressure with higher growth rate.

The picture of the State Economy emerges from the data is given in Table 2.

Table 2: Annual Growth during Five Year Plans

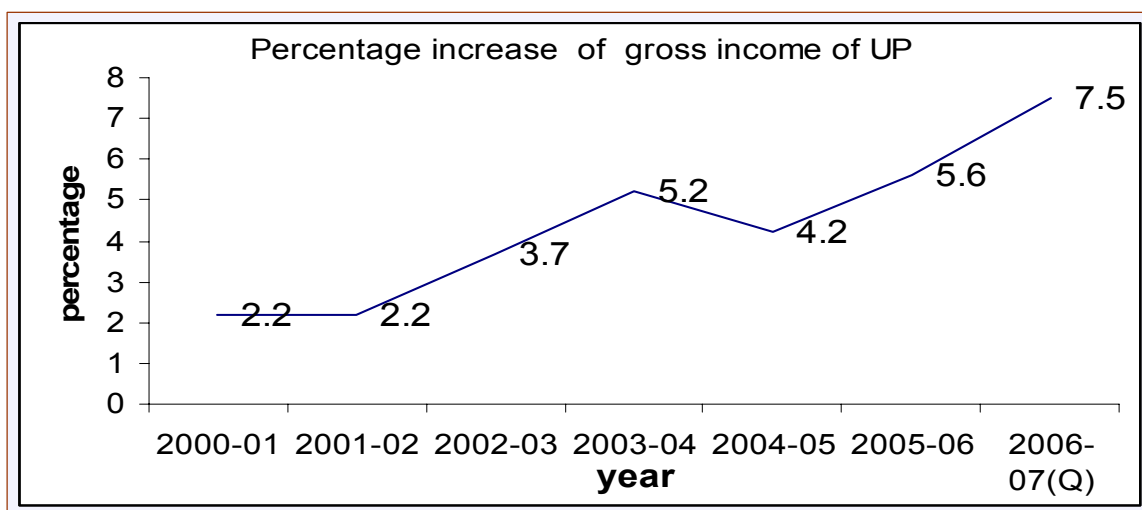
Sectors	1st Plan	2nd Plan	3rd Plan	4th Plan	5th Plan	6th Plan	7th Plan	8th Plan	9th Plan	10th Plan
Agriculture & Animal Husbandry	1.7	1.4	(-)0.5	0.8	5.7	9.7	2.7	2.7	0.8	1.4
Forestry	6.2	2.2	8.1	2.3	(-)2.9	3.9	(-)7.4	(-)13.1	32.9	5.9
Fisheries	1.2	13.0	7.3	3.9	4.3	9.6	11.6	5.3	9.1	5.4
Mining	32.0	30.0	25.3	(-)1.4	5.8	23.7	6.4	0.0	0.2	18.0
PRIMARY	1.8	1.5	(-)0.2	0.9	5.5	9.6	2.7	2.5	1.6	2.0
Manufacturing	2.3	1.7	5.7	3.4	9.4	11.8	10.9	4.2	(-)4.3	6.3
SECONDARY	1.6	3.2	9.2	6.7	7.3	9.5	8.8	3.3	(-)0.9	9.1
Transport, Storage & Communication	2.9	2.0	1.8	2.5	6.6	8.6	4.5	2.6	3.1	10.4
Finance & Real Estate	2.4	2.5	2.5	2.9	7.3	5.7	11.2	5.5	2.9	4.1
Community & Personal Services	3.8	2.7	4.1	3.7	1.8	3.1	11.0	4.4	5.8	5.9
TERTIARY	3.0	2.3	2.6	2.9	5.3	6.5	8.0	3.9	3.8	5.4
Total (U. P.)	2.0	1.9	1.6	2.3	5.7	8.7	5.7	3.2	2.0	5.0
All India	3.6	4.0	2.2	3.3	5.3	5.3	5.8	6.8	5.6	7.7
Per Capita Income (U.P.)	0.5	0.3	(-)0.2	0.4	3.3	6.3	3.3	1.4	(-)0.4	3.0
Per Capita Income (India)	1.7	1.9	0.0	1.1	2.9	3.1	3.6	4.9	3.6	6.1

Table 3: Income growth trend of UP based on new series (1999-00)

Year	Percentage of UP's net income in India (current prices)	Percentage increase of net income (constant prices)	Percentage of UP's Gross income in India (current prices)	Percentage increase of Gross income (constant prices)	Percentage of UP's PCI in India (current prices)	Percentage increase of PCI (constant prices)
2000-01	9.5	2.1	9.5	2.2	58.7	-0.2
2001-02	9.1	1.8	9.2	2.2	56.1	-0.5
2002-03	9.1	3.2	9.2	3.7	56.3	1.3
2003-04	8.9	5.1	9.0	5.2	54.7	3.1
2004-05	8.5	3.7	8.6	4.2	51.8	1.7
2005-06(P)	8.4	5.5	8.6	5.6	51.3	3.5
2006-07(Q)	8.2	7.5	8.3	7.5	49.5	5.5

Q-Quick Estimates P-Provisional Estimates

Percentage increase of gross income of U.P.



Sectoral growth rates of UP during tenth plan

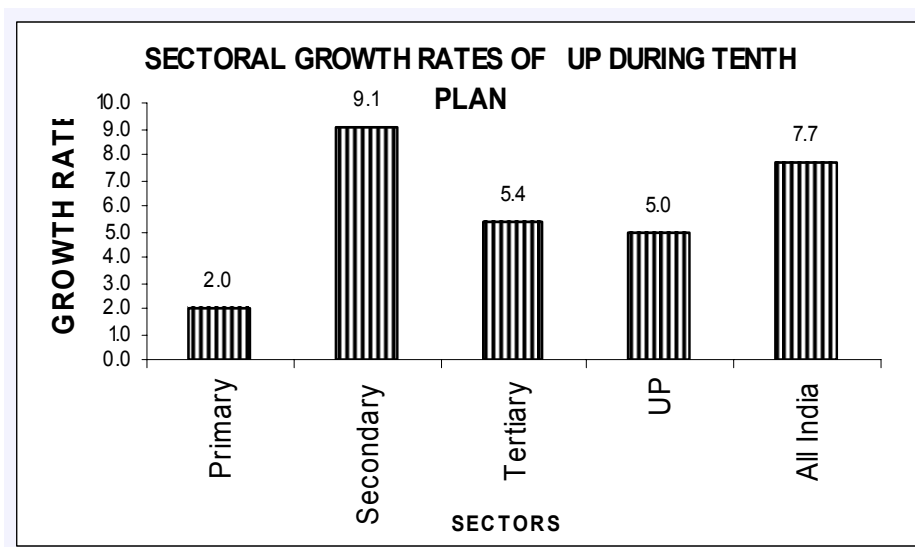


Table 4: Percentage Distribution of GSDP at Current Prices of U.P.

Percentage Distribution of GSDP of UP					Per capita Income of UP at current prices (<i>in Rupees</i>)
	Year	Primary	Secondary	Tertiary	
1	1999-00	35.5	21.8	42.8	9405
2	2000-01	35.2	21.1	43.7	9541
3	2001-02	34.6	20.1	45.3	9781
4	2002-03	33.8	20.3	45.8	10435
5	2003-04	33.2	20.2	46.5	11250
6	2004-05	32.1	20.6	47.3	11941
7	2005-06 (P)	31.8	21.7	46.5	13262
8	2006-07 (Q)	31.2	21.9	46.8	14685

Q-Quick Estimates P-Provisional Estimates

Percentage distribution of GSDP

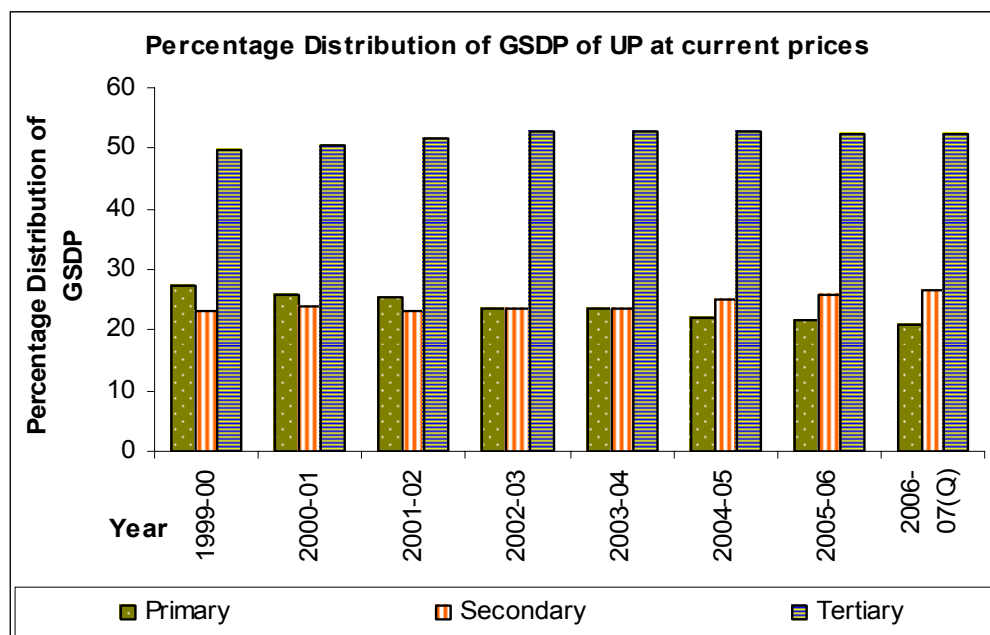


Table 5: Percentage Distribution of GDP of India at Current Prices

Percentage Distribution of GDP of India					Per capita Income of India (in Rupees)
	Year	Primary	Secondary	Tertiary	
1	1999-00	27.3	23.0	49.7	15881
2	2000-01	25.7	23.8	50.5	16688
3	2001-02	25.5	23.1	51.5	17782
4	2002-03	23.6	23.7	52.7	18885
5	2003-04	23.5	23.7	52.8	20895
6	2004-05	22.1	25.2	52.6	23199
7	2005-06(P)	21.7	25.9	52.4	25956
8	2006-07(Q)	21.0	26.6	52.4	29642

Q-Quick Estimates P-Provisional Estimates

The above table (Table 5) shows that in U.P., the shares of primary and tertiary sectors in 1999-2000 were 35.5 and 42.8 percent respectively, and the share of secondary sector was 21.8 percent. In 2006-07 (Q), the tertiary sector surged ahead and reached 46.8 percent while the share of secondary sector remained same i.e. nearly 22 percent. At all India level, the tertiary sector share was nearly 50 percent and primary sector share was 27.3 percent in 1999-00

and in the year 2006-07, there is a increase in tertiary sector share up to 52.4 percent , however, a decrease in primary sector share (21.0 percent) was registered. This analysis depicts that in case of U.P. also, the tertiary sector is growing in the same rate as that of national average. However, primary sector is still a dominant sector in U.P.

The gap in per capita income of U.P and India was 40.8 percent in 1999-2000. By the end of tenth plan *i.e.* 2006-07, this gap in per capita income increased to 50.5 percent, clearly indicating that there is no let up in the widening gap. **This shows the growth in primary sector, particularly in agriculture and animal husbandry system is much below par. If potential including pisciculture is exploited, it can give a considerable boost to the overall growth in the state. Moreover, the growth in this sector is more dependent upon small and marginal farmers as well as agriculture/ rural labour.**

- **Emphasis on improving growth in primary sector, especially agriculture and animal husbandry sub sectors, which is lagging behind, has a potential for boosting the overall growth and making the growth more inclusive.**

Sector wise growth figures (Table 6) are also very important to analyze the situation in some detail:

Table 6: Sector wise Growth in India and U.P.

SECTORS	Sector wise Growth (At Constant 1999-00 Prices) Year 2006-07 (Quick estimates)	
	INDIA (GDP)	U.P.(GSDP)
Agriculture & Allied	3.8	5.3
Manufacturing	12.0	7.1
Primary	4.0	5.4
Secondary	11.5	10.0
Tertiary	11.1	7.5
Total Income	9.6	7.5

It is clear, that growth rate of every sector (except primary sector) in U.P. is lower than the National figure during 2006-07 and hence the overall growth rate of the State is lower.

In U.P., Agriculture plays a dominant role in the economy and growth rate of Agriculture and allied sector is 5.3 percent, that of primary sector is 5.4percent, and the national figure is 4.0 percent. Secondary and Tertiary sectors are also growing very fast in the country as a whole but in U.P. though growth of secondary sector is close to national figure, the tertiary sector is lagging behind. Yet Agriculture and allied sector growth being the lowest has a potential to improve and thus provide boost to the overall economy of the state.

In a preponderantly agrarian economy, agriculture plays a strategic role from several points of view. Development of agriculture depends, to a considerable extent, on the adequate expansion and development of irrigation facilities. The economy of Uttar Pradesh is agrarian and performance of agriculture and allied activities such as horticulture, animal husbandry, dairying and fisheries are critical in determining the growth rate of the State. Primary sector (inclusive of mining) contributed 34.5 percent to the State's income in the year 2005-06, and it came down to 33.7 percent in 2006-07. Thus, the share of this sector in State income has been progressively declining for a longer period. Development of the rural areas is essential for inclusive and equitable growth and to unlock huge potential of the population that is presently trapped in poverty with its associated deprivation. The incidence of poverty across the state indicates that poverty is very closely linked to the absence of social infrastructure. Creation of infrastructure, both physical and social has been given a greater thrust in the Eleventh Plan, as shown in the Table 7.

Table 7: Physical and Social of Eleventh Plan

(Cr Rs)

Major Heads	First Plan to Tenth Plan Expenditure	Percentage share	Eleventh Plan Agreed Outlay	Percentage share
1. Agriculture and Allied Activities	11932.15	8.74	19146.37	10.57
2. Rural Development	13729.15	10.05	7658.00	4.23
3. Economic infrastructure	62020.71	45.42	70037.89	38.67
Power	26141.64	19.14	26371.03	14.56
Irrigation	18441.84	13.51	16338.22	9.02
Transport	17437.23	12.77	27328.64	15.09
4. Social Infrastructure	22786.24	16.69	37412.22	20.66
Education	10596.13	7.76	18850.83	10.41
Medical & Public Health	5932.17	4.34	13194.05	7.29
Water supply and sanitation	6257.94	4.58	5367.34	2.96
5. Others	26078.15	19.10	46839.52	25.86
Total	136546.40	100.00	181094.00	100.00

Primary sector, in which agriculture is an important sub sector has been experiencing very low and fluctuating growth rate, running into negative growth also. Hence, this sector is responsible for low overall growth rate. The contribution of agriculture in the State economy is more than 30%. Keeping in view the potential of its growth and critical role of this sector in employment generation and alleviation of poverty in rural areas, the growth rate of this sector has been kept at 5.7 percent (Primary 6.4 percent) within eleventh plan. Next to agriculture, manufacturing sector is the other most important sector of state's economy, for which a target of 11.5 percent growth is envisaged during the Eleventh Plan. A growth rate of 10.5 percent for secondary sector has been projected. Similarly, a growth rate of 12.4 percent is targeted in the tertiary sector. A higher growth rate in this services sector is necessary both for growth in other sub sectors of tertiary sector and for a significant occupational shift of work force from agriculture to other more remunerative sectors. Sectoral breakup of the envisaged growth rate is given in Table 8.

Table 8: Year wise performance during Tenth Five Year Plan

Year	Approved Outlay	Expenditure	%age Expenditure
2002-03	7250.00	6617.65	91.28
2003-04	7728.00	6178.60	79.95
2004-05	9661.51	8456.04	87.52
2005-06	13500.00	13506.51	100.05
2006-07	19000.00	20096.90	105.77
Total	57139.51	54855.70	96.00

Table 9: Annual Growth Rate during Tenth Five Year Plan

(In percentage)

Sector	Target of Tenth Plan	2002-03	2003-04	2004-05	2005-06	2006-07	Tenth Plan Achievement
Primary	5.17	0.9	3.4	-1.2	1.7	5.4	2.0
Secondary	12.36	5.9	7.5	10.1	12.0	10.4	9.1
Tertiary	8.06	4.0	5.5	4.8	5.3	7.7	5.4
Overall	8.00	3.2	5.1	3.7	5.5	7.5	5.0

Table 10: Sectoral breakup of the envisaged growth rate

Sector	Targeted Growth rate (%)
1. Primary	6.4
- Of which agriculture and Animal Husbandry	5.7
2. Secondary	10.5
- Of which manufacturing	11.5
3. Tertiary	12.4
4. Overall	10.0

It may be mentioned here that the growth target indicated above, are higher than those envisaged by the Planning Commission. The state intends to make all efforts to achieve these ambitious targets with a view to bridging the gap between the per capita income of the state and that of the country.

Investment during Eleventh Plan

To achieve the targeted growth rate of 10 % per annum during the Eleventh Plan period, aggregate investment required has been worked out to the Rs. 810906 crore at the current prices of 2006-07, on the basis of assumption indicated by Planning Commission. In view of the financial constraints of the state, various policy measures have been initiated by the State Government to create a more conducive climate for attracting private investment. The estimates of aggregate investment in public and private sectors as indicated in the Eleventh Five Year Plan are given in Table 11.

Thus, from the point of view of investment, the actual planned investment in the eleventh plan is not even one forth of the investments required for achieving 10% growth.

Table 11: Required investment for Eleventh Plan (2007-12)

Sector	Required investment (Cr. Rs.)
1. Public sector	235974
2. Private sector	574932
3. Aggregate investment	810906
4. State Plan Outlay	181094

Objectives and Priorities of the 11th Plan

- › **The plan will focus on and give highest priority to the development of agriculture. To be more precise, it will promote all such activities which increase productivity and motivate farmers to shift from low value to high value crops. The target is to double the income of farmers during the Eleventh Plan period.**

- The development of economic infrastructure, viz. energy, irrigation and transport, will be the second most important objective of the plan and will receive the next highest priority. Development of economic infrastructure is seen as a sine-qua-non for the development of both agriculture and manufacturing sectors, apart from the fact that it provides a base for improvement in the quality of life of the people.
- Measures designed to generate remunerative and productive employment to promote a shift of work-force from agriculture to other sectors of the economy will receive the next highest priority in the plan.
- Provision of universal education, basic health amenities in rural and urban areas, safe and adequate water supply, village connectivity by all weather roads, housing for poor and speedy improvement in socio-economic conditions of the under-privileged and historically disadvantaged sections of the society will receive a much higher priority in the plan.
- Measures to control growth in population to bring the growth rate at par with that of the country, the programmes initiated for higher literacy, reduction in infant mortality and access to better health care for the poor in rural areas will also receive high priority.
- Promoting and developing public private partnership, empowerment of the masses and involvement of Self Help Groups would form important part of the strategy.

Important Goals for Eleventh Plan

The State Government is committed to make Uttar Pradesh a 'prosperous and developed' State where all citizens are able to live in peace and harmony and develop to their full potential without suffering any discrimination based on caste, creed or religion. Inclusive development is the key goal. The State Government has set certain important goals for the Eleventh Plan. They are:

- Reduction in per capita income gap between the State and the country
- Improvement in Human Development Index
- Positive steps for attainment of Millennium Development Goals
- To give a boost to agriculture and allied sectors so as to double the income of the farmer, to ensure easy availability of low cost

agricultural credit to farmers, to enhance surface water irrigation and to promote agricultural research.

- To reduce poverty I
- .
- evel, improve credit linkage of Self Help Groups, establish federation of all Self Help Groups at State / District level and work for **‘financial inclusion’** and **extend the reach of microfinance** in the State to meet credit needs.
- To create 1.25 crore employment opportunities, impart appropriate skills to students as per market requirements after completion of Basic Education and to improve ‘employability’ of workers.
- Provide all weather road connectivity to all habitations with population of 500 persons, maintain proper ‘riding quality’ of all types of roads.
- Provide 24 hour quality electric supply to all ‘industrial connections’ in the State and ensure energisation of private tube wells, improve PLF, reduce AT& C losses and additional power generation capacity.
- To provide safe drinking water supply, to cover all habitations under Total Sanitation Campaign.
- To provide housing facilities to homeless BPL rural and urban slum dwellers.
- Achieve full literacy by 2012, to reduce gender gap in literacy rate, ensure universal enrolment and completion of education upto Class VIII by all children, to reduce drop out ratio in Elementary Education.
- To reduce IMR, MMR, TFR and to achieve full immunization of children from six deadly diseases.
- To reduce percentage of malnutrition among women & children.
- Focus on Public Health – Preventive aspects rather than only on Curative aspects
- Universal coverage of all eligible persons to receive old age, widow pension, handicapped pension.
- Empowering local bodies through transfer of funds, functions and functionaries

- Curbing corruption in public service and promoting transparency and accountability in civil services
- Focus on 'outcomes' rather than 'expenditure'

With these steps, the growth rate of 10% is expected to be achieved quite easily.

The State Government is of the view that the State and Central Government should jointly work to rid the State of the scourge of poverty, ignorance and disease. This calls for renewed commitment and change of mindset. A 'window of opportunity' has opened up as the State has been generating enough resources for the past five years to fund fully the annual plan outlays. This can only be done if the policy planned have the courage to think anew and question old beliefs and not accept anything just because it has been handed down or continues by tradition. It calls for reform of institutions, systems, operational procedures and commitment to improve the lot of the poorest of the poor. Only then inclusive growth will become a reality.

The State's Finances

The Planning Commission approved an outlay of Rs 181094 crore for the Eleventh Plan period. The outlay for Annual Plan, 2007-08 has been kept at Rs 25000 crore and an outlay of Rs 32000 crore is being proposed for the Annual Plan, 2008-09. The distribution of the outlay among the various sectors of the economy is given in Table 12.

For the Annual Plan, 2008-09, substantial increase in the outlay has been proposed for the priority areas such as Agriculture, Power, Roads, Irrigation, Education, Medical and Health and Social Safety Net. Similarly, social infrastructure and economic infrastructure have been accorded priority. A brief description is given in Table 13.

Table 12: Distribution of the outlay among the various sectors of the economy

(Cr Rs)

Major/Minor Head of Development	Annual Plan 2007-08		Annual Plan (2008-09)	
	Approved Outlay	Anti. Expn	Proposed Outlay	%age Share
ECONOMIC SERVICES	15155.33	15178.44	19574.85	61.17
i. Agriculture. and Allied Activities	1998.04	1805.89	2855.34	8.92
ii. Rural Development	1698.70	1691.67	1819.31	5.69
iii. Special Area Programmes	939.41	964.41	1064.47	3.33
iv. Irrigation & Flood Control	2420.72	2420.72	2849.91	8.91
v. Energy	3177.84	3640.43	4635.19	14.48
vi. Industry & Minerals	223.76	239.80	399.61	1.25
vii. Transport	4207.55	4241.51	5188.52	16.21
viii. Science, Technology and Environment	76.57	36.32	46.41	0.15
ix. General Economic Services	412.74	137.69	716.09	2.24
SOCIAL SERVICES	9678.51	9658.09	12162.66	38.01
i. Education	2019.80	2090.01	2479.81	7.75
ii. Medical & Public Health	1714.17	1714.17	1912.93	5.98
iii. Water Supply and Sanitation	829.39	817.92	962.61	3.01
iv. Social Net	2455.38	2442.81	2912.58	9.10
v. Others	2659.77	2593.18	3894.73	12.17
GENERAL SERVICES	166.16	165.13	262.49	0.82
GRAND TOTAL	25000.00	25001.66	32000.00	100.00

Table 13: Brief Description of Outlay of Substantial Increase in Various Sector

Item	Annual Plan 2007-08		Annual Plan 2008-09 : Proposed Outlay		
	Approved Outlay	Anti. Expn	Total	Increase over 2007-08 Outlay	Increase over 2007-08 Expenditure
Agriculture and Allied Activities (Including Irrigation)	4418.76	4226.61	5705.25	29.11	34.98
Rural Development	1698.70	1691.67	1819.31	7.10	7.55
Power	3175.95	3638.52	4633.19	45.88	27.34
Roads	3929.44	3929.44	3793.85	-3.45	-3.45
Education	2019.80	2090.01	2479.81	22.78	18.65
Medical and Health	1714.17	1714.17	1912.93	11.60	11.60
Water Supply	829.39	817.92	962.61	16.06	17.69
Urban Development	2192.92	2121.05	3301.32	50.54	55.65
Housing	405.89	411.18	501.93	23.66	22.07

The Plan outlay shows that a significant importance has been given to the agriculture sector, which will be instrumental in achieving the targeted growth rate.

Physical Targets

The detailed information on the physical targets of the Eleventh Plan as well as Annual Plan, 2008-09 is given in Statement-II in Volume-II. Some key targets are given in Table 14.

Table 14: Some Key Physical Targets of Eleventh Plan and Annual Plan

Item	Unit	Level at end of 2006-07	Eleventh Plan Target	Annual Plan 2007-08		Annual Plan 2008-09 Proposed Target	Additional ly over 2007-08
				Target	Anticipat ed Achi.		
1. PRODUCTION OF							
(i) FOODGRAINS	000 Tonnes	41627	53825	48405	43149	49707	6558
-Kharif	000 Tonnes	14139	18838	16729	14713	17233	2520
-Rabi	000 Tonnes	27488	34987	31676	28436	32474	4038
(a) Cereals	000 Tonnes	39652	50817	45456	40604	46741	6137
-Rice	000 Tonnes	11124	15006	13504	11503	13865	2362
-Wheat	000 Tonnes	25444	31773	28500	26041	29285	3244
(b) Pulses	000 Tonnes	1975	3008	2949	2545	2964	419
(i) Oil seeds	000 Tonnes	1055	1436	1144	1113	1211	98
(ii) Sugarcane	000 Tonnes	159100	175500	161500	171500	164700	-6800
(iii) Potato	000 Tonnes	12230	16693	11401	11401	12542	1141
2.Cropping Intensity	Percent	154	160	154	154	154	...
3. Production of							
- Milk	000 Tonnes	18095	29453	20117	20117	22128	2011
-Eggs	Million	948.32	1309.56	894.86	894.86	984.35	89.49
-Fish	000 Tonnes	307	532	344	344	378	34
4. Irrigation Potential Creation	000 ha	32929.66	36934.23	33703.34	33703.34	34346.90	643.56
5. Irrigation Potential Utilization	000 ha	23864.36	25216.58	24443.88	24443.88	24996.44	552.56
6. Installed Capacity (Availability to the state)	MW	9618	18609	9967	10317	10517	200
7-PLF of Thermal Projects(Own)	%	60.15	65.00	62.00	57.74	63.67	5.93
8-T & D losses	%	34.59	19.06	26.21	29.81	26.07	-3.74
9. Electrification of Villages	No.	83560	88267	88267	88280	93141	4861

Item	Unit	Level at end of 2006-07	Eleventh Plan Target	Annual Plan 2007-08		Annual Plan 2008-09 Proposed Target	Additional ly over 2007-08
				Target	Anticipat ed Achi.		
10. Energisation of Tubewells	No.	856421	956421	876421	876421	896421	20000
11. Surfaced Roads	Km.	127183	152134	131644	132134	136952	4818
12. Villages connected by all- weather roads	No.	60084	71044	61458	62544	65044	2500
13A- Junior Basic School	No.	102481	109481	103294	103294	105794	2500
13B- Senior Basic School	No.	33341	48341	37798	37798	41798	4000
14. Schools / Colleges	No	15413	20503	16429	16429	17470	1041
15. Degree Colleges	No.	1882	2094	2022	2022	2144	122

The targets indicate 15.2 percent increase in food grain in 2008-09 over 2007-08 and it is without increasing the intensity of cropping. Similarly improvements in animal products and enhancements in production services are all aimed at achieving the targeted growth rate. The plan outlay for Agriculture and Allied sectors since the First Five Year Plan is given in the Table 15.

An analysis of the Table 15 shows that the outlay for Agriculture and Allied sectors which stood at 16.22 percent in the First Plan decreased to 12.11 percent in the Second Plan, and thereafter it is continuously declining. During the Eleventh Five Year Plan it is expected to be 10.6 percent.

High growth in the agriculture sector is necessary for attaining higher growth in the overall economy of the State, as also for reduction in the incidence of poverty. Thus a growth rate of 5.7 percent has been envisaged for the agriculture sector during Eleventh Plan.

Table 15: Plan outlay for Agriculture and Allied sectors

(Rs. In lakh)

Plan	Total Outlay / Expenditure	Agriculture & Allied Sectors	Percentage
First Plan	15337	2487	16.22
Second Plan	23336	2825	12.11
Third Plan	56063	5789	10.33
Fourth Plan	115924	9921	8.56
Fifth Plan	287118	16350	5.69
Sixth Plan	645312	44307	6.87
Seventh Plan	1194872	122678	10.27
Eighth Plan	2164246	206116	9.52
Ninth Plan	2830918	274375	9.69
Tenth Plan	5485571	425126	7.75
Eleventh Plan	18109400	1914637	10.57

2. AN OVERVIEW OF FARM SECTOR IN UTTAR PRADESH

Uttar Pradesh is the most important agricultural state of India, not only it has the highest cropped area of 25,785 thousand hectares, but it has the highest number of over 21 million farm holdings as well. In the country Uttar Pradesh is the largest food grain producing state. It produces more than 41.1 million tonnes of food grains which is about 20% of total food grains of the country. The state produces 38% of India's Wheat, 20% of Paddy, 21% of Sugarcane, 34% of Groundnut, 17.5% of Rape-seed, 8% of Fruits and 16% of Vegetables. Uttar Pradesh is the largest potato producer in the country, contributing 43 percent of the total production. U.P. is the largest milk producing state of the country with an annual milk production of 11.7 million tonnes *i.e.* accounting for around 16% of the milk production of the country.

Table 16: Contribution of Uttar Pradesh to the Production of Some Agricultural Commodities, 2005-06

Name of Crops	Production in lakh tons		Contribution of U.P. %
	INDIA	U.P.	
Total Food grain	2086.00	404.10	19.37
Rice	917.90	111.30	12.13
Wheat	693.50	240.70	34.71
Jowar	76.30	2.40	3.15
Bajra	76.80	12.50	16.28
Maize	147.10	10.50	7.14
Total Pulses	133.80	22.30	16.67
Gram	56.00	6.60	11.79
Arhar	27.40	3.80	13.87

Lentil	9.90	5.00	50.15
Total Oilseeds	252.90	9.40	3.72
Groundnut	79.90	0.90	1.13
Rapeseed/Mustard	81.30	9.10	11.19
Sunflower	14.40	0.20	8.39
Sugarcane	2811.70	1254.70	44.62
Potato	239.10	99.90	41.78

Source: Official website of Govt. of India and Uttar Pradesh

The total cultivated area of the state is 166.83 lakh ha and the gross cropped area is 255.24 lakh ha. The cropping intensity in the state is 153 percent. The area sown during rabi is more compared to that in kharif. The area under sugarcane which is an annual crop is 0.38 lakh ha. Land use pattern of Uttar Pradesh is given in Table 17.

Table 17: Land Use Pattern of UTTAR PRADESH, 2005-06

(lakh ha)		
S. No.	Particulars	Uttar Pradesh
1	Reporting Area	242.01
2	Forest	16.88
3	Barren Land	5.30
4	Non Agri. Use	6.49
5	Culturable Waste	4.54
6	Pastures	0.64
7	Misc. Trees etc.	0.44
8	Current Follow	12.17
9	Other Follow	5.74
10	Net Area Sown	166.83
11	Area Sown more than Once	88.41

S. No.	Particulars	Uttar Pradesh
12	Gross Cropped Area	255.24
13	Cropping Intensity	153.00
14	Kharif	118.57
15	Rabi	128.39
16	Zaid	7.91
17	Area Under Sugarcane (annual crop)	0.38
18	Gross Cropped Area	255.24

Source: Official website of Govt. of India and Uttar Pradesh

Accelerating Pace of Land Development Programmes

Out of 120.44 lakh hectares of problematic area, 64.71 lakh hectare area has already been treated. Out of remaining 55.73 lakh hectares untreated land 32.02 lakh hectares is reclaimable. Programmes have already been proposed for reclamation of degraded land. Keeping in mind, "Kisan Hit Yojna", the most ambitious, multifaceted, employment generating scheme, has been proposed in Eleventh Five Year Plan.

As per 2000-2001 Agriculture Census, there is a predominance of marginal and small farmers which account for 76.9 % and 14.6% of the total holdings, respectively. This group of small and marginal farmers own 61.2% of the total land area. Average size of holding is only 0.83 ha. per farmer. However, the average size of holding of marginal farmers is 0.40 hectare.

Productivity of Crops

The average productivity of food grain for Uttar Pradesh in 1951 was 689 kg/ha while for India it was 522 kg/ha The average productivity rose to 2054 kg/ha (2005-06) and 1715 kg/ha (2004-05) for UP and India respectively. U.P. is better placed in this respect, yet potential exists to improve the productivity substantially.

Table 18 depicts that the total food grain production has been fluctuating over time and considerably decreased in 2004-05 compared to previous year., However the production increased marginally during the year 2005-06.

Table 18: Agricultural Production ('000 m tonne)

Crop	2001-02	2002-03	2003-04	2004-05	2005-06
Rice	12856	9587	12495	10783	11741
Wheat	25498	23748	26350	23430	24090
Pulses	2377	2182	2448	2431	2205
Total Food Grain including other crops	44187	38373	44464	39997	41086
Oil Seeds	1110	850	940	1019	1167

Table 19 and the figure 4 depicts that productivity of major crops in U.P. fluctuated within narrow margin and remained at low level, however, the productivity of wheat, rice and total food grains increased marginally in 2005-06, except pulses. **It appears that the productivity can be increased considerably to improve overall production.**

Table 19: Agricultural Productivity (quintal per hectare)

Crop	2001-02	2002-03	2003-04	2004-05	2005-06
Rice	21.17	18.41	22.34	18.13	19.95
Wheat	27.55	25.91	27.90	25.00	25.86
Pulses (Arhar)	11.57	9.55	11.01	9.62	8.35
Total Food Grain	21.63	19.99	21.91	19.65	20.54
Oil Seeds	8.69	7.72	8.40	8.45	9.34

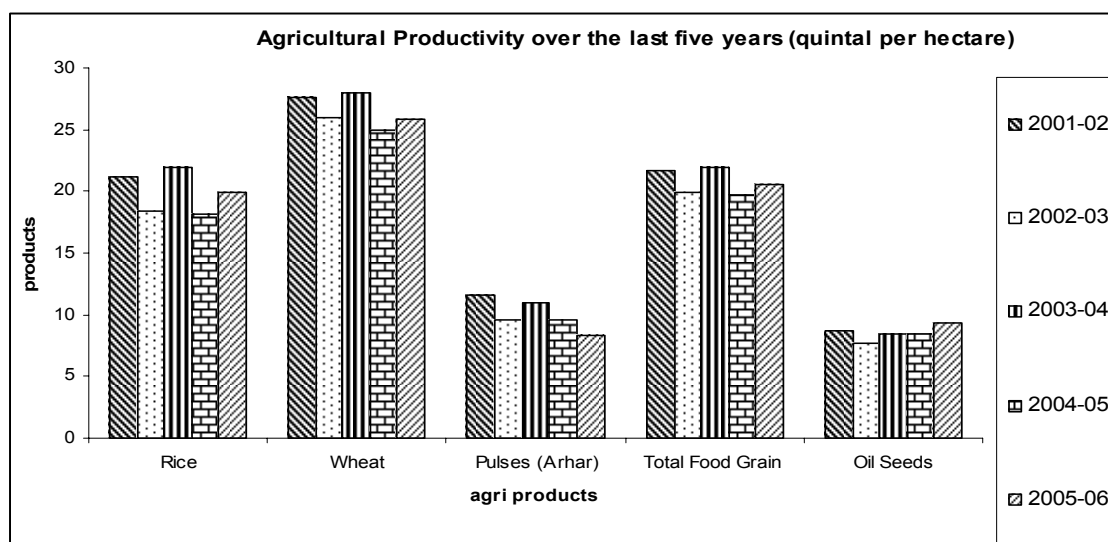


Figure 4: Agriculture Productivity of U.P.

Agro climatic zones and productivity status

The state is divided into nine zones. The detailed coverage of districts is given in Table 20.

Productivity Status of Agro-climatic Zones, 2006-07

Productivity of different crops in the different zones pertaining to the year 2006-07 is indicated below.

Cereals

The average productivity of food grains in the state is 20.77 q/ha and in case of cereals, it is 22.90 q/ha. The food grains productivity varies in different agro-climatic zones from 10.51 q/ha (in Bundelkhand zone) to 30.49 q/ha (in western plain zone). Similarly in case of cereals it varies from 16.19 q/ha (in Bundelkhand zone) to 31.40 q/ha (in western plain zone). The zone-wise details are presented in Table 21.

Table 20: Agro-climatic zones of Uttar Pradesh, 2005-06

S. No.	Agro Climatic Zone	Districts
1.	Tarai and Bhabar	Saharanpur (58%), Muzaffarnagar Nagar (10%), Bijnor (79%), Moradabad (21%), Rampur (40%), Bareilly (19%), Pilibhit (75%), Shahjahanpur (6%), Khiri (39%), Bahraich (47%), Shravasti (71%)
2.	Western Plain	Saharanpur (42%), Muzaffarnagar Nagar (90%), Meerut, Bagpat, Gaziabad, Gautam Budha Nagar, Buland Shahar
3.	Mid Western Plain	Bareilly(81%), Badaun, Pilibhit(25%), Moradabad (79%), Jyotibaphule Nagar, Rampur (60%), Bijnor (21%),
4.	South Western	Agra, Firozabad, Aligarh, Hathras, Mathura, Mainpuri, Etah
5.	Central	Shahjahanpur (94%), Kanpur Nagar, Kanpur Dehat, Etawa, Auraiya, Farrukhabad, Kannauj, Lucknow, Unnao, Raibareilly, Sitapur, Hardoi, Khiri(61%), Fetehpur, Allahabad (58%), Kaushmbi
6.	Bundelkhund	Jhansi, Lalitpur, Jalaun, Hamirpur, Mahoba, Banda, Chitrkoot,
7.	North East	Gorakhpur, Maharajganj, Deoria, Kushi Nagar, Basti, St. Kabir Nagar, Siddhartha Nagar, Gonda, Baharaich(53%), Balrampur, Shravasti (29%)
8.	Eastern	Azamgarh, Mau, Balia, Pratapgarh, Faizabad, Ambedkar Nagar, Barabanki, Sultanpur, Varanasi, Chandauli, Jaunpur, Gazipur, St.Ravidas Nagar (86%)
9.	Vindhyan	Allahabad(42%), St. Ravidas Nagar (14%), Mirzapur, Sonebadhra

Source: Official website of Govt. of India and Uttar Pradesh

Note: Percentages in parentheses indicate the portion of district falling in respective agro-climatic zone.

Pulses

The average productivity of pulses is 7.25 q/ha in the state. It varies in different agro-climatic zones from 6.57 q/ha (in Bundelkhand zone) to 8.09 q/ha (in mid central plain). The zone-wise details are presented below in Table 22.

Table 21: Zone-wise Productivity of Cereal Crops, 2006-07

(q/ha)								
S. No	Zones	Food grains	Total Cereals	Rice	Wheat	Jowar	Bajra	Maize
1	Tarai & Bhabhar	23.76	24.82	20.82	30.12	10.87	11.06	10.02
2	Western Plain	30.49	31.40	22.36	35.61	8.08	12.43	18.58
3	Mid- Western Plain	23.73	24.65	19.98	30.26	10.73	13.44	14.97
4	South West.Semi-Dry	23.54	24.30	22.98	28.57	11.37	15.70	19.10
5	Mid-Plain/ Central	22.23	24.00	19.52	29.10	12.08	14.92	13.03
6	Bundelkhand	10.51	16.19	8.20	19.11	8.41	13.61	9.19
7	North Eastern Plain	22.20	21.09	17.42	25.87	11.94	16.48	9.77
8	Eastern Plain	20.37	21.41	17.82	25.91	---	12.02	11.73
9	Vindhyan	16.22	17.64	18.27	19.94	11.71	9.30	6.30
	Uttar Pradesh	20.77	22.90	18.78	27.66	10.29	14.55	13.26

Source: Official website of Govt. of India and Uttar Pradesh

Table 22: Zone wise Productivity of Pulses in 2006-07

S. No.	Zones	Total Pulses	Arhar	Gram	Pea	(q/ha)	
						Lentil	Urd
1	Tarai & Bhabhar	7.18	6.70	7.44	9.67	7.22	7.38
2	Western Plain	7.91	9.55	7.30	9.67	5.66	5.61
3	Mid- Western Plain	7.61	6.92	7.30	9.67	7.68	6.63
4	South West. Semi-Dry	7.45	8.31	8.31	9.67	9.05	5.61
5	Mid-Plain/ Central	8.09	8.22	10.66	12.13	7.68	5.17
6	Bundelkhand	6.57	6.40	6.22	9.36	5.52	5.40
7	North Eastern Plain	7.98	6.20	7.39	9.67	8.68	5.47
8	Eastern Plain	8.02	7.66	8.62	9.95	8.47	5.61
9	Vindhyan	7.94	6.90	9.59	10.38	6.88	4.89
	Uttar Pradesh	7.25	7.49	7.42	9.67	7.05	5.61

Source: Official website of Govt. of India and Uttar Pradesh

Oilseeds

The average productivity of oilseeds is 8.36 q/ha in the state. It varies in different agro-climatic zones from 3.74 q/ha (in bundelkhand zone) to 13.03 q/ha (in south-western semi dry zone). The zone wise details are presented below in Table 23. The target for average annual growth rate of agriculture sector during the 10th Plan was 5.1 percent. However, only about 2 percent was achieved. A lower growth rate of this order is indicative of the fact that there was 'something' missing in the efforts and strategies for agriculture development. The past growth rates in the agriculture sector showed that the state achieved a growth rate of 5.7 percent during the Fifth Plan. Thus, the State has potential for achieving much higher growth in this sector. It is in this background that a growth rate of 5.7 percent has been envisaged in agriculture sector during Eleventh Plan.

Table 23: Productivity of Oilseeds, 2006-07

S. No.	Zones	(q/ha)	
		Total Oilseeds	Rapeseed/ Mustard
1	Tarai & Bhabhar	8.13	8.67
2	Western Plain	9.69	9.78
3	Mid- Western Plain	9.26	10.04
4	South West. Semi-Dry	13.03	13.17
5	Mid-Plain/ Central	8.02	9.28
6	Bundelkhand	3.74	4.49
7	North Eastern Plain	8.26	8.42
8	Eastern Plain	10.39	11.68
9	Vindhyan	5.05	5.46
	Uttar Pradesh	8.36	10.22

Source: Official website of Govt. of India and Uttar Pradesh

During eleventh five year plan target growth rate for crop sector is 5.7 per cent.

Horticulture

Uttar Pradesh has diverse agro-climatic conditions and with its vast agricultural & natural resources, it is facilitating production of various food crops such as fruits, vegetables, spices, medicinal and aromatic plants. The state is fourth in the country with a cultivated area of 15.91 lakh ha under vegetables. The state accounts for 16% of India's total population and produces 15% of the country's vegetables *i.e.* 266.06 lakh ton. Uttar Pradesh ranks second among all states in vegetable production. Major vegetables are potato and peas (leading

state), sweet potato (second among states), cabbage (sixth among states). U.P. contributes 40-45% of the potato production of the country.

Similarly, U.P. ranks third in production of fruits among all states. Major fruits grown in the state are Mango (leading state in India in terms of production), Guava (ranked fourth in India), Banana and Litchi. The overall productivity of fruits in the state is 10.79 tons/ha against national average of 11.9 tons/ha. The important spices produced in Uttar Pradesh are onion (sixth among states), turmeric, chili, garlic, fennel, fenugreek and coriander.

Nearly 72% of the total population of the state is engaged in cultivation, out of which approximately 80% farmers are in the small and marginal category. To boost the required horticultural development in the state different schemes / programmes under state / centrally sponsored schemes are being implemented. There is good scope for vegetables and fruit production in the state, especially quality production through organic farming.

During the Eleventh Five Year Plan period (2007-12), the growth rate of this sector has been fixed at 10%. To achieve this growth rate the department is implementing various developmental schemes i.e. introduction for new varieties of fruits, adoption of hybrid varieties of vegetables and spices of high quality, production, adoption of new horticultural techniques, production of European vegetables, adoption of new techniques to increase production of flowers and medicinal plants, establishment of high-tech model nurseries, apiculture, mushroom cultivation, establishment of distillation units for flowers, and medicinal and aromatic plants, onion storage units and the establishment of semi-processing and processing units in the state. Recently organic farming has caught the fancy of the farmers and thus effort needs to be encouraged for production of chemical free fruits and vegetables with a provision of reliable traceability in order to improve nutritional security of the country.

Table 24: Proposed Targets of Eleventh Five Year Plan (2007-12) for Horticultural crops

Fruits and Vegetables	PROPOSED TARGETS XI th Plan	
	Production (lakh tonnes)	Proposed growth rate during XI th plan
Fruits	164.3	10.46
Vegetables	441.90	11.11
Potato	166.93	10.41
Total	733.20	10.87

Including fruits, vegetables, spices and potato the overall growth rate of horticulture sector in the state is targeted at 10.87% in the Eleventh Plan Period.

Sugarcane

Sugarcane is another important crop in the State. Almost half of the total sugarcane area in the country is in Uttar Pradesh. About 30 percent sugar production in the country is contributed by the State, yet at 58.2 tonnes per hectare, productivity is much below the all India average of 66.9 tonnes and average sugar recovery is almost 75 percent of all India average. Major challenges facing the sugarcane sector in U.P. are (i) Limited availability of water for irrigation; (ii) Depletion of soil fertility; (iii) Increase in the prices of fertilizer herbicides and pesticides; (iv) Price escalation of petroleum products; and (v) Limited availability of farm labor.

The state is implementing intensive Cane Development Programmes including improved seed production programme, Soil and Seed treatment, and Ratoon management

Seed and Planting Material and Seed Replacement Rate (SRR)

Seed is one of the most vital inputs responsible for higher productivity and can contribute 10 to 15 percent increase in production. The seed scenario in U.P. during the Tenth Five Year Plan Period has been quite encouraging in case of cereals especially paddy and wheat. An increasing Seed Replacement Rate has been observed during the Tenth Five Year Plan as evident from the Table 25. The recommended seed replacement rate in case of self pollinated crops is 25%. In case of hybrids e.g. maize, bajra etc and in case of cotton where Bt hybrids have been released, the replacement should be total. As such the SRR, in case of almost all the crops needs improvements.

Table 25: Crop-Wise Seed Replacement Rate during Xth Five Year Plan

S. No.	Name of Crop	X th Plan Target of (2006-07)	02-03 (%)	03-04 (%)	04-05 (%)	05-06 (%)	06-07 (%)
1.	Paddy	21.83	15.90	17.25	17.90	20.29	20.54
2.	Maize	19.46	7.80	10.90	14.03	12.28	18.67
3.	Bajra	51.25	17.70	35.90	41.78	50.54	53.47
4.	Jowar	11.36	4.90	5.60	8.28	10.57	14.95
5.	Urd	12.40	8.80	10.90	11.45	11.20	9.86
6.	Moong	20.00	16.20	15.30	18.99	23.06	56.83
7.	Arhar	18.89	13.20	13.50	15.06	18.23	17.62
8.	Groundnut	4.17	1.50	2.60	3.57	3.96	3.08
9.	Til	9.80	2.50	2.90	5.32	8.84	10.46
10.	Soyabean	34.05	13.10	23.90	32.27	31.68	15.18
11.	Sunflower	73.33	100	72.60	51.73	14.13	61.93
12.	Cotton	72.00	73.80	60.60	39.36	64.00	66.16
	Kharif		16.00	17.03	17.09	19.06	19.48
13.	Wheat	23.82	16.42	16.88	18.97	21.40	24.14
14.	Barley	20.00	11.03	12.09	13.93	18.78	24.60
15.	Gram	12.50	8.16	9.14	11.07	11.50	14.36
16.	Pea	23.98	9.49	12.90	14.12	23.91	20.96
17.	Lentil	12.50	7.08	11.25	0.73	12.42	12.12
18.	Rai/Sarson	53.00	38.18	52.87	85.00	52.00	58.38

S. No.	Name of Crop	X th Plan Target of (2006-07)	02-03 (%)	03-04 (%)	04-05 (%)	05-06 (%)	06-07 (%)
19.	Toria	100	64.96	91.48	23.92	103.00	86.48
20.	Linseed	7.50	2.28	4.77	0.44	6.65	8.64
Rabi			16.5	18.14	18.14	20.67	23.29
Annual			15.06	17.91	17.58	18.86	22.46

Source: Official website of Govt. of India and Uttar Pradesh

Soil Health and Consumption of Fertilizers

During 2006-07, 15.33 lakh soil samples were tested. In order to improve balanced use of fertilizers based on soil testing, strengthening of soil testing laboratories will be essential. In addition to the existing 48 Soil Testing Laboratories, additional 22 have been sanctioned in 2006-07 with the aim of raising existing soil testing capacity from 15 lakh to 22 lakh. At present, only 12 Laboratories are well equipped with micronutrient analysis of soil samples. It is proposed to develop the facility of micronutrient testing in all the Soil Testing Laboratories of the state.

The recommended fertilizer use is focused on N P K ratio which should be in the ideal form that is 4:2:1 when the nutrients are applied to the fields in the ratio of 4:2:1, then maximum productivity is achieved. The pattern of fertilizer consumption in the state shows that the NPK ratio is gradually narrowing. During 2001-02 the ratio was 25.2:7.6::1.0 which has tapered down to 10.7: 4.0: 1.0 indicating the efforts for balanced use of fertilizers. During 2007-08 it is estimated that the NPK ratio will be 10.71:4.40:1.0 (Table 26).

It has been observed that soil health has deteriorated sharply during the last few years. Indiscriminate and imbalanced use of chemical fertilizers, especially urea along with chemical pesticides and unavailability of organic manures has led to considerable reduction in soil health. *Hence restoring soil health has emerged as a major challenge before the farmers and the State.* The State Government is taking steps to check the rapid deterioration in soil health in several areas.

Although use of chemical fertilizers is very low in comparison to agriculturally advanced neighbouring states like Haryana and Punjab and it is even below the national average, yet consumption of chemical fertilizers is increasing constantly and there is an imbalance in their usage which has caused the deterioration in soil health.

Table 26: Consumption of Fertilizers in Xth Five Year Plan

Consumption (kg/ha)			NPK Ratio
N	P	K	
93.10	28.60	5.60	16.6 : 5.1 : 1.0
93.10	30.10	6.00	15.5 : 5.0 : 1.0
104.00	32.00	8.00	13.0 : 4.0 : 1.0
107.00	34.00	8.00	12.5 : 4.25 : 1.0
107.00	40.00	10.00	10.7:4.0:1.0

Source: Official website of Govt. of India and Uttar Pradesh

WATER RESOURCES AND IRRIGATION

Irrigation

- The irrigation facilities are provided to farmers in the State from different sources such as canals (72450 kms), State Tube wells (28366 Nos), Major and Medium Pump Canals (27 Nos), Minor Lift Canals (243 Nos) and Reservoir (66 Nos) / Bundhies etc.
- The total irrigation potential created in the State by the year 2005-06 is to approximately 324.26 lakh ha. The large part of it (241.84 lakh ha) is through minor irrigation projects where as, only 82.42 lakh ha is irrigated through large and medium irrigation projects. However only 64.55% of this created potential is being utilized.
- The total irrigated area of state is 131.19 lakh ha. The source wise Irrigation status, as indicated in the Table 27, shows that Canal

irrigation provides irrigation facilities to only 26.92 lakh hectares, which is about 20.5 percent of net irrigated area. State Tube wells account for just 3 percent of net irrigated area.

Table 27: Source wise Irrigation Status

(lakh ha.)

S. N.	Irrigation Source	Area	Percentage (NAS)	Percentage (Irrigated)
	Net Area Sown	166.83		
1	Canal	26.92	16.13	20.52
2	State Tube-wells	3.83	2.30	2.92
3	Private Tube-wells	89.96	53.92	68.57
4	Other Sources	10.48	6.28	7.99
	Net Irrigated Area	131.19	78.63	

- Area irrigated by canals has been continually declining over the years. Further, water use efficiency in most irrigation systems is low in the range of 30-40 percent as against an ideal value of 60 percent. It is 80 percent in the major and medium irrigation against 61 percent in minor irrigation.
- The ground water (quantitatively and qualitatively) is depleting at a fast rate in many areas due to over-exploitation. Some other areas are affected by water logging, resulting in soil degradation due to shallow water table. Excessive use of chemicals in the field also contributes to declining water quality. Hence the programmes of ground water development are being planned in such a way, so as to provide permanent and sustainable solutions to the ground water problems in the State.

The proposal for 11th Five Year Plan (2007-12) was formulated considering the problem arising out of indiscriminate use of ground water, its declining trend and developing scarcity areas. Keeping in mind, the ground water

regime (quantitatively and qualitatively) problems arising out of over-exploitation, causing declining ground water level and water logging, soil degradation due to shallow water table and excessive use of chemicals in the fields, the programmes of ground water development are being planned/proposed in such away, so as to provide permanent and sustainable solutions to the ground water problems in the State.

The following ground water survey programmes are proposed to be carried out during financial year 2008-09. Detailed specific programmes and financial requirements are summarized below-

Ground water Resource Estimation and Strengthening of Ground water survey:

1. Monitoring of Ground water Level on hydrograph stations network
(Observation well / Piezometer)
2. Construction of Piezometers
3. Estimation of Ground Water Resource
4. Micro Study in Over Exploited / Critical Blocks
5. Quality Assessment / Monitoring of Ground Water
6. Procurement of Drilling, Survey and Monitoring Equipments

Rain water harvesting and Recharging: In this scheme Roof top rain water harvesting, ponds and percolation tanks will be constructed for study purpose on model basis. Inter departmental co-ordination for monitoring and implementation of Rain Water Harvesting / Recharging activities in the State. Impact assessment of rain water harvesting/recharging activities and schemes on ground water regime (ground water level and quality) are to be carried out. An outlay of Rs. 96.00 lakhs is proposed for this work.

Construction of Shallow Tube-Well for Small/Marginal farmers: The major interventions/ facilities for construction of tube wells under “Free Boring Scheme” is given in Table 28. The salient features of scheme are:

- Construction of “Medium Deep Tube-Well” in alluvial areas of State where water bearing strata is between 31 to 60 metre.

- Construction of Deep Tube Well for deep and difficult areas of state having water bearing strata deeper than Sixty metre.
- Construction of Blast Well /Deepening of Well in rocky areas.
- Boring by In well Rig/Wagon Drill in rocky areas.
- Artesian Well Scheme (Mainly for Jalaun Distt.)
- Ground Water Recharging/Check dam Scheme in which Renovation of Ponds and construction of check dam is included.

Table 28: Status of facilities provided for minor irrigation works, 2006-07

S. No.	Name of Works	Eligibility Criterion	Average of project cost	Detail of Subsidy Provided
1	Free Boring			
	A- Boring	Small/ Marginal Farmer	Rs. 8000/-	1- General Category (1) Small Farmer 3000/-
				(2) Marginal Farmer 4000/-
	B- Pump set (5 Hp)		Rs. 18,000/-	2- Small/Marginal Farmers of SC/ST 6000/-
				1- General Category (1) Small Farmer 2800/-
				(2) Marginal Farmer 3750/-
2	Medium Tube Well	Farmers of All Categories	Rs. 1.70 lakh	3- Small/Marginal Farmers of SC/ST 5650/-
3	Deep Tube Well	Farmers of All Categories	Rs. 3.30 lakh	50% cost of the Tube well with maximum Rs. 75000/- & for water distribution system of cost with 50% maximum Rs. 10000/- Total Rs. 85,000/-
4	Artesian Well	Farmers of All Categories	Rs. 12,000/-	50% cost, maximum Rs. 1.00 lakh
5	Blast Well	Farmers of All Categories	Rs. 1.20 lakh	50% cost, maximum Rs. 50,000/-
6	Boring by In well Rig Machine	Farmers of All Categories	Rs. 50,000/-	50% cost, maximum Rs. 7500/-
7	Deepening of Well in Rocky Area	Farmers of All Categories	Rs. 122/- per hole	50% cost, maximum Rs. 20/- per hole
8	Surface Pump set (Rocky area of Bundelkhand)	Farmers of All Categories	Rs. 20,000/-	25% cost, maximum Rs. 3000/-

	& Allah bad District)			
9	Construction of Check dam	Community Work	Rs. 10.00 lakh.	Cent percent Subsidy
10	Renovation of Tank	Community Work	Rs. 3.00 lakh	Cent percent Subsidy

Source: Official website of Govt. of India and Uttar Pradesh

Availability of Ground Water: As per available data, Zone-wise ground water recharge, exploitation and stage of development in different regions of the state are given in Table 29. Although overall water balance situation appears to be positive, yet 37 blocks at present are over-exploited, 13 blocks are critical and 88 blocks are semi-critical. However,, 675 blocks are in safe categories as per stage of ground water development. The available ground water balance in the State is 2.13 million hectare-meter (M ha-m) and out of this 1.95 M ha-m is available for irrigation purposes.

Table 29: Annual Ground water balance in U.P., 2006-07

S. No.	Zone	Ground Water Recharge (M ha-m)	Ground Water Exploitation (M ha-m)	Balance Ground Water (M ha-m)	Stage of Development (%)
1	East	2.54	1.68	0.86	66
2	West	2.58	2.05	0.53	79
3	Central	1.45	0.96	0.49	66
4	Bundelkhand	0.44	0.19	0.25	43
	Total	7.01	4.88	2.13 *	69

Source: Official website of Govt. of India and Uttar Pradesh

Irrigation Potential Created: The irrigation potential from Minor Irrigation works at the start of 1st Five Year Plan was only 14.44 lakh ha. As per 3rd Census of Minor Irrigation Works Conducted by Govt. of India in the base year 2000-01, the actual irrigation potential created came to 158.97 lakh ha. The position expected at the end of 10th Five Year Plan, after taking into consideration the depreciation of minor irrigation works at 1% as per 3rd

Census of Minor Irrigation works, is given in Table 30, which brings out that the State has made considerable progress through various five year plans and the 10th plan provided a boost to the development efforts; yet, there remains a tremendous scope for further development in every sub-sector of the agriculture sector including crops, horticulture, animal husbandry and pisciculture.

Table 30: Irrigation potential of U.P.

S. No.	Year	Irrigation Potential Created (lakh ha)	Depreciation (@ 1%)	Net Irrigation Potential (lakh ha)
1	2000-01	-	-	158.97
2	2001-02	3.61	1.58	161.00
3	2002-03	3.83	1.61	163.22
4	2003-04	2.92	1.63	164.51
5	2004-05	3.41	1.64	166.28
6	2005-06	4.00	1.66	168.62
7	2006-07	3.95	1.68	170.89

Source: Official website of Govt. of India and Uttar Pradesh

District-wise Status of Irrigation

The state average of irrigated area is 79% but there are wide variations in districts. The district wise irrigated area varies from 29% to 100%. The districts have been categorized in different slabs indicating the extent of irrigation as presented in Table 31.

Resources Available Through Convergence

In view of the resource crunch, loan assistance from National Bank for Agriculture & Rural Development (NABARD) under Rural Infrastructure Development Fund (RIDF) is being obtained since 1995-96 with the condition of their utilization in three years from the year of sanction. Further, Central Loan Assistance under Accelerated Irrigation Benefit Programme (AIBP) is also being provided by Government of India for early completion of the on-going projects, on

Table 31: Irrigation status of different districts of U.P., 2006-07

S. No.	Slab	No.	Name of Districts
1	90 % and above	22	Saharanpur, Muzaffarnagar, Meerut, Bagpat, Mathura, Shahjahanpur, Aligarh, Hathrus (100%) , Firozabad, Mainpuri, Etah, Bareilly, Badaun, Pilibhit, Kannauj Moradabad, Ajamgarh, Lucknow, Faizabad, Ambedkernagar, Chandauli.Gaziabad,
2	80-90 %	23	Bulandsahar, Bijnor, J.B. Fulenagar, Rampur, Farrukhabad, Etawa, Auraiya, Pratapgarh, Varanasi, Gazipur, Jaunpur, S. Rabidasnagar, Mau, Gorakhpur, Maharajganj, Deoria, S. Kabirnagar, Unnao, Raibareilly, Sitapur, Hardoi, Sultanpur, Barabanki.
3	70-80 %	9	G.Budhnagar, Kanpur Dehat, Allahabad, Lalitpur, Balia, Khushinagar, Khiri, Gonda.
4	60-70 %	6	Kanpur Nagar, Fetehpur, Kaushmbi, Jhansi, Basti, Siddharthnagar.
5	50-60 %	2	Jalaun, Mirzapur,
6	Less than 50 %	8	Mahoba, Banda, Chitrkoot (29%), Hamirpur, Sonbhadra, Balrampur, Baharaich, Shravasti.

Source: Official website of Govt. of India and Uttar Pradesh

which substantial expenditure has already been incurred. At present, as per modified guide lines for the accelerated irrigation benefits programme effective from December 2006, the central assistance will be in the form of central grant which will be 25% of project cost. The balance cost of the project as the state's share is to be arranged by the state government from its own resources. Table 32 indicates that while the average intensity of cropping in the state at was 146.5 % for irrigated area, it was 138.5%. It is surprising that intensity of cropping is lower in the irrigated area then that of the total net area sown. It means intensity

of cropping is higher in unirrigated area. Another interesting feature is whereas the overall cropping intensity improved to 152.1% by the 2005-06, in irrigated area it increased to just 145 percent

This means the water use efficiency needs to be improved. It is anomalous that intensity of cropping is lower in irrigated area than that in the unirrigated area. This is why due emphasis in district plans has been placed on underground conveyance of water in the fields.

Table 32: Irrigated area and net sown area

Year	Gross irrigated area (in lakh)	Net irrigated area (in lakh)	Intensity	Gross area sown (in lakh)	Net area sown (in lakh)	Intensity
2002-03	177.92	128.48	138.5	243.11	165.97	146.5
2003-04	185.24	132.27		254.25	167.5	
2004-05	189.39	131.18		255.24	166.83	
2005-06	189.7	130.75	145	253.07	166.33	152

There is a need to increase the efficiency of water use in canal irrigated area and the share of surface water irrigation such as canals has to be increased and reduce dependence on ground water as this will benefit small and marginal farmers and also restrict the depletion of ground water. There is also a need to adopt rainwater-harvesting schemes to arrest the declining groundwater levels in several holdings

ANIMAL HUSBANDRY, DAIRY, POULTRY AND FISHERIES

Animal Husbandry

The growth rate of animal husbandry sector in the state is proposed to be increased to the level of 10% in the Eleventh Plan Period. Uttar Pradesh has a livestock population of 585.31 lakh excluding poultry as per 2003 Animal census. Poultry population is meagre at just 117.18 lakh. Further negligible growth has been recorded in poultry population in the State. Out of 414.65 lakh cattle & buffalo in the State, there are only about 173.82 lakh breedable animals. Out of

173.82 lakh breedable cows and buffaloes, only 117.81 lakh (68 percent) are in milk production.

U.P. stands at the top in milk production in the country by producing 173.56 lakh MT. The State is seventh in egg production (9227.87 million), fifth in wool production (14.59 lakh Kg.) and first in meat production (1983.592 lakh Kg) during 2005-06.

During the last two decades, milk production has doubled, meat production has increased three folds, egg production by two and a half times, and wool production by about 50 percent. Cows contribute 28 per cent, buffaloes 66 per cent and goats around 6 per cent of the milk produced. National milk production increased by 4.5 per cent per annum compared to 5.1 per cent per annum in U.P. The per capita availability of milk is presently about 286 grams per day.

Production estimates of different livestock products during the years 2007-08 & 2008-09 are given in Table 33.

Table 33: Production estimates of livestock products during years 2007-08 & 2008-09

#	Item	Unit	Eleventh plan		
			2007-08		2008-09
			Target	Ant. Ach.	Target
1	Milk	Lakh MT	201.17	201.17	221.28
2	Egg	Million Nos.	894.86	894.86	984.35
3	Wool	Lakh Kg.	21.25	21.25	21.70

- › In spite of several constraints livestock insurance has become one of the most powerful instruments for mitigating economic losses in livestock sector. But there is no animal insurance cover like crop insurance in the State, which can give some relief to farmers as lots of animals die due to natural calamities such as flood, drought and epidemic outbreaks. There is a proposal to extend insurance cover to livestock on the same pattern as crop insurance. The insurance of all livestock will be accelerated in consultation with general insurance authorities. Farmers will be made

aware about livestock insurance and their benefits through mass and electronic media.

Dairy Development

- The main thrust of dairy development in the State is to supplement the income of small and marginal farmers and landless labourers to bring about socio-economic transformation of the rural people through strengthening of cooperative structure and promoting private investment in the dairy sector.
- U.P. is the largest milk producing state of the country with an annual milk production of 11.7 million MT i.e. accounting for around 16% of the milk production of the country. Uttar Pradesh State Cooperative Milk Producers Federation at the state level, Milk unions at the district level and Milk producers cooperative societies at the village level carry out milk procurement and marketing activities in the State.
- The Milk Cooperatives are currently operating in around 15 percent of revenue villages in the State. It is proposed to increase coverage to around 33 percent by end of Eleventh Plan. It is proposed to increase milk procurement in the ensuing Plan in Cooperative Dairy sector from the present level of 4.95 percent to 9.64 percent by focusing on increased procurement especially from districts of eastern & central Uttar Pradesh.
- It is proposed to further strengthen the existing dairy cooperative societies and to organize new societies to ensure timely supply of required inputs to the producers. For raising the income of farmers, it is essential to provide them remunerative price by eliminating the middlemen. The value addition in this sector would also require capacity building in milk processing and storing for its subsequent marketing in the rural areas at remunerative price.
- During the Tenth Plan (2002-07) the number of village level milk producers who have associated themselves with the cooperative net work increased from 665.43 thousand to 755.70 thousand. Against this, the average milk procurement increased from 732.15 thousand kg./day to 1044.00 thousand kg/day during the same period. The targets proposed to be reached by the end of the Eleventh Plan are given in Table 34.

Table 34: Targets by the end of the Eleventh Plan

Particulars	2007	2012	Cumulative Growth (Yearly %)
Functional Societies	15063	35014	18.38
Membership (lakhs)	7.56	18.21	19.22
Avg. Milk Procurement (lakhs kg/day)	10.44	24.23	18.34
Avg. Liquid Milk City Sale (lakhs ltr./ day)	5.04	19.87	31.57

- ▶ Automation and mechanization of procurement system would be taken up on priority during the XI th Plan. In the year 2007-08, 1920 VDCs' are being provided with Automatic Milk Chilling Units (AMCUs). Wherever this AMCU has been setup, it has resulted in increased milk procurement, restored producers faith and increased their income. During 2008-09, 2840 VDCs' will be provided with AMCU's. 90% cost of AMCU will be provided as grant while 10% will be borne by societies/milk unions.
- ▶ Uttar Pradesh has a livestock population of 585.31 lakh heads excluding poultry as per 2003 Animal census. The cow population stands at 185.51 lakh heads which comprises 16.34 lakh crossbred and 169.17 lakh indigenous breeds. Likewise, the State has 229.14 lakh buffaloes. Sheep population stands at just 14.37 lakh. Although sheep wool constitutes the most important raw material for the carpet industry in the State, yet its population is showing a declining trend. Similarly, the goat population is just 129.41 lakh although it is called poor man's cow. There are only 22.84 lakh pigs – the most proliferate, low input and high output animal and their population is also decreasing over the years. Poultry population is also meager at just 117.18 lakh birds although the State is a major consumer of poultry products. Further, virtually no growth has been recorded in poultry population in the State.

Table 35: Livestock population in the State

Livestock Population (000)			Percent Increase/Decrease
Category	1997	2003	
Crossbred cattle	2105	1634	-22.38
Indigenous cattle	17911	16917	-5.55
Total cattle	20016	18551	-7.32
Buffaloes	18996	22914	20.63
Total Bovines	39012	41465	6.29
Sheep	1905	1437	-24.57
Goats	11784	12941	9.82
Pigs	3135	2284	-27.15
Camels	31	16	-48.39
Others	545	388	-28.81
Total Livestock	56412	58531	3.76

Source: Official website of Govt. of India and Uttar Pradesh

Total poultry population in the state is about 11.71 million birds. Over the period of 10th plan, fowl population has decreased by around 3.5 per cent and total poultry by 3.3 per cent in the State. Ducks and other birds have shown an increase of 2.5 per cent during the period. - Over 60 per cent of them comprising indigenous fowls in the backyards of rural households. Poultry production in Uttar Pradesh consists of two distinctly different streams: the organized poultry industry made up of exclusively of commercial hybrid birds and the backyard system with indigenous fowl in the rural areas. Organized poultry industry in UP is stagnant and over half of the eggs and poultry meat consumed in the state is imported from States as far away as Andhra Pradesh and some from neighbouring Punjab and Haryana. While the state's neighboring States (Punjab and Haryana) have a successful and flourishing poultry industry and account for nearly 40 per cent of the table eggs and broiler import into the State. *UP has lagged far behind in organized egg / broiler*

production. In Overall ranking Uttar Pradesh stands 1st in milk production, 5th in wool production, 7th in egg production and 1st in meat production in the country.

Livestock Production

The livestock of the state contributed significantly to the State's economy by producing 180.946 lakh metric tonnes of milk, 8135.1 lakh eggs, 14.61 lakh kg wool and 2002.31 lakh kg meat in 2006-07. Uttar Pradesh is the largest milk producing state in the country since last many years. Per capita availability of milk in U.P. is 286 gm while the national average is 245 gm/day against the minimum requirement of 280 gram per day per capita as recommended by ICMR. Yet, there is good scope for breeding of cows, especially cross-bred cows for increasing productivity and production of milk.

Meat Production

The state also plays a vital role in meat production in the country. Uttar Pradesh is the largest meat exporter in the country with the exports worth Rs.200 crores. Meat production status of U.P. is given in Table 37.

Table 36: Milk Production in U.P., 2006-07

Category / Animal	Total milk production (lakh Litres)	Percentage Contribution
Buffalo	124.139	68.61
Cow	46.276	25.57
Goat	10.531	05.82
Total	180.946	100.00

Source: Official website of Govt. of India and Uttar Pradesh

Table 37: Meat Productivity and Production in U.P., 2006-07

Category / Animal	Av. meat productivity (Kg. /animal)	Total meat production (lakh Kg)	Percent contribution
Buffalo	120.759	1475.577	73.69
Goat	16.133	327.921	16.38
Sheep	16.554	52.620	02.63
Pig	44.507	146.191	07.30
Total		2002.309	100.00

Source: Official website of Govt. of India and Uttar Pradesh

Availability of Fodder

The state has negligible pasture facilities, and inadequate green fodder and concentrate feed availability is a major limiting factor. Only about 4 per cent of agricultural land is under fodder crop production. Fodder requirement & production status is given in Table 38. There is, thus an urgent need for improving the productivity of fodder crops and expansion of area under green fodder. For this purpose the fodder seed production facilities in the State need strengthening.

Table 38: Requirement and availability of fodder, 2006-07

Commodity	Requirement (lakh MT)	Availability (lakh MT)	Deficit (lakh MT)	Deficit (%)
Green Fodder	933.06	617.62	315.44	33.80
Dry Fodder	571.19	548.60	22.59	03.95
Compounded Feed	120.85	63.25	57.60	47.66

Source: Official website of Govt. of India and Uttar Pradesh

Fisheries

During the Tenth Plan, the production of fish increased from 2.49 lakh ton to 3.07 lakh ton while the productivity increased from 2.55 ton per ha. per year to 2.85 ton per ha. per year. During the Eleventh Plan, the growth rate of this sector

is to be raised from 7.4% to 13% and productivity from 2.8 t/ha/year to 4 t/ha/year. Thus, it is envisaged that during the Eleventh Plan the total fish production will increase from 2.90 lakh ton to 5.32 lakh ton.

Importance of aquatic resources in our economy is well recognized. The need for protective food production has assumed vital importance. Hence, use of aquatic resources for developmental purpose such as aquaculture and fisheries at par with the terrestrial resources for agriculture and animal husbandry, has attracted considerable attention in recent years. As a result of intensive efforts, aquaculture has become one of the fastest growing food production sub-sectors over the past two decades in India. Distribution (percentage) of aquatic resources of Uttar Pradesh is detailed in Table 39.

Table 39: Aquatic Resources in the U.P., 2006-07

Resource	Percentage
Rivers & Canals	62%
Large & Medium Reservoirs	12%
Ponds	14%
Lakes	12%
Total	100%

Source: Official website of Govt. of India and Uttar Pradesh

The Eleventh Five Year Plan (2007-12) has laid down the monitorable targets for fisheries sector (Table 40) and the salient features of this programme are as under:

- Growth rate to be increased from 7.4% to 13%.
- Enhancement of productivity from 2.8 t/ha/yr to more than 4 t/ha/yr.
- Increase in total annual fish production from 2.90 lakh ton to 5.32 lakh ton.
- Increase in seed production capacity to get about 150 crore standard fingerlings from present 120 crore.
- Diversifications of fish culture activities for a variety of aquatic products e.g. prawn, catfish, ornamental fish etc.

Table 40: Annual Physical Targets during Eleventh Five Year Plan

S. No.	Activity	2007-08	2008-09	2009-10	2010-11	2011-12
1	Pond area lease (ha)	10000	10000	10000	10000	10000
2	Improvement and construction of ponds (ha)	12000	12000	12000	12000	12000
3	Fish seed production (crore)	126	132	138	144	150
4	Establishment of hatcheries (No.)	69	31	33	27	27
5	Seed rearing units	75	192	169	210	170
6	Training of fishermen (No.)	8000	8000	8000	7700	7700
7	Fish productivity (kg/ha/yr)	2950	3100	3250	3500	3800
8	Fish production (lakh ton)	3.44	3.78	4.19	4.75	5.32
9	Organization of coop. societies	140	140	150	160	200
10	Fish development through co-operatives (ha)	3000	3000	3000	3000	3000

Source: Official website of Govt. of India and Uttar Pradesh

The growth rate of animal husbandry sector in the state is proposed to be increased to the level of 10% in the Eleventh Plan Period.

TECHNOLOGY DISSEMINATION

Dissemination of technical knowledge is a very important task. Agriculture Universities and other agencies are involved in the development of new techniques for the benefit of farmers in improving crop production. The knowledge of such techniques has to be transferred to the farmers who are the ultimate users. Through agriculture extension, this information is being disseminated to the farmers. For this purpose, Agriculture Technology Management Agency (ATMAs) has been set up in 32 districts of U.P. and *it is proposed to cover the entire state in the near future*. ATMA provides a strong platform for convergence of all extension activities for holistic development of

agriculture sector. ATMA has proved to be an effective medium of extension where programmes have been prepared in consultation with stake holders and implemented with their participation.

The targets & anticipated achievements for 2007-08 are indicated in the Table 41.

Table 41: Targets and Anticipated Achievements for 2007-08

Item	2007-08	2007-08
	Target	Anti.Ach.
Exposure Visit	350	350
Training	1470	1470
Kisan Mela	70	70
Demonstration	10500	10500
Reward and Incentive	350	350

Farmer School for strengthening farmer to farmer extension approach

In order to strengthen farmer-led extension approach, the State has decided to establish 813 farmer's field schools (FFS) consisting of best practicing farmers for the purpose of disseminating and sharing new knowledge with the fellow farmers of the block. During the Eleventh Five Year Plan it is proposed to develop one FFS in each Nyaya Panchayat with proper linkage with departments, KVKs, Research Organizations, Banks etc. This would help in arranging quality inputs as well as ensuring marketing of agri-produce at appropriate price apart from dissemination of new technology.

Institutional Credit

- ▶ The per hectare share of crop loan has shown increasing trend during the Xth Five Year Plan. It has gone up from Rs. 2051 in 2001-02 to Rs 5182 in year 2006-07.
- ▶ As per the policy of G.O.I. all the farmers are to be covered under Kisan Credit Card (KCC) Scheme. 195.01 lakh KCCs were distributed among the farmers till Kharif, 2007. Further Kisan Credit Card holders

are also provided insurance cover upto Rs. 50,000/- under Janta Personnel accident Insurance Scheme at a nominal premium of Rs. 9.40 per year. For meeting the consumption need of the farmers the KCC holders are also allowed to avail 10% of their crop loan credit limits as consumption loan.

Public Private Partnership in Agriculture

Contribution of private agencies in agriculture has been increasing. Presently, input providing companies as well as those involved in marketing of agriculture produce is engaged in agricultural extension, soil testing and several other agriculture oriented activities according to their business requirement.

During the Eleventh Five Year Plan there is a need to establish an extensive network between development departments, SAUs/KVKs, other Research Institutions, Private Agencies, Agri-polyclinics, Farmers Field- Schools, Agri-clubs and other Trained Agriculture Graduates in such a way that all the Nyaya Panchayats (8135) and 52027 Gram Panchayats are covered and new technologies as well as quality inputs at appropriate price are available at farmers doorstep. Efforts would be made to ensure that farmers start getting appropriate price for their Agri produce. Public Private Partnership can be ensured in the following areas:-

- New technology through agriculture demonstration.
- Organizing Kisan Melas, farmers meets, Gosthis, Crop seminars etc.
- Soil testing and promotion of balanced use of fertilizers based on soil testing.
- Use of IT for dissemination of technology (Network of Common service centres, E-Choupals etc.)
- Large scale availability of bio-agents and bio-pesticides such as *Tricoderma*, *Bavaria*, *Tricocard*, Neem oil etc.
- Sale of agricultural produce at appropriate price.
- Availability of other quality inputs at appropriate price.
- Training of farmers and extension workers.
- Development and establishment of Agri-marts on lines of Khushhali and ARIAL etc.

Co-operation

- The past few decades have witnessed substantial growth of the Cooperative sector in diverse areas of the economy. 18342 Cooperative societies are presently registered with the Registrar of Cooperative Societies in Uttar Pradesh. These include 7479 Credit Societies, 50 District Cooperative Banks and 10 Apex Cooperatives.
- There are 7479 Cooperative Societies functioning at Nyaya Panchayat level in the State and they constitute the main point of interface between the farmers and the Cooperative Banks for disbursement of short term agricultural loans, providing them HYV seeds, pesticides, fertilizers, improved agricultural implements etc. There are 50 District Cooperative Banks which have 1353 branches. However, the data reveals that there is virtual stagnation in the functioning of the Cooperative Societies in the State.
- Keeping in view the available resources with Short Term Cooperative Credit Institutions, a target for crop loan distribution of Rs. 2280 Cr. was fixed for 2007-08 against which Rs. 2531 Cr. is expected to be disbursed which is Rs. 643 Cr. more than that of last year.
- A Memorandum of Understanding was signed among Government Of India, State Government and NABARD on 18th December 2006 to implement the recommendations of the revival package finalized by Government Of India for strengthening short term Cooperative Credit Structure. In this package there is provision for improving the working conditions of Short Term Cooperative Credit Structure. These institutions will also be provided financial assistance for cleaning up their balance sheets based on the financial position as on 31.3.2004 and the total financial assistance for these institutions assessed through special audit will be shared by Government Of India, State Government and Institutions based on the origin of losses.

Thus, Inter alia, the govt. of Uttar Pradesh has accorded top priority to the development of Agriculture/ rural sector in the 11th Five Year Plan with an objective of 5.7% growth in this sector and makes this growth inclusive in nature. For this purpose, district agriculture plan has been prepared for every district of the state based on participatory approach. Panchayat level surveys were conducted. Wherein strengths, weakness as well as opportunity and threats to the programmes were discussed and programme were drawn with consultation of local people. These programmes and priorities were discussed at block and district levels and discussion were held with ATMA and their stakeholders. Secondary, data were also used wherever available.

Based on district level plans, programmes have been compiled for the state as a whole. These programmes/ projects with financial outlays are given here region-wise and district wise.

Over All

Thus the state has made considerable progress through various five year plans and 10th plan provided a boost to the development efforts; yet, there remains a tremendous scope for further development in every sub-sector of the agriculture sector including crops, horticulture, animal husbandry and pisciculture. The eleventh plan effort based on district level development plans is envisaged to boost the sectoral growth significantly. The district Agricultural development plan for districts is, therefore, drawn for the state for consideration of the Planning Commission for the assistance under Additional Central Assistance Scheme (Rashtriya Krishi Vikas Yojana) in the following pages of the document.

3. RASHTRIYA KRISHI VIKAS YOJANA (RKVY)

Rashtriya Krishi Vikas Yojna (RKVY) is an additional central assistance scheme launched by Government of India in addition to other farm sector schemes to increase public investment in agriculture and allied sectors.

BASIC FEATURES OF RKVY

- It is a state plan scheme
- States are required to maintain / increase state plan expenditure on farm sector
- Preparation of district agriculture plans (DAP) and state agriculture plan (SAP) is mandatory
- Encourage convergence with other central and state schemes
- Funding is 100 % central grant

MAJOR OBJECTIVES OF RKVY

- Incentivize states to increase public investment in agriculture
- To achieve and sustain at least 4.1% growth in farm sector
- To ensure preparation of district agriculture plans(DAP) and state agriculture plans(SAP).
- Reduce yield gaps in important crops
- Address agriculture and allied sector in holistic manner
- Increase profitability of farmers

PLANNING PROCESS RKVY

Developing District Agriculture Plan (DAP) for each district is mandatory

- The DAP should include AH, Dairying, Fisheries, Minor Irrigation Projects, R & D works,
- A comprehensive State Agriculture Plan (SAP) should evolve out of the DAPs
- Finalized SAP should be placed before the DAC/Planning Commission, as a part of the State Plan Exercise.

4. METHODOLOGY- ADOPTED FOR DEVELOPING STATE AGRICULTURE PLAN (SAP)

The State Agriculture Plan of Uttar Pradesh under Rashtriya Krishi Vikas Yojana (RKVY) has culminated from District Agriculture Plans. The District Agriculture Plans were developed with a bottom up approach starting from the Panchayati Raj Institutions (PRI) surveys and conduct of Participatory Rural Appraisal during 2008. Detailed Methodology of developing SAP is given below:-

DEVELOPMENT OF DISTRICT AGRICULTURE PLANS (DAP)

As per requirement of RKVY guide lines the State Agriculture Plan (SAP) should be comprehension of DAPs and for drawing up DAP following methodology was adapted.

(i) Survey and integration of base data from Panchayati Raj Institutions (PRI), line departments (LD) and participatory rural appraisals (PRA)

The resource persons were engaged to contact Pradhans of Gram Panchayats. A sample of five gram panchayats for a block was taken.

Primary data was collected from different Panchayats and blocks on performa specially designed for the purpose. Participation of stake holders for Participatory Rural Appraisals (PRA) was ensured, by conducting surveys at Nyaya Panchayat and block level by staff specially trained for the purpose. For induction of Panchayati Raj Institutions (PRI) information panchayat level and block level - formats, were designed on the following aspects:

1. Main agricultural and horticultural crops grown in Gram Panchayat and their problems.
2. Quality and quantity of different fertilizers used at village and block level along with organic matter (FYM and crop residue recycling).
3. Sources of irrigation available in gram panchayat.
4. Status of availability and use of farm machinery, at gram panchayat and block level.
5. Status of availability of seed and seed replacement rate.
6. Availability of improved livestock with farmers.
7. Status of dairy, poultry and fisheries.

8. Status of agriculture produce markets.
9. Status of vegetable production.
10. Status of fruit production.
11. Value addition and processing facilities available.
12. Profitability of farmers and their income.
13. Potential for increasing productivity of agricultural and horticultural crops and dairy sector.
14. Status of rural infrastructure.

Besides surveys and individual contacts at Gram Panchayat level, strategic Research and Extension Plans (SREP) prepared by Agricultural Technology Management Agency (ATMA) of the district were also consulted. District offices of the line departments were contacted and PRI information was integrated with the PRA and SERP. As suggested in the guidelines of Rashtriya Krishi Vikas Yojana (RKVY), information from Potential Linked Credit Plans (NABARD) was also used to estimate the potentials in farm sector. Secondary data available at the official website S-patrika was utilized for cross-checking the information obtained and collected from PRI, PRA, SREP (ATMA) and Line Departments.

(ii) Development of district profiles, SWOT analysis and strategy of farm development by nationally reputed core committee of experts

Based on consultations held with Line Department (LD), PRA, primary data from PRI and secondary data from other sources, district profiles and vision of individual districts have been prepared. The core committee of experts consisting of senior Agriculture, Horticulture and Animal Husbandry experts as well as, farm planner of national and international repute such as Padma Vibhushan Dr.S.S.Johal (former vice-chancellor Punjab Agriculture University and Punjabi University and Agriculture advisor to former Prime Ministers) inferred the data and identified the constraints, gaps and potentials in the existing agricultural potential pattern of the districts. Based on the SWOT analysis, vision for each district has been developed. Strategies to boost farm production and profitability of farmers for each district have been worked out.

Public Institutions of Central and State level were also consulted for inferring the information gathered through surveys.

(iii) First Brain storming on draft district agriculture plans by Honourable Minister of Agriculture Uttar Pradesh, Principal Secretary and senior officer of line departments along with Dr. S.S. Johal and other experts was held in Krishi Bhawan, Lucknow at 12 noon on 1st of July, 2008

The development programmes included in DAPs were presented before Principal Secretary Agriculture, Special Secretary, Agriculture, Chief Secretary, Agriculture Production Commissioner and officers of Line Departments as well as District Magistrates in the Planning Commission in Lucknow. Second brain storming at the highest level in state vice chancellor and Padma Bhushan Dr. S.S. Johal besides external and internal farm experts of repute.

Programmes both in crop sector and livestock sector were developed for obtaining holistic growth of farm sector as per the available resources of each district and its convergence with resources available from central sector schemes such as NREGS was assessed. The state plan documents were consulted for deriving the desired target in farm sector in achieving the growth rate during the XIth five year plan. Each programme was discussed in detail by the panel of experts before its inclusion in the District Agriculture Plan (DAP).

The indicative outlines of the projects that can be selectively picked up based on idiosyncratic agro-climatic conditions and potentials that exist for development of agriculture sector of the districts were prepared. Although estimated financial requirements are also given in each of the proposed projects, these were adjusted depending upon the size of the district, number of blocks in the district and other relevant specific features, constraints and potentials that exist.

(iv) Modifications and fine tuning of draft DAPs

The draft DAPs were again shown to officers of the line departments, PRIs and DMs for district-wise modification and fine tuning of District Agriculture Plans. **District Planning Committees** were consulted to know if the programmes designed would satisfy the needs and aspirations of the people.

DEVELOPING STATE AGRICULTURAL PLAN

The targets and priorities of the State Planning for the total growth and growth in farm sector were taken into account. All programmes as per suggestions of panchayats of DPC and experts were designed in the project mode to fulfil the requirement of Stream I, (75% budget of RKVY is for the stream I). However, the programmes selected by the state may be implemented as per priority and budget provisions.

FORMATION AND FUNCTIONS OF DISTRICT PLANNING COMMITTEE

In pursuance of the 73rd and 74th Constitutional Amendments, the State Government has constituted the District Planning Committees (DPC) by an Act, which provides for consolidation of plans prepared by the panchayats and the municipalities in the district and preparation of draft development plan for the district as a whole and for matters connected therewith. The highlights of the new system are as under:

- There is flexibility in constitution of the DPC with the restriction that the number of members shall not be more than forty. Four-fifths of the total number of members of the Committee shall be elected from amongst the elected members of the Zila Panchayat and of the Municipalities in the district in proportion to the ratio between the population of the rural areas and of the urban areas in the district.
- One-fifth members of the Committee shall include:
 - Minister nominated by the State Government , who shall be the Chairperson of the Committee;
 - The Chairman of the Zila Panchayat
 - District Magistrate - ex-officio;
- MPs, MLAs, MLCs of the State representing constituencies which are wholly or partly in the district shall be permanent invitees to the meetings of the Committee
- The Chief Development Officer of the district shall be the ex-officio Secretary of the Committee

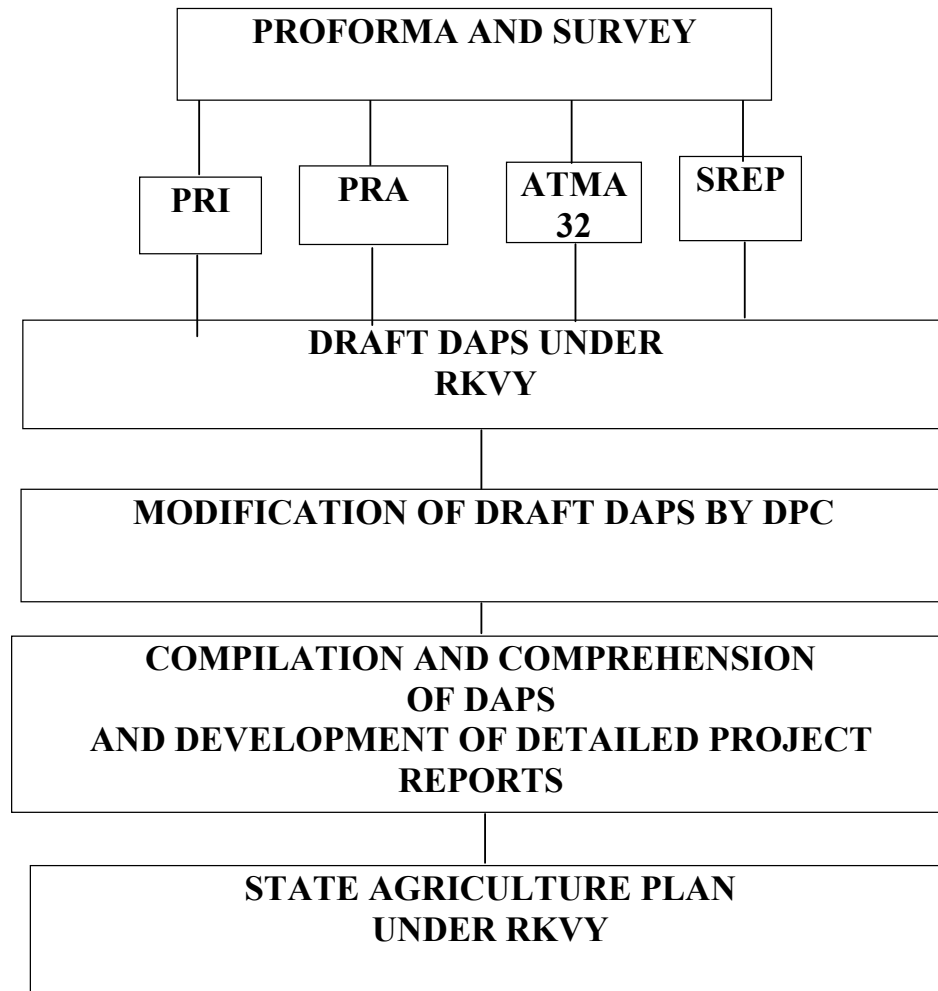
The Committee shall perform the following functions, namely:

- to identify local needs and objectives within the frame-work of national and state plan objectives ;
- to collect, compile and update information relating to natural and human resources of the district to create a sound data base for decentralised planning and preparation of district and block resources profiles;
- to list and map amenities at village, block and district levels;
- to determine policies, programmes and priorities for development of the district, in order to ensure maximum and judicious utilisation and exploitation of available natural and human resources;
- to modify or amend and consolidate the draft Five Year or Annual Development plan prepared for the rural and urban areas, keeping in view the over-all plan objectives and strategies;
- to submit development plan to the State Government in such manner as may be prescribed;
- to prepare employment plan for the district;
- to prepare estimate of financial resources for financing the district plan;
- to allocate sectoral and sub-sectoral outlays within the overall framework of the district development plan;
- to monitor, evaluate and review progress of the schemes and programmes being implemented in the district under the decentralized planning framework including central sector and centrally-sponsored schemes, and the Local Area Development Schemes of Parliamentary Constituencies and Assembly Constituencies;

- to submit regular progress reports to the State Government in respect of schemes included in the district plans;
- to identify schemes and programmes which require institutional finance, devise appropriate forward and backward linkages with the plans and ensure requisite flow of investment;
- to ensure participation of voluntary organisations in the overall development process;
- to make suggestions and recommendations to the State Government with regard to the State sector schemes having significant bearing on the process of development of the district;

The State Government has decided to activate the District Planning Committee and District Planning Committee Rules, 2008 have been notified, Also the process of election of members of the Committee is underway and the development plans will be prepared by the District Planning Committees.

**DIAGRAMATIC REPRESENTATION OF METHODOLOGY
OF DEVELOPING SAP**



5 SUMMARY OF ALL THE NEW PROGRAMMES PROPOSED FOR FARM SECTOR (RKVY)

I. CROP SECTOR INCLUDING HORTICULTURE

(i) PROGRAMMES ON SOIL HEALTH AND LAND USE

Deterioration of soil health is a serious problem in Uttar Pradesh, not only the organic matter content is getting depleted but also the soil witness imbalances in major nutrients NPK as well as deficiencies in micronutrients which have telling effect on crop yields. Healthy soils are the foundation of sustained agriculture. Growing trend in mining of soil nutrients need to be reversed. Balanced fertilizer use, though much needed, would not counter soil fatigue in itself. Improving the soil organic matter and enhancing microbial activity in the soil would restore the soils. It is essential to revitalize the soil system through organic residues, better management and soil care. The soil energy system would enhance once soil biosphere is activated. The microbial activity in soil system would not only enhance the organic matter content but also improve the soil physical condition that ultimately enable the availability of more nutrient and moisture to the plants. The following programmes are suggested in project mode, to improve soil health on sustainable basis.

1. Enrichment of Organic Carbon Content Using Green Manuring

The benefits of maintaining optimal level of organic matter in soil are many that would be instrumental in enhancing agriculture production, restoring fragile eco-system and environmental security. The role of organic matter for rehabilitation of degraded land could be gauged through improvement of the soil characteristics such as soil binder, soil physical condition, soil buffer, soil respiration, soil water, retention of plant nutrients and drainage condition. The organic carbon content in the soil is much below the desired level. Growing and incorporation of legumes, as green manures can take care of the deficiencies to a large extent. Daincha, sunhemp and cow pea not only fix nitrogen but add

organic carbon into the soil as well in substantial quantity. It is proposed to provide seed of green manures to 4 lakh farm holdings in a span of five years. Accordingly, 80,000 farm units will be covered each year. Each holding may be provided with green manure seeds worth Rs 100.00 for future production and government will bear a subsidy of Rs 50.00 per holding. The seed grown by first 80,000 farm units in the first year may be purchased by the government for distribution among the next farm unit in subsequent years.

(Note: the selection of area will dependent on the number of land holding)

Objectives

- Improve content of organic carbon in the soil through green manuring for better soil health.
- To supplement organic content in soils, where cow dung and FYM is available in scanty.
- To add buffer effect to soil for pH and salts.

Deliverables

- Improved soil productivity.
- Less use of chemical manures.
- Improved water conservation.
- Addition of atmospheric nitrogen through legumes.
- Establishment of sustainable farming system.

The programme is proposed to be implemented in 41 District with total outlay of Rs 61.758 crore.

2. Establishment of Integrated Nutrient Management (INM) System

Integrated nutrient management will maintain the desired nutrient pool in the soils to buffer any adverse situations including prolonged drought spells. Balanced use of plant nutrients is essential for sustainable intensification of agriculture. The goal of INM is to integrate the use of all natural and man made sources of plant nutrients, so as to increase crop productivity in an efficient manner. Ten demonstrations of one forth hectare each will be conducted in

each and every block for which an amount of Rs. 5000 per demonstration is needed. It is also proposed to provide an assistance for application of micronutrients @ Rs 1250 per ha as INM package to the farmers. Additional assistance will also be provided for bringing additional area (upto maximum of 2 ha / farmer) under pulses production each season under rainfed farming system. The farmer once given assistance will not be entitled to get the assistance for the same land next year. The programme is proposed to be implemented in all the blocks with a total outlay of Rs 116.496 crore.

3. Recycling of Agri Waste and Crop Residues through NADEP and Vermicompost for Soil Nutrition and Moisture Conservation

Application of adequate quantities of organic manures would help in overcoming the micro-nutrient deficiencies and would also help in improving the fertilizer use efficiencies. This can be achieved by application of various organic matter like FYM compost, vermi-compost, etc. with an objective to regenerate the wasted potential in eco-friendly manner. During the **Green Revolution**, emphasis of the farmers got centered around HYV varieties and chemical fertilizers and pesticides use. Necessity of incorporation of organic matter in the soil was put to back burner and was considered inconsequential.

This has resulted in very low Organic carbon content in the soil. Humus which holds nutrients and water was eroded to lowest level resulting in inefficient use of fertilizers and creating moisture stress repeatedly, causing increase in cost of production due to high energy use for irrigation and yield losses.

In general every farmer has reasonable quantity of Agriwaste either as dried weed mass, tree leaves, cattle dung, fodder waste and organic house hold waste.

Farmers need to be incentivised to convert above Agri waste to high value organic manure which will improve productivity and decrease irrigation frequency by retaining soil moisture for long periods. This will also increase the chemical fertilizer use efficiency to reasonable extent.

Two prominent methods are to be incentivised:

1. NADEP Compost
2. Vermi Compost

Following incentive system is suggested:

- Nadep Compost – 50% subsidy on Rs.5000/- the cost of Nadep tank construction (Brick & Cement prices have gone up)
- Vermi Compost- On a Vermi compost system on costing Rs.60,000/- NHM is already providing Rs.30,000 or 50% subsidy which ever is minimum

However farmers are not coming forward to avail these incentives to develop vermin-compost units. It is therefore suggested to grant additional 25% subsidy of Rs. 15000/ max., to arrest the burying of organic waste and go for vermi compost production. Over the period due to improvement in fertilizer use efficiency and lesser irrigation frequency, cost of production will be reduced and productivity will be improved, and sustained

This scheme is proposed to be implemented in 17 districts with an outlay of Rs 45.425 crore.

4. Management of Sulfur Status in Soil of Intensive Agriculture System to Maintain Sulfur Availability to Plants

In the process of intensive agriculture with high yielding varieties, there has been substantial uptake of sulphur by the plant and thus the status of sulphur in the soil has depleted. Wheat and oilseed crops needs sufficient quantum of available sulphur during the crop life to give optimum production. Sulphur is essential element for growth, physiological functioning, production and resistance to environmental stress, and pests.

Sulphur can be supplemented in the soil by application of crude pulverized sulphur (micronised) or by incorporation of gypsum. Third source of sulphur supplementation is phosphogypsum available as by product available in fertilizer industry. Naturally occurring Sulphur oxidizing bacterial population in the soil release sulphur for plant use, but as their population is usually very low hence availability takes quite long period.

It is suggested that phosphogypsum, along with virulent sulphur oxidizing culture can be incorporated in the soil at the rate of 2.5 MT/ha, in the kharif season. This incorporation will normalize the pH to a reasonable extent and also make available required quantum of sulphur to current kharif crop as well as to

rabi crops. It is proposed to cover 300436 ha area spread over 42 districts with total financial outlay of Rs 82.62 crores during XI plan period.

5. Management of Zinc Status in Soil of Intensive Agriculture System to Maintain Zinc Availability to Plants.

Imbalanced use of nutrients in agriculture by the farmers results in mining of soil nutrients. In Uttar Pradesh current subsistence agricultural systems have depleted soils not only in macro-nutrients but also in micro-nutrients such as zinc and boron beyond the critical limits. Deficiency of micronutrients in the soil particularly Zinc in maize production areas have adversely affected the productivity. Uttar Pradesh has very low productivity in maize compared to national level. Therefore, based on soil analysis there is requirement to supplement the zinc availability in the soil by its application. A project is proposed for enhancing the availability Zinc (Zn) in the soil. Therefore, based on soil analysis application of Zinc is to be popularized in deficient areas, in project mode 01 district with total financial outlay of Rs 1.375 crore are proposed to be covered during XI plan period.

6. Renovation and Strengthening of Soil & Fertilizer Testing Laboratories

For sustainable production of Agri and horticultural crops in the state, it is essential to maintain the soil health in terms of available macro and micro nutrients in the soil. Therefore, every farmer should be aware of the soil fertility status of their farms in respect of, soil pH, organic carbon, E.C, major and micro nutrients position in the soil. This is only possible if the soil testing laboratories established at district level are well equipped with latest and ultra modern soil testing apparatus like Atomic Absorption Spectrophotometer etc, so that, the farmers of the district may get quick and correct result of supplied soil samples.

7. Soil Health Card Programme

Enhancement of soil health is possible only when the specific deficiencies in the soil are identified and appropriate soil amendments are made to care of them. Through strengthening and establishment of soil testing laboratories it will

be possible to test soil samples of all farm holdings and the macro, micro and other soil characteristics can be recorded in form of a document called soil health card for the farmers. The distribution of soil health cards will help farmers to promote balanced and integrated use of fertilizers / nutrients. It is proposed to issue soil health cards to all the land holdings clubbed in clusters in some selected districts. The details of the scheme are given here under.

Project objectives:

- i. Provide to farmers, a scientific solution for soil and crop management and generation of farmers database with respect to various parameters and actions for the development of the district/ state.
- ii. Increase productivity by adoption of scientific management of soil fertility.
- iii. Decrease the cost of production due to optimum use of fertilizer, as per recommendation made based on soil testing.
- iv. Quality production and better prices.
- v. Maintain Soil Health, and check soil and water pollution.
- vi. Strengthening Agriculture Information System.
- vii. Data can be utilized for Center/ State Policy formulations.

DELIVERABLES: Benefits to Farmers/ State Govt/ Central Govt

- Increased productivity.
- Decrease in cost of production.
- Conservation of soil health.
- Policy making & planning.
- Sustainable development of environment.
- Integrated soil health development.
- Improvement in socio- economic status of the people.
- Increase in per capita income.

The schemes is proposed for implementation in 42 districts at a cost of Rs 132.295 crores

8a. Adoption of Organic Farming System

Farming has become a non-remunerative enterprise in general. It is still continuing due to Agriculture being a way of life, in majority of the cases.

The above situation has developed on account of following:

1. Excessive use of chemical fertilizers.
2. Development of high soil pH on account of heavy use of chemical fertilizers.
3. Soil and water pollution.
4. Deficiency of soil micro nutrients.
5. Loss of soil micro flora and fauna.
6. Higher cost of production due to high input cost.

Therefore, Organic Farming is one of the sustainable and viable alternatives to conventional farming system, because it improves the soil health, utilizes natural resources, farm waste, reduces air and water pollution and finally produces high quality end products, having longer shelf life. The demand for organic products is increasing at national and international level and the requirement of traceability in food products has become mandatory in European and other developed countries.

The programme is proposed to be launched with 100% government support in project mode, so that soil health is restored and maintained.

A Cluster of farmers will be registered for organic farming; the number of farmers in a cluster will depend upon size of their holdings. It is proposed to start organic farming systems covering an area of 500 – 1000 ha in the selected districts with a unit cost of Rs 7000 per ha. Under the component a total of 6127 ha will be converted to organic with total financial cost of Rs 42.89 crores.

Deliverables of the project

- Sale of Organic Produce at premium.
- Increase in yield of major crops by 5 to 7 % in a span of 2 to 3 years.
- Reduction in the cost of production
- Complete recycling of Agri waste

- reduction in the carbon emission
- Improvement in animal health
- Improvement in soil organic carbon level
- Improvement in the soil microflora
- Normalization of pH
- Improvement in the availability of nutrient to the crops
- Ten to twenty per cent water saving due to moisture conservation
- Reduction in the soil pollution, air, water pollution
- Safe food availability

8b. Adoption and Certification of Organic Agriculture Management System with Online Traceability System for Facilitation of Exports and Domestic Retail Chain Uttar Pradesh

Increasing productivity and profitability of farmers while maintaining sustainability of farming system is the bottom line of agricultural policy in India. After green revolution, sustainability of most farming systems became a serious issue, the soils turned sick, the water resources depleted and ecosystem supporting biological control of insect pests and diseases alarmingly disturbed, the depletion of soil organic matter became cause of concern., coupled with food safety and environmental protection issues under WTO regime, new challenges to Indian food production system has emerged in the last decade. While organic farming has been considered the best alternative to rejuvenate the system, yet its adoption particularly by small and marginal farmers has been a major obstacle, not only their land holdings are economically unviable but their certification in organic farming system would be too expensive to avail the benefits of certified organic produce. The present project has a new model having innovative idea of cluster approach for organizing organic farmers which will go a long way in helping small and marginal farmers. Group certification will help in reducing the cost of certification, added with traceability advantage their produce will become of international standards.

India is going through a harsh time for the sustainable management of natural resources those are used in crop production as well as catering for the food

demand of our growing population. Moreover, the indiscriminate use of chemicals, fertilizers and pesticides has caused severe damage to our environment and challenged food safety. Indian farms are fast losing their sustainability. The Indian farmers need to be educated for conservation of environment and sustainable management of resources in order to meet the international standards of quality and safe food production. **The answer lies in conversion to “Organic Agriculture Management System”, its certification and marketing of certified organic agriculture produce.**

The project was approved in first SLSC held on March 3rd 2008 with the total budget cost of rs Rs 39 crores (Rs 10.67 crores was sanctioned).

Deliverables: *An electronic organic management system for Uttar Pradesh agro-products* will have a beneficial impact on producers (especially those from low input agricultural systems), Traders and other stakeholders, regulatory and control agencies and indirectly, but importantly, on the consumer by supplying the following major deliverables:

- *Risk management tools*, developed with all stakeholders including food producers, to establish Organic “guarantee systems” for tracing origin and verifying authenticity;
- Screening techniques for in and on-line inspection;
- Databases of analytical results for predictive mapping of food origin;
- Robust statistical procedures for producing novel product specifications;
- Improved methods of presentation of statistical data that will withstand legal scrutiny;
- Empirical data based learned consumer behaviour;
- On-line information systems available to Department of Agriculture, Uttar Pradesh and other Regulatory stakeholders;
- Reference materials for enhanced quality assurance
- Extensive technology transfers through a training network, demonstration and dissemination activities.

(ii) PROGRAMMES ON EFFICIENT USE OF SOIL & WATER RESOURCES AND THEIR MANAGEMENT

Degradation and erosion of natural resources – those parts of the natural world that are used to produce food and other valued goods and services and which are essential for our survival and prosperity, are one of root causes of the agrarian crisis. Land, water, soil, forest, biodiversity (plant, animal and microbial genetic resources), along with air and sunlight, are our natural resource upon which human life is dependent. But, the natural resources are rapidly shrinking and declining under demographic and socio-economic pressures, climate change, monsoonal disturbances, increasing frequencies of floods and droughts, sea level rise and glacial melting. Overuse of marginal lands, imbalances of fertilization and deteriorating soil health, extensive diversion of agricultural land to nonagricultural uses, misuse of irrigation water depleting aquifers and irrigation potential and causing salinization of fertile lands and waterlogging continue apace.

As regards water, our per capita water availability at the national level has declined rapidly, from 1986 cubic meter in 1998 to about 1200 cubic meter in 2005/06. Of our estimated some 350 million hectare meter (mhm) annual renewable water resources, around 160 mhm find their way back to the sea as river flow. On the other hand, over 29% of the blocks in the country are in the category of over exploited areas of ground water use. Since the availability of water supply is the major constraint in the state there is an urgent need to promote water conservation and to increase water use efficiency. The following programmes are proposed in project mode.

9. Installation of Underground Pipe Line System to check Surface water losses.

It is observed that the average water use efficiency is only about 40% which may be considered as very low considering the international specifications. There is immediate need to increase water use efficiency for optimum utilization of available water resources that will help in reducing the

cost of production and improving production potential. Availability of water for irrigation in general is good enough in the state to cover about 80-85% of cultivated land barring a few districts of U.P. However, ground water utilization has to face lot of hurdle of irregular and insufficient supply of electric power. Farmers have to use much costly, Diesel generated power to lift the water & irrigated the field.

Another problem faced by marginal/small & medium scale land owners is lot of wastage of land under creation of kachha channels. These channels harbour weeds and rodents, causing loss of crop and management problems. Some blocks of the various districts have been declared in the dark zone, where ground water has receded to alarming low level.

It is therefore proposed to offer incentive of 50% to selected farmers having tube wells to install under groundwater conveyance system (PVC pipes).. Total cost of such underground pipe based conveyance system is estimated to be Rs.50,000/ ha/farm. Government will provide subsidy as incentive to the tune of 50% i.e. Rs. 25000/cultivator.

(Note: Number of under ground pipe line may vary from district to district and this will dependent on the availability of water)

Objectives

- To reduce the surface water loss in irrigation from tube wells.
- To check weeds on bunds of open channels.
- To make more area available for cultivation.
- To increase water use efficiency.

Deliverables

- Thirty three per cent increase in water use efficiency.
- Ten per cent increase in cultivable area.
- Twenty five per cent increase in profitability of farmers.

The scheme will be implemented in 12 districts covering total of 50400 farms with total subsidy of Rs 126.00 crores.

10. DEVELOPMENT OF NATURAL RESOURCES

Limits to further expansion of surface and groundwater irrigations through big dams and tube wells are hitting a plateau. On the other hand, rainfed areas accounting for 55% of the cultivated area, have suffered neglect in the past. But, it is these areas which have high untapped yield and income potential. Much of the natural resources in these areas are fast degrading. The agriculture economy, especially in the low potential dry land regions, is seriously affected by degradation of the natural resources. Technology fatigue, soil fatigue, declining fertilizer response rate, depleting water resources, declining irrigation potential and capital stock, and increasing agro-climatic aberrations are the key factors behind the deceleration in agriculture growth. Natural resources management, therefore, has a strong bearing on all these factors behind the farm economy. It is therefore crucial to recognize that investment on farm production and livelihood support systems would not sustain until are properly converged with natural resources development.

In the state 325278 ha area is affected by ravenous problem (Wasteland Atlas-2003 published by DoLR, MoRD) which is being increased regularly through a dynamic process. Very little effort has been made to develop these areas which are socially and economically backward and have potential for economic returns as well maintaining the eco-system.

Though Government has made large investment for watershed development, yet the benefits of these intervention are not utilized to their full potential level due to lack of appropriate watershed plus strategies like promotion of production based activities, farming system improvements, livelihood support activities, small agro-based entrepreneurs, storage, post harvest, market support etc. These watersheds can be brought to their potential level by promoting economic activities utilizing the developed natural resources.

In view of above following projects area proposed

- a. Watershed Development: Treatment of arable land, non arable land and drainage-lines
- b. Ravine Stabilization: Protection of table land through land leveling and peripheral bunding, Development of shallow ravines for agriculture

production, development of medium ravines for economic returns through horticulture, afforestation, pasture development.

- c. Watershed plus activities: promotion of production based activities, farming system improvements, livelihood support activities, small agro-based entrepreneurship, storage, post harvest, market support etc.

The cost per ha under different schemes are given below

- Watershed development @ Rs. 12,000 per ha
-

Watershed plus activities in the developed watersheds through various programmes to optimize economic returns @ Rs. 6000 per ha
Ravine Stabilization (Protection of table land, development of shallow and medium ravines) @ Rs. 30000 Per ha

11. Adoption and Promotion of Precision Farming Techniques through Microirrigation (Sprinkler and Drip irrigation)

Water being the most important and precious input for cultivation, it is necessary to increase water use efficiency for optimum utilization of available water resources and to reduce the cost of cultivation as less water will be required to cover large areas. In order to ensure optimum utilization of water resources, the Micro Irrigation practices are the most promising practices. Its main objective is to increase the area under efficient methods of irrigation, viz. drip and sprinkler irrigation, as these methods have been recognized as the only alternatives for efficient use of surface as well as ground water resources. Micro irrigation systems enhance conservation and water use efficiency. It also helps to increase the fertilizer use efficiency. Being one of the main components of precision farming, it can be of great help for small and marginal farmers. Use of these techniques involves an expenditure of Rs. 40,000 per ha. a for various crops in five years. Each year covering 400 ha area will be covered. It is proposed to give a subsidy of 50 % on the system..

It is proposed to cover about 1.63 lakh ha area spread over 62 districts with proposed outlay of Rs 326.85 crores. The covered under RKVY will be in

addition to area covered under National Horticulture Mission or Central Sector schemes under precision farming.

12. Demonstration cum Training of Ridge and Furrow System of Paddy Cultivation for Increasing Water Use Efficiency and Ecofriendly Cultivation

Paddy is generally cultivated in puddled fields and is planted in standing water. Recently a new technique “transplanting of paddy seedlings on both sides of ridges under non puddled conditions” has been reported to have given good yield with only 50 per cent quantity of water use along with efficient utilization of added plant nutrients and better micro-climate which reduces the incidence of pests and diseases. Also, this method improves the soil texture and soil health, with lesser pollution of ground water. The weeds problem under this technique can effectively be controlled with the use of new herbicide(s) and with no residual effects on succeeding crops. In this method, bed planter is used for preparing ridges on well prepared field. Three to four weeks old seedlings of paddy are transplanted on both sides of ridges, keeping a distance of fifteen centimeters between the seedlings, ten centimeter above the bottom of the furrow. Thus 33 seedlings per square metre will be maintained as in case of conventional transplanting.

It is proposed to conduct demonstrations of this technology to convince the farmers that water can be saved in paddy cultivation without compromising with the yield. In rice growing districts targeted blocks will be provided with a bed planter for conducting demonstrations and a total sum of Rs. 30,000 will be spent on each training and ten trainings per block will be organized annually. The total cost of the proposal works out to Rs 79.52 crore in 46 districts.

Objectives

- Reduce water requirement of paddy by 50 per cent.
- To increase profitability of paddy farmers.
- To increase cropping intensity by saving water.
- Reduce emission of green house gases particularly methane by growing paddy under non puddle aerobic conditions.

Deliverables

- Increase in cropping intensity during Kharif by saving water in paddy fields and grow other crops.
- Reduced cost of paddy production by 50 per cent.
- Eco friendly cultivation of paddy.

13. Water Harvesting, Storage and Its Utilization for Irrigation

Water plays an important role to increase the productivity of the crops. In dry land areas where water deficiency is the major problem hinders increase in the crop area coverage and productivity. Because in such areas under groundwater is not reachable and rain is also deficient. In such areas catchment run off will be assessed by and measures will be adopted to harvest the runoff and rain water for their proper potential use various methods of harvesting . Through rain water harvesting structures the stored water can be utilized in localized areas for supplementary and live saving irrigation which is not earlier available presently. This will improve the income of localized pockets and check the migration of rural people to cities in search of livelihood. This scheme will also be applied in dry land or semi-dry land areas where water table is too low.

The main components are:

Small water storage check dams with natural catchment's areas, which so far wasted on account of unhindered runoff.

Deliverables of the project:

- Increase in cropping intensity by 15 per cent taking the present cropping intensity from 153 % to 175.5 %. Thereby bringing 15 % increase in production area.
- Reduction in the 'Usar' area.
- Increase in productivity on account of water availability at critical junctures.
- Increase in area under high value crops and profitability of small and marginal farmers.
- Improvement in quality of produce.
- Improvement in profitability through sowing at proper time.

14. State Water Tube well for Small and Marginal farmers_

The small and marginal farmers suffer severely due to nonavailability of irrigation water. This category of farmers does not have capital to construct tube well and it is uneconomic also to invest on tube well for small & fragmented land holding of this group.

In order to increase the average yield of the state, it is essential that these small and marginal farmers are provided irrigation water by installing deep wells as public investment where there is scope to utilize the underground water

. Each such tube well is likely to cost about Rs. 3 Lakhs.

It is proposed that 10% of the Panchayats in some selected district will be covered under this scheme. Total 50% Panchayats can be covered during 11th Five Year Plan in this district. In all it is proposed to cover 150 panchayats in 3 districts with an outlay of Rs 6.00 crores in XI plan.

(iii) PROGRAMMES ON SEED REPLACEMENT RATE (SRR), SEED TREATMENT AND PLANTING MATERIAL

The seed is the most crucial agriculture input for improving the production and productivity of crops. Better seed replacement rate coupled with proper seed treatment can largely contribute improving the yield of crops per unit area. Similarly availability of high quality planting material for horticulture crops can improve their productivity. The following interventions are proposed to be taken up under this programme:

15. Establishment of Seed Treatment and Demonstrations Units at Gram Panchayats Level for early and high germination rate to increase crop yield

The concept of seed treatment is the use and application of biological and chemical agents that control or contain primary soil and seed borne infestations. The benefits of seed treatment are as follows:

- Increased germination
- Ensures uniform seedling emergence,

- Protect seeds or seedlings from early season diseases and insect pest improving crop emergence and its growth.
- Improved plant population and thus higher productivity.

Presently, 70% requirement of seed is met from the farmer's own stock which goes for sowing without seed treatment. The demonstrations and training on seed treatment will be provided at gram panchayat level, and each year 20 % gram panchayats will be covered in a district. The demonstrations will be conducted in one acre area and the farmers will be trained simultaneously on the techniques of seed treatment. A total of 714 demonstrations will be organized during XI plan in 68 districts with a cost of Rs 28.284 crores.

16. Production and Supply of Quality Seeds and Planting Material for Improvement of Seed Replacement Rate (SRR)

The major field and horticultural crops of the district are wheat, potato, maize, pulses, rice and vegetables, where replacement of seed and planting material can boost the production and productivity. This programme is required to be taken in a project mode.

Except for hybrids in maize, rice and vegetable crops, the certified seed/ foundation seed stage-2 can be produced by the farmers. It is proposed that the farmer may get his crop inspected, so that instead of certified seed, he is able to produce foundation seed stage-2. So as to meet the desired seed replacement requirement, the government may provide foundation seed to one fifth of the farmer every year. The seed produced by these farmers will be supplied to the next lot of farmers in subsequent years. In some districts high quality horticulture or medicinal /aromatic plants, planting materials will also be provided.

To support nutritional kitchen garden as well as production of high value crops by small and marginal farmers, special emphasis is required to be given to provide high quality vegetable seeds to the farmers. Pulses and open pollinated vegetable seeds will be produced on farmers' fields by the state seed corporation under the supervision of the seed testing authority. To the extent possible seed can be purchased from private seed company (holding them fully responsible for outcome) and distributed to the farmers on subsidized rates. The

ambitious scheme is proposed to be implemented in 68 districts with total cost of 145.145 crores during XI plan period.

17. Programme on Promotion of Cultivation of Composite Maize for Improving Productivity

In order to improve the productivity of maize to increase the availability in the poultry feed and industrial raw material, intensive efforts are required. The maize growers will be required to be incentivised for following components:

1. Adoption of hybrid
2. Balanced use of fertilizers
3. Control of stalk borer

It is suggested that on each of the above components 50% subsidy should be given to establish the commercially viable high productive maize cultivation

Scheme will be implemented in the districts where this crop form significant crop area. *i.e.* over and above 20,000Ha per district to reflect the improvement in the yield. Total financial outlay for this component is proposed for Rs 27.925 Crores.

18. Programme on Promotion of Cultivation of Hybrids of Bajra for Improving Productivity

Bajra is millet, the cultivation of which is done in poorly irrigated areas in rain fed conditions. It is a staple food for the poor and also having good dietary fibre. The farming of bazra is mostly taken up, in the traditional system without focussing on any scientific approach to promote its cultivation or to avail better economic returns to encourage farmers to take it up. The productivity can be boosted with introduction of hybrid varieties and farming practices. Farmers may be given subsidy for hybrid seed to be distributed by the government along with extension support for improved practices. Total financial outlay for this component is proposed for Rs 12.125 Crores.

19. Programme on Promotion of Cultivation of Oilseeds for Improving Productivity

India invests a lot on importing the cooking oil every year. In order to save the foreign exchange and to increase the availability of cooking oil at reasonable & competitive price, it is urgently required to improve the oil seed production.

In most cases the oil seed crops like groundnut, mustard, rye are grown in arid/ semi-arid conditions. Use of fertilizer, particularly phosphate fertilizer is very low. In case of mustard there is scope for introduction of hybrid seed to increase the productivity. Early stage mortality in case of mustard, is too heavy on account of lack of pest control. Keeping the above agronomical constraints in to consideration and incentivise the farmers to increase the area of oil seed and to encourage for its intensive cultivation, following schemes are suggested:

Unit Incentives:

S.No.	Unit	Amount
1	INM subsidy/Ha	50% upto Max. Rs.1250/Ha
2	IPM	50% or upto Max. Rs. 750/Ha
3	Distribution of Portable sprinkler	50% or upto Max. Rs. 7500/Ha

It is proposed to target 10,000 ha of new oil seed area either in existing farmers' field or at New farmers/ New pocket area in some selected districts. A provision of Rs 172.603 crores has been envisaged for XI plan period.

20. Promotion of Summer/Winter Pulses on Sustainable Basis to Optimize the Farm Profitably

1. India in general and U.P in particularl needs to increase the availability of **Pulses**, as important nutrients contributor and this can be achieved by increase in Cropping intensity and Profitability through pulse cultivation in target area.
2. The Pulse crop additionally contribute to availability of **Nitrogen** as well as increase the soil organic carbon if residues are incorporated in the soil
3. It is proposed to address the enhancement of area and yield for Pulses under NFSM norms. However, two different basis will have to adopted in

the efforts.

- In existing Pulses pockets, farmers should be given target of putting 50% more area under pulses. Over the last record on increased area farmers should be provided incentive area farmers should be provided incentive as per NFSM norms
- In the pockets or farmers where Pulses are not taken incentive to pursue to opt for Pulses cultivation.

Unit Incentives:

S.No.	Unit	Amount
1	INM subsidy/Ha	50% upto Max. Rs.1250/Ha
2	IPM	50% or upto Max. Rs. 750/Ha
3	Distribution of Portable sprinkler	50% or upto Max. Rs. 7500/Ha

Selected district will target 5000 Ha of new pulse area either in existing farmers field or at New farmers/ New pocket area with total outlay of Rs 296.7 crores.

Note: Those farmers who are already availing the benefit under NFSM scheme will not be entitled for additional incentives.

21. Promotion of Basmati Rice Cultivation for Export in Compliance with Global GAP

High cost of Production and moderate yield coupled with excessive insect and disease problems are limiting factors for expansion of Basmati rice of production area. It is proposed to cover and incentivise 1000 ha area in selected Basmati growing districts @ Rs5000/Ha to support the farmers on **INM/IPM/Disease Control**. The scheme is proposed with an outlay of Rs 3.50 crores to cover 7000 ha area in U.P. spread over 6 districts.

22. Enhancement in Production Capacity of Seed and Planting Material at Government Farms

Seed is one of the very important component of crop production which is directly related to increase in 15-20% productivity per ha of crops like Wheat,

Paddy, Pulses and Oil seeds etc. In U.P state almost every zone has their foundation seed production farms. But under present situation the strengthening of seed farms is urgently required to meet the farmers seed requirement up to some extent. Most of the state seed production farms are having very poor infrastructure. Therefore, the quality and quantity of the seed production by the farm is affected by this and that way. Therefore, under RKVY providing financial support will be influential in meeting quality seed requirement through development of farm infrastructure during the XIth five year plan. The provision of budget during XIth **Five Year Plan** is to be made available for strengthening and maintenance of seed production farms.

23. Programme on Promotion of Cultivation of Jowar

Jowar is one of the major crop for rainfed and irrigated areas of Kharif season, which are being used by the farmers as a green fodder, dry fodder & grains. Therefore, the promotion of hybrid Jowar cultivation should be promoted in the desired districts of the state.

Deliverables of the Project

The major outcomes of this programme are likely to be increase in productivity by 10-15%. The other deliverables are

- Quality seed and planting material will become available to the small and marginal farmers particularly of high value crops to boost their profitability.
- The seed borne diseases and insects can be controlled at a minimum cost by seed treatment and it is expected that farmers of all strata will be benefited and their income will be raised by 10-30 %.
- High quality planting material will result in better quality of produce, thus higher returns to the farmers.

(iv) PROGRAMMES ON TECHNOLOGY DISSEMINATION

The extension structure of the state is deficient in staff as well as the present status of extension services in Uttar Pradesh is not based on information and communication technology. It is required that for reaching out every farm unit a new programme *i.e.* based on information and communication technology be adopted. The outline of the programme is given here under:

24. Customised Farmer Training & Extension and on-Line Agriculture Monitoring Through Application Of ICT at Block Level

Rashtriya Krishi Vikas Yojana (RKVY) envisages doubling of growth in agriculture sector at national level from 2 per cent to 4 per cent. In a sector like agriculture which is highly influenced by weather and soil conditions in a vast and varied country like India achieving and sustaining the target of 4 per cent growth is a challenge. Increasing farm productivity and profitability alongwith sustainable management of its natural resources is the bottom line of agriculture policy in India. The targets of RKVY can be achieved with efficient management of existing resources. Hence location specific need based customized trainings and extension activities support by ICT in farm sector can help achieve the desired results in shortest time period. This in turn calls for a dedicated work force of extension workers equipped with ICT tools and knowledge of its application.

The present project has very strong inbuilt component of customized farmer training and extension activities for which a dedicated work force will be deployed equipped with ICT tools. The project envisages deploying extension workers one per block so that at least one person from one land holding can receive training specific to local agroclimatic conditions with regard to application of manures and fertilizers based on soil fertility status, selection of right kind of planting material suited to the area, optimum use of inputs, Integrated Nutrient Management, Integrated Pest Management, harvestings based on market information, post harvest handling of produce and finally its competitive marketing. Eventually the deficit of 13, 000 AEO's will be fully taken care of by the present project. The project will not only help the state in saving perpetual expenditure on permanent recruitment of field extension staff but will also improve the effectiveness of agriculture extension activities through application of ICT. The project will be operating in synergy with Department of Agriculture.

Rationale

The state of Uttar Pradesh has nearly 22 million agricultural holdings which is the highest in the country. It is expected that as per project target, at least one person from each land holding will receive customized training as per

the local needs of his farm which will result in better management, lesser risk and better marketing. **Quality planting material coupled with location specific customized farm training will lead to optimum and efficient use of resources which in turn will lower the cost of production on one hand and increase productivity on the other hand. Low cost of production and higher productivity converge to bring higher profit which is the present day need to keep farmers in business.**

On line availability of data such as actual cropped area under various crops, soil characteristics, rainfall, temperature, relative humidity, sunshine, evaporation from across all the regions of Uttar Pradesh, while the crops are actually in the field, coupled with ground truthing data of actual cropped area along with inputs and management practices used will help efficient agriculture management system in U.P. This will allow adjustment of sowing times, choice of crops for the next season crop growth assessment, management and forecast of diseases and pests, marketing, prediction and management of gluts and shortages. This will help farmers policy makers, planners, scientists, exporters and importers in arriving at important decisions. And last but not the least the data will help in developing long term sustainable strategy for agriculture growth and development in Uttar Pradesh. **The data will be useful both for micro and macro planning in agriculture. The project will ultimately bring U.P. farmers in line with domestic market requirements as well as for exports.**

Objectives

- To provide need based, location specific customized trainings
- Increase farm productivity and reduce input cost by efficient use of resources and inputs
- To provide online information on weather parameters, net area sown and crop profile
- To put in place risk assessment and Quick alert system
- Yield assessment
- To provide online market intelligence for higher profitability
- To predict gluts and short falls in crop produce

Expected Outcome

OUTCOME	INDICATOR
1. Increase in productivity of crops at individual farm units.	Increase in yield/unit area can be verified from annual farm records.
2. Lower production cost through improved input use efficiency.	High input use efficiency of water, fertilizers and pesticides.
3.Scenario of area under different crops for benefit of planning and management by officials	Online availability
4. Diversification and reduce risk for farmers and planners.	Online cropping pattern
5. Mid course corrections on arronomic pracices depending on weather conditions.	Online monitoring
6.In season alarm system for disease	Online monitoring
7.Insect pest and disease forecast to control epidemics	Online monitoring
8.Yield assessment & forecast	Yield assessment & forecast
9.Timing produces for market by planting time and agronomic practices	Online assessment and forecast
10.Export/import decisions	Online assessment and forecast
11.Managing gluts & shortage of perishable	Training and online information
12.Integrate Disease & insect pest	Trainings
13.Integrate nutrient management	Trainings
14.Conserve natural resources & ecofriendly systems - Soil analysis for nutrient, organic matter and water	

The estimated cost for U.P. during XI plan period will be Rs 180.45 crores.

25. Establishment of Integrated Farmers Training Center (IFTC) at District Level

The Agri-technologies are being upgraded all over the world constantly to optimize the production in the ever-changing climate. Significant improvements have taken place in varieties; seed technology, fertilizer use, better water

management practices and efficient management of pest and diseases, but these have not yet reached the farmers. Therefore, there is a need to start integrated farm training centres where the farmers can be trained and demonstrated the latest technologies in all components of farming *i.e.* crop husbandry, dairy, animal breeding, poultry, fisheries and other ventures such as bee keeping, mushroom production, post harvest handling and marketing. This way transfer of technologies from lab to land can be executed at nominal cost.

Training Units	Components
Crop husbandry	<ul style="list-style-type: none"> • Precision farming • Natural resource management training • Seed and planting material unit • Crop protection unit • Farm management and marketing unit • Organic farming unit • Post harvest management unit
Animal husbandry, Fisheries and poultry	<ul style="list-style-type: none"> • Dairy unit • Cattle and livestock improvement unit • Veterinary unit • Fisheries unit • Poultry unit
Entrepreneurial ventures	<ul style="list-style-type: none"> • Bee keeping • Mushroom production • Home scale food preservation • Sericulture

Infrastructure

Following Infrastructure will be required at each training centre

1. Hostel for training participants- 30 rooms with the facility to stay 4 persons per room.
2. Halls for training- 4 numbers.
3. Demonstration units- 50 numbers.
4. Fifty staff quarters.

Note: The **Integrated farm training centre** will be setup in the existing Agriculture Deptt., Farm

Trainees will be provided with subsidized lodging and boarding during their training period which is included in the proposed management budget.

Desirables:

- A major constraint in increasing the production and productivity is poor transfer of technology to the farmers as well as very few on farm trials. The present programmes on technology dissemination ensure that latest technology reaches to the farmers. This herculin task will be possible through application of information and communication technology. It is expected that farmers profitability will atleast be enhanced by 25%, simply by adopting latest techniques and technologies in crop sector
- The global vision of farmers regarding modern agriculture will be developed.
- The farmer will access to market information and latest know how.
- The demonstrations on farmers' fields will not only directly result in higher production, but will trigger a chain reaction in adopting new technologies by others.
- The heavy investment in research and education will be translated into real production.

The proposed plan will be implemented with a total outlay of Rs 883.305 crores in U.P. during XI plan period.

26. Establishment of Agri- knowledge and Market Information Center at Block Level

The reformation of agricultural marketing sector is another important area to which the Government is attaching a lot of significance. With the advent of information technology and its application in nearly all social and economical fields the rural population which is basically farming oriented is still not driving the benefits compared to the urban lot and other economic sectors. Therefore it is proposed to establish agriculture knowledge and market information centre across the state in all the blocks. The main objective of the project is to develop marketing infrastructure in the state to cater to the

requirement of production and marketable surplus of various farm products and allied sectors including dairy, meat, fisheries and minor forest produce. It is aimed at progressively linking important agricultural produce markets spread all over the state and the Marketing Boards/ Mandies and other agencies for effective exchange of market information. The establishment of market information centres and net work will facilitate collection and dissemination of information for better price realization. These centres will be equipped with Market related, Price related, Infrastructure related and promotion related information for efficient marketing.

The proposed plan will be implemented with a total outlay of Rs 509.945 crores in U.P. during XI plan period.

27. Knowledge Dissemination at Field level by Subject Matter Specialist (SMS)

Farmer currently, in general gets the knowledge from mouth publicity, in most of the cases such information may not have solid scientific base. The information which reaches to the farmers through such un systematic manner is not reliable and correct.

For adoption of upgraded technologies at farm level, farmer needs presence of subject matter specialist in the vicinity for periodical guidance, field visits, capacity building etc., they can realize confidence of farmers with commands on improved technology that requires to be adopted.

It is therefore, proposed to create a wide spread network of subject matter specialists in all the districts of UP, to achieve fast dissemination of agriculture technologies at the field level.

It is proposed to place one subject matter specialist for every two Nyaya Panchayats across the state. To cover all the nayay Panchayat in all 17387 SMS will be appointed at a cost of Rs 177.342 crores during XI plan period.

28. Publication and Mass Campaign for resource development of Agri and Allied Sector using ICT

The publication training and mass campaign system has a vital role in the overall development of agriculture and allied sector. However, present agriculture extension system is not designed to meet the integrated requirement

of the farmers. According to the multidimensional needs of the farmers, the publication awareness and mass campaign with the full support by training will provide extra and latest information to the farmers in their respective fields as and when required. Therefore, to make timely available and proper use of printing materials and electronic media related to every modern technology can be passed on very quickly up to the grass root level (learning by doing and seeing by doing) and to cover every village of the entire district and state. A sum of Rs 265 lakhs are proposed for XI plan period for such publicity and awareness campaigns.

29. Training cum Demonstration of Integrated Pest Management in Major Crops to Decrease the Pesticide Load in Food Chain

Insects and diseases control based on chemical insecticides & fungicides has played havoc with soil health, environment and quality of food products in the state. Following disadvantages have cropped up:

- I. Constant increase in the cost of pest control due to increase in the cost of pesticides.
- II. Resistance developed in pest & diseases requires repeated application and involves higher cost.
- III. Minor pests are becoming major problem in certain situations.
- IV. Heavy residue problems in Vegetables & other food products such as foodgrains, oil seeds, fruits, particularly mango, banana, bittergourd, tomato, brinjal, okra, cabbage, cauliflower.
- V. Parasites & Predators have been killed
- VI. Soil, Water, Air and even human & animal milk is having high pesticide residues.

In order to save the soil, sub-soil-water, air, and living beings from this tragic situation, it is essential that Integrated Pest Management programme should be introduced at large scale, particularly in cash crops described above. Introduction of Integrated Pest Management will include following steps:

- viii. Farmers training
 - i. Concept of IPM utility over chemical approach
 - ii. Cultural method

- iii. Mechanical method
- iv. Biological method & Physical Method
- v. Agronomical practices
- vi. Time of sowing to reduce the incidence of Pests & diseases
- vii. Mixed Cropping
- viii. Border catch crop
- ix. Mixed catch crop
- x. Usefulness of Bio-pesticides
- xi. Useful tool of Bio-pesticides like *Beauria Basiana*, *Verticilium*, *Metarhizum*, *Trichoderma*, *Pseudomonas* etc.
- xii. Use of botanicals, like Neem and its various parts, karanj etc.
- xiii. Liquid herbal base insecticides like fermented cow dung + Cow urine + Leaves of Neem, Ipomea, etc.
- xiv. Use of other tools like sex pheromones, light traps, trench method etc.

It is proposed to go in for training cum demonstration of IPM technology on the farmer fields and following financial norms may be adopted:

Four training cum demonstrations per block are suggested in one year which cost Rs. 20,000 per training and Rs. 5,000 for inputs. For demonstration minimum size of area should be half of an acre. In all it is proposed to conduct 263592 demonstrations through out the state in 59 I district with total financial outlay of Rs 32.949 crores.

30. Training and Demonstrations of Weed Management in Major Crop to Reduce the Yield Loss

The association of weed with the crops is well known because weeds compete with the crops for various growth factors like light, space, nutrients, moisture etc. The competition of weeds reduces the crop yield from 15 to 25 per cent depending upon the type of weed flora, its intensity and duration of competition. The introduction of dwarf genotypes with the high inputs uses like fertilizers and irrigation requirements has further aggravated the weeds problems.

31. Farmers training and Demonstration at Krishi Vigyan Kendra

It is imperative that the agriculture extension is integrally linked with agriculture research and developments in order to disseminate the updated information about the new technologies etc to the farmers. In order to rejuvenate and reform existing agricultural extension support system to fill the extension gap through available resources, it is required to strengthen the grass root institutions available for the purpose. KVK/ KGK are very prestigious unit in the district which provides latest production technology to the farmers by different ways. To provide latest information and training to the farmers, it is necessary that KVK/ KGK must be kept up to date,, so that farmers may get their benefit , suggestions to adopt latest techniques in their farms.

Therefore, strengthening of KVK/ KGK located in the state under present situation is important to increase the productivity of state in agriculture sector. The project will cost Rs 70.52 crores to state during XI plan period.

32. Farmers Study Tour Within and Outside the State for exposure and Motivation towards Commercialized Agriculture

In order to induce competitive instinct in the minds of farmers of lesser developed areas, it is essential to expose them to well develop pockets of U.P. at first stage.

These visits will strengthen the confidence of farmers in new technologies and see the practical adoption of new technologies. Personal interaction and listening to success stories from the benefited farmers will change the mind set and motivate to adjust the changes in their own package of practices.

In each district the progressive farmers should be included in the proposed study tour. Various agriculture segments for improvement can be selected like: Improved fish culture visit from Western to Eastern U.P, Advanced potato cultivation from all over up to Kannauj/ Sitapur/ Agra, better farm mechanization to Western U.P all over the state. In addition to above farmers can also visit other states like:-

Maharashtra & Valsad (Gujarat) to see the oranges, mango cultivation, Nasik for grapes, onion, Satara for ginger cultivation, Haryana/ Punjab/ Gujarat for dairy etc.

To cover 500 farmers per block during XI plan period a sum of Rs 63.93 crores are proposed.

33. Krishi Vikas Yatra

To make extension system more popular and attractive, extension support through Krishi Vikas Yatra will have a greater impact on farmers on the latest technologies in farm production system. It will not only bring confidence to the farmers but also have a wide spread coverage in a shorter duration.

34. Publicity of New Technology through Multi & Print Media

Mass Media Support to Agriculture Extension has proved very successful in the recent past. The programme is proposed to utilize the existing mass media and print media infrastructure for wide spread coverage of information and knowledge to the farming community.

The publication training & mass campaign system has a vital role in the overall development of agriculture and allied sector. However, present agriculture extension system is not designed to meet out the integrated requirement of the farmers. According to the multidimensional needs of the farmers, the publication awareness and mass campaign with the full support by training will provide extra and latest information to the farmers in their respective fields as and when required. Therefore, to make timely available and proper use of printing materials and electronic media related to every modern technology can be passed on very quickly up to the grassroots level (learning by doing and seeing by doing) and to cover every village of the entire district and state.

35. Strengthening of Government Agriculture Workshop

It is imperative that the agriculture advancement is integrally linked with agriculture advancement through public machinery support to farmers. In order to rejuvenate and reform existing workshops to fill the gap through available resources, it is required to strengthen these workshops.

Manufacturing of agricultural implements & tools by the Government Agricultural Workshop is one of the important components, which may be indirectly helpful to increase the productivity by the small & marginal farmers. Therefore, Strengthening & upgrading of Government Agricultural Workshop is one of the important components to increase the production capacity of implements as and when required.

36. Regional Agriculture Research station

In conformity with the extension reforms proposed in the Policy Framework for Agricultural Extension, support to regional research stations will be provided under the project to strengthen these organizations to facilitate development of location specific farming innovativeness for the farmers

Strengthening & upgrading of R.A.R.S. in all respect should be very fruitful to conduct different types of research activities under different Agro-climatic conditions & also producing of quality seed material, as well as to generate knowledge (seeing by believing) to the field staff and farmers of the region.

37. Soil Conservation Training Centre

Most of the Soil Conservation Training Centres are having poor infrastructures with insufficient knowledge provided to the farmers. Henceforth, to provide the latest technical knowledge regarding soil conservation and training to the field staff and farmers, these training centres must be upgraded at district to regional level for their competence.

These Soil Conservation Training Centres are useful institutions to impart training on management of natural resources which are fast depleting and is a concern for agriculture growth, Strengthening of these centres will help field functionaries and project officers of State Government engaged in implementation of Soil and Water Conservation Programmes in getting training on participatory Watershed Management, Planning & Designing of land development programmes, Water Harvesting Structures , Project Formulation, reclamation of problem soils, soil health care, Agro – forestry & Planting techniques etc.

38. Strengthening of training hall at sub division level

Efforts will also be made to strengthen the available training halls at subdivision level to create infrastructure for imparting need based training to various stake holders associated in agriculture.

39. Farm field days

Organization of farm field days have a long standing impact on farmers on developed technologies in agriculture and allied sector. Under this programme resources will be provided for organizing such field days in a systematic manner.

40. District Level Farmer Fare/Gosthi

To provide the latest Agri-horti technology to the farmers, there is an urgent need to organise farmer fairs at district & block level with the goshtis, therefore, the district farmers may be fully equipped with latest knowledge and inputs.

Organization of district level fares will create a platform for farmers from various corners of the districts to share their experiences and will have great impact on farmers on the successful agriculture parctices. Under this programme resources will be provided for organizing such fares on regular basis.

41. Farmer Fare at Block Level

Similarly organization of block level fares will create a base for farmers from various corners of the blocks to share their experiences and will have great impact on farmers on the successful agriculture parctices. Under this programme resources will be provided for organizing such fares on regular basis.

42. Agri-Clinic at Block Level for Field Crop Advice and Plant Protection Centre

Agri-clinics have been developed to provide expert services and advice to farmers on crop package of practices, crop protection from pests and diseases,

market trends, and prices of various crops in the markets and also clinical services, which can enhance productivity of crops and check the loss due to inadequate knowledge.

Objective:

- To provide guidance and consultancy services for control of various pests and diseases, weeds etc.
- To undertake regular visits to provide advice, response to enquiries, undertake control operations using own equipments etc.
- To further strengthen these Agri-clinics, it is proposed to provide Rs 213.34 crores during XI plan period.

(v) PROGRAMMES ON FARM MECHANIZATION

Farm mechanization plays a very vital role in timely and precision performers of different farm operations. In areas of intensive agriculture i.e. where two or more than two crops are taken in a year a use of machinery can greatly enhance the productivity by timely performance of various agricultural operations and thereby improving the input use efficiency. However, this is the most capital intensive agricultural input. The various interventions proposed are as follows:

43 Establishment of Farm Mechanization Centers at Panchayat Level to Minimize production cost by reducing labour input in farming

Interaction with village panchayats in the district revealed that there is need to make available farm machineries/ equipments to small and marginal farmers. However, they cannot afford to purchase costly farm machineries as it will not be economical for their small holdings. Further lack of farm machinery at small farms brings drudgery on farm women. So the village level cooperative societies or farmers clubs, or entrepreneur should be encouraged to purchase the machinery which may be subsidized @ 100% of the cost and this should be made available to the farmers on custom hiring basis.

S. No.	<i>Machinery</i>	<i>@ cost (Rs lakhs)</i>
1	Bed Planter	0.50
2	Zero seed Drill	0.30

3	Seed cum fertilizer drill	0.30
4	Rotavator	0.65
5	Ridger	0.25
6	Tractor	4.5
	Total	6.5

Each Nyaya Panchayat is to be covered in the five year plan (few in each year) It is proposed to provide one set of equipment to each Nyaya Panchayat, which will cost about Rs. 6.5 lakhs per set. To cover all Nyaya Panchayat a sum of Rs 455.69 crores have been proposed under RKVY under the current plan period.

Deliverables of the project

- Will help in mechanization of small and marginal farms at marginal rent.
- Reduce drudgery on women.
- Will make crop sowing at optimum soil moisture.
- Increase efficiency and thus profitability of farm sector.

(vi) PROGRAMMES ON ESTABLISHMENT OF STATE OF THE ART NEW LABORATORIES

44. Establishment of Tissue Culture Laboratory

There is need for generating quality planting material in large quantities and for this a state of art tissue culture lab need to be established in selected districts of the state, tissue culture labs will provide quality planting material of horticultural crops.

A sum of Rs 2.60 crores are proposed for XI plan period for establishment of tissue culture laboratory in total 2 districts.

45. Establishment of Modern Food Testing Laboratories including Facilities for Soil, Fertilizer & Bio fertilizer, Pesticide Residues to Study Soil Ionic Balance and Chemical Residues for Food Safety

The indiscriminate use of pesticides on field and horticultural crops as well as their use in animal husbandry and dairy has resulted in the alarming increase of pesticidal residues in human and animal food chains. All crops are being frequently sprayed with high concentration of harmful pesticides. Moreover, farmers do not follow waiting period norms and sell the produce in the market immediately after spray. Cotton seed/ fodder carrying heavy Pesticide residue is fed to cattle which makes milk, milk products and meat unsafe for consumption. Most of our export consignments of farm produce are rejected because they carry heavy load of Pesticidal residues. It is essential therefore to sample and test the produce before its marketing in domestic or export markets. It is a must in present day farming to meet food safety requirements of all farm produce originating from plants or animals. It is proposed to establish three Pesticidal Residue Testing Laboratories of state of art at Merrut, Lucknow and Allahabad with a cost of Rs 2.70 lakhs per laboratory. For three laboratories Rs 48.555 crores are proposed.

(vii) PROGRAMME FOR SMALL AND MARGINAL FARMERS AND WOMEN EMPOWERMENT

46. Promotion of Protected Cultivation of Vegetable Crops under Low Tunnels for Early Production of Vegetables

Majority of farmers in most of the district are small and marginal, their holdings are uneconomical, if provided with capital support and know how, and they can compliment production of cucurbits out of main season in protected structure like low tunnels. The cost of material for structure of low tunnel including plastic for one ha is Rs. 50,000. Small and marginal farmers have very small holding and it is expected that not more than 500 sq mt area will be put under plastic tunnel at one time. Accordingly, the government should support 50 % cost of 500 sq mt per farm unit. The programme will be launched in 67 districts with total financial outlay of Rs 72.92 crores.

Objectives

- To start early crop of vegetables when the season is still cool.
- To help off season production of vegetables for higher profits.
- This technology will improve the productivity and increase cash flow to the farm women.
- Insect – pest and disease management can be done more effectively.
- Vegetable being high value crops, a better protection from weather conditions ensures crop safety and safeguards against crop failures.
- Higher vegetable production leads to better nutritional security.
- Use of low tunnels for raising nurseries of winter vegetables under protection ensures production of quality planting materials and safeguard of expensive hybrid seed.

47. Augmentation of Quality Seed Potato Production at Farmer's Field Using 'Seed Plot Techniques'

To improve the production of potato, on sustainable basis, it is important to assure seed replacement with quality seed of standard varieties. In the first year of the scheme 50% potato growing blocks will be covered and in the next coming year rest 50% blocks will be covered, so that by the end of 11th Plan the entire potato area is under improved varieties. Hence the support will be utilized in the first two years of the project.

The components included are

- i. Providing subsidized foundation seed during (2008-09)
- ii. Plant protection for raising seed in seed plot technique.
- iii. Technical know how and operational charges

Note: This scheme is required to be converged with National Horticulture Mission and Agri Export Zone.

48. Demonstration and Supply of Healthy Nursery in Vegetable Crops

Vegetable crops including onion, cole crops, capsicum, chillies, tomato and brinjal are raised through nursery. All these crops are high value and highly productive. They suit to small and marginal farmers and especially it is the

women who take care of vegetable production. Healthy nursery of these vegetables ensures the success of vegetables production venture. It is therefore proposed to train the farmers on the practices of raising healthy nursery.

Objectives

- To raise healthy nursery of the high value crops through high quality seed to ensure crop success.
- To provide quality-planting material of costly seeds i.e. hybrids.
- To boost the income of small and marginal farmers.
- To increase cash flow to farmwomen through raising quality nursery of vegetables crop for own use and for sale to other farmers.

Technology

Small beds of 3 m X 1 m are made, these are raised by 10 cm. Well rotten FYM or vermicompost is added to each bed. The beds are drenched with formalin solution (1 part formalin: 7 part water). After doing so the beds are covered with polythene sheets and left as such for one week, so that, formalin fumes penetrate into the soil and it is sterilized properly. The covering with polythene also provides solar sterilization of soil. After one week the polythene is removed and the soil is raked a number of times for atleast one week, so that, formalin fumes are completely driven out. As a check, a handful of soil is taken out from the bed and smelled to feel if there are any fumes of formalin smell left in the soil. Just in case, if the soil still smells of formalin it should be left for another two- three days. Normally, it takes 2-3 weeks time to prepare the nursery bed and sterilized them for sowing of seeds. Therefore, bed preparation programme should be started atleast three weeks in advance of actually planting the seeds in nursery beds. Since the vegetables seeds particularly hybrids are very costly healthy nursery is very important. Further, it should be borne in mind that the seeds are sown in line and it should not be congested.

Deliverables

- It will boost vegetable production particularly of tomato, capsicum, chillies, brinjal, cauliflower, cabbage, knol khol, and onion.
- Lower the cost of production due to less disease attack.
- Help to produce safe vegetables free of pesticides.

- Increase farmer profitability.
- Encourage women to produce and sell vegetable nursery of high quality.

49. Improvement of Productivity and Post Harvest Handling of Onion and Garlic

In Some district onion and garlic are upcoming crops and at present 1052 ha is under onion and 267 ha are under garlic. The productivity of onion is 17 qt/ha and garlic is 6 tonne/ha, it can be increased to 30 tonne/ha and 10 tonne/ha respectively. Moreover if these are cured in rooted sheds their post harvest loses can be minimized. Therefore scope exists for area expansion and productivity increase in these crops.

50. Development of Nutritional Kitchen Garden for Balanced Nutrition at Village Level and Involvement of women in Horticulture

Rural people particularly women and children suffer from lack of vitamins and minerals. Nutrition garden can play an important role to solve this problem, besides this, nutritional garden also help in economic gains economy. On an average, a eight member family will require 2.4 kg vegetables and 800 g fruits per day. This production can be obtained from 500 sq mt area. Twenty villages from each block of the district will be selected and one kitchen garden will be laid out in each village each year. They will be provided with input and training to raise the kitchen garden. Besides, the seed mini kits of summer and winters vegetables and three fruit trees (Amrapali, guvava, banana, citrus/papaya) will be distributed to each unit. Under this programme, it is proposed to cover 62 districts with total financial outlay of Rs 40.139 crores.

51. Potato Grader for each Block

To improve marketing of potato and to help farmers in gaining better remunerations, it is proposed to set up potato grader units in each block to make available the facility to the farmers in their vicinity.

52. Biofencing of Karonda Plantation to Check Treepassing of Wild Animals and Prevention of Anna Pratha

Biofencing of Karonda Plantation is to check the damage created by the wild animals an important component in the concerned districts. This type of biofencing helps in protecting the field bunds and maintaining the bio-diversity. This type of biofencing will also improve the bioasthetic planning as well as to helpful to seed multiplication of Karondas for further multiplication in the areas, to check the air pollution and moisture conservation. This type of biofencing will generate some income and invite fruit processing industries at village level.

53. Strengthening & Govt Agriculture Farm & Garden

Strengthening of state farms and gardens will meet the requirement of farmers in providing seed and seedlings for both field and plantation crops. It is proposed to invest in developing adequate facilities in these farms / gardens.

54. Machan method of cultivation in cucurbits

Machan method of cucurbits cultivation is an old method which provides more yield with qualitative fruits to the farmers. This method is also helpful to check the diseases like Powdery Mildew. This type of practices may be enhanced Cucurbits cultivation during summer & rainy season to provide moisture conservation, when there is a scarcity of vegetables.

55. Onion, Turmeric, Chilly, Garlic and Coriander

Every year in the states like U.P., the demand and trend of spices cultivation is increasing with more profitability. To cover up more area by the farmers, 25% subsidy on planting material (Onion, Turmeric, Chilli, Garlic, and Coriander) be provided to the small and marginal farmers.

These spice crops have great scope to help farmers in getting better economic returns from small farm units. It has been proposed that Government may consider providing subsidy on planting material for these crops to encourage farmers in raising these crops.

(viii) PROGRAMME ON ENTREPRENEUR DEVELOPMENT

56. Entrepreneur Development in Commercial Vegetable Production

A total of 100 ha area in each block are selected per year for commercial vegetable production and to promote that quality hybrid vegetable seeds, fertilizer and pesticides will be provided @ 50% subsidy. For this accordingly, the government may support for Quality hybrid vegetable seeds, fertilizer and pesticides may be provided @ 50 % subsidy, which will cost around Rs 10,000 per ha.

- Total cost of the project : 10.00 lakhs

Under this programme, it is proposed to cover 133260 lakh ha area, spread over 9 districts with total financial outlay of Rs 13.326 crores.

57. Entrepreneur Development in Floriculture

There is a good scope for development of floriculture in the some district as there are ready markets for cut flowers such as Gladiolus, Roses, Marigold and Tuberose.

Commercial floriculture is very beneficial for the areas particularly located near to Metros. Establishing ventures in commercial floriculture is capital intensive and farmers need financial support for such an innovative project.

The provision is kept for

- i) Making available noble varieties of Gladiolus Corms (Support subsidy of Rs. 200/100 corms), Tuberose bulbs (Support subsidy of rs. 100/100 bulbs),
- ii) Bulb/Corms Store house (with 50 % subsidy)
- iii) Pack house (with 50 % subsidy)

Under this programme, it is proposed to cover 17 districts with total financial outlay of Rs 64.455 crores.

58. Incentive for Establishing Backyard Mushroom Units

Uttar Pradesh being an agricultural state, over 65% of the population lives in villages and depends upon agriculture. The land holdings are small. The farmers are generally small and marginal. Most of the farmers are not getting good returns from agriculture and want to adopt other agriculture related activities to enhance their income. Hence adoption of Dairy farming, sericulture, fishery, floriculture, Mushroom and Bee-keeping avocations are the need of the hour. Mushroom cultivation requires no land and can be grown in the houses / small huts. This crop is of short duration and does not pose marketing problem.

Mushrooms have been valued throughout the world both as food and medicine. They are a rich source of nutrition and form a major chunk of health foods. Fat content in mushrooms is low compared to other foods. The fatty fraction consists predominantly of unsaturated fatty acids such as linoleic acid. They are the perfect food for maintaining a healthy heart and cardiovascular system.

The two most commonly grown species of mushroom in India are white Button mushroom and Oyster mushroom. Cultivation of common white button mushroom can be done in temperatures varying from 15⁰-25⁰ C. The other mushroom *Pleurotus* commonly known as Dhingri can be cultivated within a range of 20⁰ C to 30⁰ C. temperatures.

Materials Required

Material required for *Pleurotus*: Wheat/Paddy Straw, plastic sheet, drum, polythene bags, spawn, sprayer, gunny bags, chemicals etc.

Material required for *button mushroom*: Wheat/Paddy Straw, Chicken manure, urea, gypsum, farm yard manure, sheet, polythene bags, spawn, sprayer, gunny bags etc.

Benefits of mushroom production:

- i. The problem of the unemployment for rural youth and others could be considerably reduced by involving the unemployed youth in Mushroom cultivation.

- ii. The Mushroom can be successfully grown in small houses and requires no separate land.
- iii. Mushroom cultivation does not require full time labour and family members can look after different operations easily
- iv. Domestic market is readily available for sale of mushroom; hence no risk is involved.
- v. The agricultural waste material like wheat/paddy straw etc can be utilized for the cultivation.
- vi. The spent mushroom substrate can be used as organic manure in the field for all the crops.

ECONOMICS:

- White button mushroom (*Agaricus bisporus*)

a) Infrastructure/equipment/materials:

Cost of thatched shed having two rooms of 15'x15' with 6 bamboo racks is Rs.35000.

b) Operational Costs (for one season)

Cost of compost (including raw material)	:	Rs. 10,000.00
Cost of polythene bags for cultivation	:	Rs. 500.00
Cost of Spawn	:	Rs.600.00
Water, electricity etc.	:	Rs. 500.00
Miscellaneous (Labour charges, chemicals etc.)	:	Rs. 2500.00
Cost of casing material	:	Rs. 1000.00
Total	:	Rs. 15,100.00

One room with 6 racks has capacity of 3000 kg compost:

Total yield from one room	:	450 kg
Total yield from both the rooms	:	900 Kg
Cost of mushroom/ kg	:	Rs. 60
Sale price of 900 kg mushroom	:	Rs.54,000

Net Benefit 54,000-15,100 = Rs. 38,900 (say Rs.40,000)

In plains two crops of button mushroom can be grown from September to March. Since the operational expense is Rs 15,000 and with 50 % subsidy a sum of Rs.

7,500 is proposed to be given to each unit. It is proposed to cover 15 farmers per block.

The scheme is proposed for implementation in 569 blocks spread over 46 districts with total financial outlay of Rs 68.158 crores.

59. Promotion of Bee Keeping for Honey Production and Processing for Price Realization

There is a need for installation of Comb foundation mill for sheet production, for this an amount of Rs. 45 lakhs and operational charges at Rs. 5 lakhs per year will be made available. The basic sheet of comb production will be made by cooperative societies.

Deliverables

- Farm sector is based on small peasantry with 91% holdings being small and marginal. The only way to make these holdings economically viable is through capital support to cottage scale ventures, such as; bee keeping and vegetable growing
- It is expected that by adopting above two ventures farm income could be supplemented to the tune of 30 %.
- Increase in self employment
- Increase of cash flow to farm women
- Increase in entrepreneurs in agriculture
- Nutritional kitchen garden will help provide nutritional food security particularly to women and children.

60. Establishing High-Tech Green Houses for Training and Demonstration of Commercial Horticulture for Entrepreneur Development in Peri Urban Areas

In peri urban areas adjoining to tourist city of Agra, metros like Delhi, entrepreneurs can start high tech green houses made of polyethylene for production of high quality vegetables and floriculture. They can be given training and demonstrations on end to end i.e. from planting to marketing of produce.

This will help bring more investment in agriculture through entrepreneurs as envisaged in Rashtriya Krishi Vikas Yojna(RKVY).

Green house technology is concept of growing crops under cover in modified environment for obtaining optimum growth of plants and high quality produce. Green house cultivation allows to capitalize on full productivity and quality potential of the genotype (plant) under optimum environmental conditions. With the use of desired substrate, and complete control over irrigation and fertigation, full control over the growing environment of plant can be achieved.

Objectives

- To motivate new entrepreneurs for investment in farm sector.
- To establish high tech green houses in peri urban areas around Agra, Bulandshehar, Ghaziabad for meeting the demands of tourists and metro cities for high quality vegetables and floriculture.
- To train youth and entrepreneurs on end to end production and marketing of high agricultural produce such as vegetables (including exotic vegetables), ornamentals and cut flowers.
- To create more employment opportunities in peri urban areas.

TECHNOLOGY

3.1 STRUCTURE

There is a need for using high-roof, ventilated greenhouse structures (4.75 meter) for protected vegetable production or commercial floriculture (Fig 1 & 2). High-roof greenhouse structures with roof vents and side curtains lead to lower inside air temperatures during the warm season and permit high vertical training of crops such as pepper, tomato, cucumber, and melon. The greenhouses need to be covered with polyethylene cover connected with reusable PVC aluminum locking profiles. The polyethylene is a UV-absorbing type of film which can reduce the spread of insect pests and virus diseases in covered crops. The polyethylene film also prevents water condensation from forming on the film surface. The side walls and roof vents can be covered with insect screens (50 mesh) to restrict the entrance of pest insects.

These high-roof greenhouse designs are less expensive and more suited to be used in regions with tropical climates than structures covered with glass or polycarbonate. So as to keep the temperatures optimum for plant growth and development for year round production with energy saving following structures are proposed.

Specifications of PE, GH

1. Top height = 4.75m
2. gutter height = 4.5 m
3. span = 8m
4. top vent = 1.2 m
5. Fan and Pad cooling
6. side ventilation
7. 50 mesh net on vents to check white fly

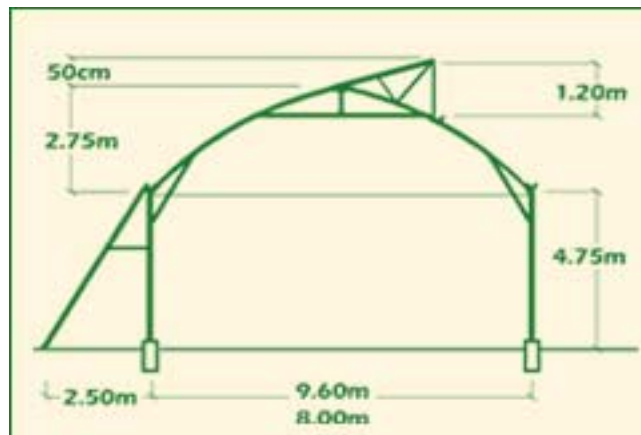


Fig 1



Fig 2: HIGH ROOF TOP AND SIDE VENTILATED GREEN HOUSE

3.2 CONTROL SYSTEM

As per the climate of sub tropical regions a higher level of climate control will be required particularly during summer when the inside temperature may well reach as high as 50 o C (42 OC outside) and relative humidity 90%. the main issue is to control the temperature inside. The control device will be put in place to regulate the temperature, and relative humidity.

3.3 COOLING SYSTEM

The evaporative cooling systems of two types are deployed (1) fan and pad cooling and (2) Mist cooling. Fan and pad cooling is being proposed. Shade nets will also be used to lower the temperature in summers.

The advantage will be taken of Natural Ventilation during winter for cooling to save energy.

3.4 Irrigation System

Drip irrigation will be used.

3.5 Fertigation System

Fertilizer dosing system will be used.

3.6 Crop Management Technology

Crops such as Tomato, Bell pepper and cucumber beans and exotic vegetables such as lettuce coloured capsicum be grown with appropriate tested varieties, pruning and tresses. Floriculture crops such as carnation, rose, chrysanthymum, gerbera and other cut flowers may also be grown.

FINANCIAL

Estimated Cost for Establishing the Venture in One Hectare

		Rs/ sqm
1.	Approximate Cost Of Structure And Cladding Material/ Sq Meter With Fan And Pad Cooling System And Drip Irrigation System	1000
2.	Cost Of Integration Execution And Controls	1000
	Total Cost Per Square Meter	2000
3.	Total Cost Of Installing In One Hectare (10,000 Sq Meter)	200Lakhs
4.	Operational Cost For One Year	10 Lakhs
5.	Grading , Packing, Transportation Cost	40 Lakhs
	TOTAL	250 lakhs

Total cost of establishing and operating PEGH in one hectare = Rs.250 lakhs

4.2 Estimated Cost of Project for Five Years for Half Hectare (5000 Sqm)

Rs. Lakhs

S.No.	ITEM	1 ST Year	2 ND Year	3 RD Year	4 TH Year	5 TH Year	Total
1.	Cost Of High Tech Poly Green Houses	100	-	-	-	-	100
2.	Operational Charges, Maintenance & Automation	10	5	5	5	5	30
3.	Grading, Packing House & Automation	10	1	1	1.5	1.5	15
4.	Demonstration & Training	1	1	1	1.5	1.5	6
	TOTAL	121	7	7	8	8	151

Expected estimated cost = 151 lakhs

Expected Outcome

1. A business worth Rs.1000 crores will be established around the cities for production of conventional and exotic vegetables, ornamentals and cut flowers.
2. Export of high value to the tune of 500 crores will be possible of vegetables and floriculture.
3. More investment and entrepreneurs will come in farm sector.

61. Expansion of Herbal crops (Aloe vera, Ashvgandha, Lemon Grass, Palmarosa)

Plantation of herbal crops has great demand these days and have great scope to earn financial benefit by the farmers with minimum effort and little investment, It is proposed to promote plantation of such crops in back yard or boundary plantations and even on commercial basis.

62. Promotion of GLOBAL GAP in Vegetables Production (Including certification & Residue analysis)

Promotion of GLOBAL GAP in Vegetables Production will be supported under the scheme to fetch better market price and to meet the global standards for export purpose.

63. Programme for Promotion of Mentha Cropping

Financial assistance will be provided as per NHM norms i.e. 75% of total production which is estimated Rs.15000/Ha. The financial assistance will be Rs. 11,250/Ha.

(ix) PROGRAMMES ON ARID AND RAINFED FARMING

64. Improvement of Package of Practices for Cultivation of Seed Spices in Arid Regions

Cultivation of seed spices like Cumin, Coriander, Fenugreek and Fennel can appropriately help the farmers in augmenting their incomes in districts

having scanty rainfall. Seed spices provide better returns than grain crops and they also require less irrigation water and can withstand certain amount of saline conditions. The required information on varieties, seed rate is given below:-

- i) **Cumin:** Varieties like Rajasthan Cumin-19, Rajasthan Cumin- 309 and Gujarat Cumin 1, 2 & 3 can be adopted. Seed rate of 12-16 kg/ha can be used.
- ii) **Coriander:** In this Seed spice, the varieties like NRCSS-ACR-1, Rajasthan Coriander 41, Rajasthan Coriander 20 and Gujarat Coriander 1 & 2 can be used. Seed rate of 10-12 kg/ha under irrigated conditions and 20-25 kg/ha under unirrigated conditions can be adopted.
- iii) **Fennel:** Varieties like NRCSS-AF-1, Rajasthan Saunf 101 and Gujarat Saunf 1 & 2 can be cultivated with a seed rate of 8-10 kg/ha for Rabi crop.
- iv) **Fenugreek:** In fenugreek, varieties like NRCSS-AM-1, AM-2, Rajasthan Methi, Rajendra Kranti and Kasuri Methi can be used for cultivation. Seed rate of 10 kg/ha for Kasuri Methi and 20 kg/ha for other varieties can be used.

Assistance under NHM

NHM provides an assistance of Rs. 11250/ha based on 75% of estimated cost of Rs. 15,000.

Financial Assistance under RKVY Programme

Financial assistance for cultivation of seed spices under RKVY programme, will be given as per NHM norms which are given above. Additional programme, other than proposed under NHM can be taken up depending upon the requirement of the district.

A sum of Rs 5.86 crores is proposed under RKVY for XI plan period.

65. Improvement in Package of Practices for Cultivation of Arid Fruit Crops

Districts having scanty rainfall and less fertile soil with gravels and affected with certain degree of salinity can cultivate arid fruit crops. In such

situations cultivation of grain crops does not provide enough returns to the farmers. Therefore, to augment the income of the farmers, cultivation of arid fruit crops can give appropriate returns to the growers.

Arid Fruit Crops

Arid fruit crops like ber, aonla, bael and acid lime (wherever irrigation facilities are available) can help in enhancing the income of the farmers.

i) **Ber:** In case of ber cultivars like Gola, Sev and Umran can be planted at a distance of 8m × 8m with 5% slope with a view to provide *in situ water harvesting*. This technique will help to give enough yields even in the absence of irrigation facilities. In case it is not possible to provide slope then drip irrigation can be provided by planting at a distance of 6 m × 6 m with regular annual pruning.

ii) **Aonla:** For aonla, varieties like NA-4, NA-5, NA-6, NA-7 and NA-10 can be adopted. Aonla can also be planted at a spacing of 10 m×10 m with 5% slope to provide *in situ water harvesting* as an alternative to irrigation facilities. If it is not possible to provide slope, then planting can be done 8m × 8m spacing and facilities of drip irrigation can be provided.

iii) **Bael:** Bael is another important fruit crop which can be cultivated, as this is tolerant to salinity. The varieties like Narendra Bael 5, 6, 7, CISH B-1 and B-2 can be adopted at a spacing of 8m × 8m with 156 plants/ha. Provision of ponds can be made to provide life saving irrigation.

iv) **Acid Lime:** Acid Lime is another important fruit crop suitable. However, it requires sufficient irrigation facilities and therefore this fruit is recommended in irrigated area at a spacing of 5m × 5m.

ASSISTANCE AS PER NHM NORMS

NHM provides assistance of Rs. 22500/ha based on 75% of estimated cost of Rs. 30,000/.

Financial Assistance under RKVY Programme

Financial assistance for cultivation of arid fruit crops under RKVY programme, will be given as per NHM norms which are given above. Additional programme, other than proposed under NHM can be taken up depending upon the requirement of the district.

Planting of Arid fruit crops

S.No.	CROP	Spacing	<u>Plants/ha</u>
1.	Ber	8m × 8m with slope	150
		6m × 6m without slope	277
2.	Aonla	10 m × 10 m with slope	100
		8m × 8m without slope	150
3.	Bael	8m × 8m	150
4.	Acid Lime	5m × 5m	400

A lump-sum grant of Rs 24.075 crores is proposed for implementation of this programme in 19 district.

(x) PROGRAMMES FOR PROMOTION OF COMMERCIAL FRUITS PRODUCTION

66. Promotion of Rejuvenation of Senile, Old and Unproductive Orchards of Mango and Guava

India is the largest producer of the mango in the world accounting over 40.1% of total world production. Maximum area, among fruits in Uttar Pradesh is under mango and guava. Survey of state has shown that quite a good percentage approx 30-40% of orchards are unproductive. India's productivity is quite low (6.2 tons/ha) compared to Brazil, Mexico and Egypt. Therefore, rejuvenation of such orchards is required on priority to increase productivity, export competitiveness and to take advantage of global opportunities. The technology of rejuvenation of both Mango and Guava is given below:

- (a) **Mango** – Rejuvenation of mango gives a new productive life of 20-30 years. Like other fruit crops, mango trees also witness decline in productivity after certain age and orcharding becomes unviable. The technology of rejuvenation has been worked out and demonstrated by CISH, Lucknow.

The technology aims at pruning of undesired branches for inducing development of umbrella like open canopy of healthy shoots which ensures better light penetration and improves flowering and fruiting

potential. Pruned trees attain canopy of healthy shoots in two years time and in three years onwards they start bearing fruits.

The technology involves pruning of undesired branches from a height of 4-5 meters from ground during month of December. Four to five medium sized branches with outward growth are retained for basic frame work of tree for the development of canopy. Other criss cross intermingling, dried and diseased branches are marked for complete removal, which is also done in month of December. Branches for canopy development are pruned at a distance of about 75 cm at their base. Immediately after pruning, fungicidal paste should be applied on cut surfaces to check microbial growth.

It was observed that alternative row pruning is much more acceptable to growers as there is less economic loss and the availability of better light to unpruned adjacent rows, greatly increases their fruiting potential.

Apart from this, pruned trees are to be provided intensive care of nutrition, irrigation and management of insect, pests and diseases.

Five to six months after pruning, outwardly growing 8-10 healthy shoots need to be retained per branch. This operation is done during June to August. If the orchard is of inferior variety, then the branches (new shoots) can be grafted with improved variety which is called as “top working”. Total cost involved for rejuvenation per tree is Rs. 133 to 160. Pruned trees have been found to have 2-3 times higher average yield than the control plot in which pruning was not done.

- (b) **Guava** – The unproductive old orchards which produce low grade fruits need to be rejuvenated through heavy and systematic pruning followed by proper nutrition, irrigation and plant protection measures. Heading back of unproductive guava orchards is done in the month of May followed by judicious thinning and pruning of newly sprouted shoots in month of October.

The newly emerged shoots after October pruning are found to be very conducive for flowering and fruiting in the following season.

Assistance under NHM

This activity has been adopted by National Horticulture Mission and assistance norms are 50% of the estimated cost of Rs. 30,000/ha subject to a maximum of Rs. 15,000/ha limited to 2 hectares per beneficiary.

Financial Assistance under RKVY Programme

Financial assistance for cultivation of rejuvenation of senile, old and unproductive orchards under RKVY programme, will be given as per NHM norms which are given above. Additional programme, other than proposed under NHM can be taken up depending upon the requirement of the district.

67. Programme for High Density Planting of Mango and Guava

Although India is the largest producer of Mango and guava, however yields are very poor varying from 6.2 tons/ha in mango and 11.0 ton/ha in guava. The main reasons for low yields are wide spacing, low penetration of improved varieties and poor management practices. Even countries like Brazil, Mexico and Egypt harvest yields up to 9.2 tons/ha to 16.0 tons/ha in mango. It is a common practice to plant mango at a spacing of 10m × 10 m and guava at a spacing of 8m × 8m between rows and between plants within rows. With the wider spacing it takes 7-10 years to fill the space between plants.

Thus there is tremendous scope for increasing orchard productivity by increasing planting density. Along with high planting density, early height control with and canopy management are essential to control vegetative growth and to achieve desired results. Research work on high planting density in mango at GB Pant University of Agriculture and Technology, Pant nagar and on Guava at Central Institute of Subtropical Horticulture at Lucknow has given very encouraging results. Even in countries like Israel and South Africa, tree size control by topping, hedging combined with high density planting are commonly adopted.

- a) **Mango**: Planting density of 2.5 m × 2.5 m, 2.5m × 5.0m and 5.0m × 5.0m were investigated at GBPAUT, Pantnagar in both Dashehari and Amrapali varieties. Yields up to 20 tonnes in Amrapali and 25 tonnes per hectare in Dashehari were obtained with highest planting density. For commercial

application planting densities of 5.0m × 3.0 m for Amrapali and 5.0m × 5.0m for Dashehari can be easily adopted. Such planting densities can easily result in the yield of 18-20 tons/ha in fully grown orchards.

- b) **Guava:** For Guava, researches conducted at Central Institute for Subtropical Horticulture at Lucknow have found that a spacing of 6.0m × 3.0m has been found most favourable. In this case also, yields of the order of 15-16 tons/ha can be easily obtained in Allahabad Safeda variety.

High Density Planting

S.No	Crop	Spacing	Planting Density/ha
1	MANGO		
	Amrapali	5.0m × 3.0 m	666
	Dashehari	5.0m × 5.0m	400
2	GUAVA		
	Allahabad Safeda	6.0m × 3.0m	555

Assistance norms under NHM

High density planting is also being advocated under NHM with an estimated cost of Rs. 75,000 and assistance is proposed 75% of the cost *i.e.* Rs. 56250.

Financial Assistance under RKVY Programme

Financial assistance for cultivation of high density planting under RKVY programme, will be given as per NHM norms which are given above. Additional programme, other than proposed under NHM can be taken up depending upon the requirement of the district.

63. High Density Planting in Litchi

Litchi fruit again is planted at a very wide spacing of 8m × 8m to 10m × 10m. With this spacing only 100 to 150 plants/ha are planted. In countries like

Australia, South Africa and China planting density up to 300 plants /ha are commonly adopted. High density planting in litchi not only results in significant increase in yield but it saves the fruit from sun burning. Fruit cracking is also reduced because of better microclimate in the plantation.

Researches conducted on High density planting at the Central Horticulture Research Station, Ranchi have shown that up to sixteen years of plantation, planting of litchi in a Double Hedge Row System at a distance of 4.5m × 4.5m × 9.0m accommodating 329 plants/ha has been found to be the best and gave higher yield of equally good quality fruits. Thus adopting planting density of 300 to 320 plants/ha can easily result yield of 10-11 tons/ha. High density planting needs to be adopted in combination with tree size control by appropriate pruning.

Assistance in NHM

National Horticulture Mission is also adopting high planting density from this year with an estimated cost of Rs. 75,000. Assistance will be provided at 75% of the estimated cost providing total assistance of Rs. 56250/ha.

Financial Assistance under RKVY Programme

Financial assistance for cultivation of high density planting in litchi under RKVY programme, will be given as per NHM norms which are given above. Additional programme, other than proposed under NHM can be taken up depending upon the requirement of the district.

68. High Density Planting in Litchi

Litchi fruit again is planted at a very wide spacing of 8m × 8m to 10m × 10m. With this spacing only 100 to 150 plants/ha are planted. In countries like Australia, South Africa and China planting density up to 300 plants /ha are commonly adopted. High density planting in litchi not only results in significant increase in yield but it saves the fruit from sun burning. Fruit cracking is also reduced because of better microclimate in the plantation.

Researches conducted on High density planting at the Central Horticulture Research Station, Ranchi have shown that up to sixteen years of plantation,

planting of litchi in a Double Hedge Row System at a distance of 4.5m × 4.5m × 9.0m accommodating 329 plants/ha has been found to be the best and gave higher yield of equally good quality fruits. Thus adopting planting density of 300 to 320 plants/ha can easily result yield of 10-11 tons/ha. High density planting needs to be adopted in combination with tree size control by appropriate pruning.

Assistance in NHM

National Horticulture Mission is also adopting high planting density from this year with an estimated cost of Rs. 75,000. Assistance will be provided at 75% of the estimated cost providing total assistance of Rs. 56250/ha.

Financial Assistance under RKVY Programme

Financial assistance for cultivation of high density planting in litchi under RKVY programme, will be given as per NHM norms which are given above. Additional programme, other than proposed under NHM can be taken up depending upon the requirement of the district.

69. Promotion of Banana Cultivation

Financial assistance for Banana cultivation will be provided as per NHM norms i.e. 75% of Rs. 30,000/ha. It comes to Rs. 2,2500/ha. An amount 11,250 Rs will be dispersed in the first year. Rs. 6750 will be dispersed in second year and Rs. 4500 in the third year.

70. Early Bearing Grafted Tamarind, Pomegranate, Fig (Angir), Guava & Mango

Promotion of cultivation of Tamarind, Pomegranate, Fig, Guava & Mango in rainfed areas is an important component for small and marginal farmers. Under this project grafted & true to type planting material will be supplied by the Govt. with 25% subsidy to the farmers to enhance the cultivation under rainfed regions which will be helpful for soil moisture conservation & sustainable production in the state.

71. PROMOTION OF SERICULTURE FOR ENHANCEMENT OF FARMER'S INCOME

The State Sericulture Department is providing extension services and training to the farmers. There is a need to develop demonstration farms in the district and formulate schemes according to achievable at the ground level. The extension support also needs to be strengthened in the district. Potential has been assessed as the district has conducive atmosphere for development of Sericulture.

The unit cost is given below:

- Mulberry Cultivation @ 1.0 lakhs
- Govt. Subsidy @ 50% per unit

(xi) PROGRAMMES FOR DEVELOPMENT OF FACILITIES FOR MARKETING OF AGRICULTURAL PRODUCE

72. Improvement and Creating of New Market Facilities for Marketing of Agricultural Produce

In order to provide Marketing facilities, there is a need to offer proper marketing infrastructure so that farmers can market their produce at optimum rates.

So as to save the farmer from clutches of local dealers, compelling him for distress sale, it is proposed to provide proper market infrastructure, so that he may sell his produce in a nearby market at appropriate prices. The following infrastructure is proposed.

Each Market Centre should have an area of 1-2 acres with following facilities.

1. Raised platform (Pucca) - 2 Nos.
2. Sheds over pucca platform- 2 Nos.
3. Office for Market Centre Incharge
4. Parking place for Tractor trolleys
5. Shed with animal feeding structure & drinking provision

Deliverables

Improvement in Market infrastructure will facilitate following

1. Increase in the procurement of Agri produce

2. Reduce the exploitation of farmers
3. Reduce losses in the unorganized storage facility of farmers
4. Better price realization to the farmers

It is proposed to develop 86 market yards spread over 63 district at a total cost of Rs 21.50 crores during XI plan period.

73. Value addition to Horticultural Produce through Establishment of Grading and Packaging Houses

Improper post harvest handling and storage of horticultural produce results in 40% loss in India. Besides causing heavy losses to the farmers, the quality of the produce is also impaired and the self life is decreased. So as to increase farmer profitability, it is proposed that two grading and packing houses be provided in each selected district, at a total cost of Rs 31 lakhs.

74. Development of Pack House Centre (For Fruit and Vegetable Washing, Sorting, Grading and Packing)

Post harvest management is very poor in India in general and so very much in most parts of UP.

Post harvest loss on account of improper treatment/ wrong handling leads to 10-15% loss in semi durable fruits and 15-20% in sensitive non durable vegetables & fruits.

Lot of better prices realization is not possible due to harvested Agri produce is sold in non presentable forms, uncleaned, ungraded, tanned and packed unscientifically.

It is proposed to provide the pack house facilities in at least 350 blocks where Fruits/ Potato and vegetables are grown in substantial areas where support for crop loss production, brand building, scientific packing will help the farmers to realize better price and smoother marketing.

In each selected block pack house centre has to be developed along the side of or within the premises of collection/market shed facility.

Component of Pack House

1. Washing tanks
2. Graders: Grading machine with conveyor belt

3. exhaust system to dry the agri produce
4. Packing machine/Carton packing machine

The centre should provide scientific packing material at economic prices to (Pre confirmed) farmers so that affordable packing can help in long distance transportation

75. Grading and Acid Lime Waxing Package

It is proposed to provide scientific grading and acid lime waxing facilities in selected centres for the benefit of farmers far availing better market returns.

76. Maintenance of Seed Distribution Godowns & Plant Protection Units

Seed distribution godowns and plant protection equipments has a great role in modern day agriculture as these are most important inputs in farm production system. It is proposed to make provisions for maintenance of these infrastructure for the benefit of farmers.

77. Establishment of Post Harvest Laboratory

A good quality product is always ensured with better market and higher economic returns. Facilities for quality testing and analysis of different useful and harmful ingredient will not only guide farmers for taking appropriate measures but will also differentiate in prices based on quality aspects. It is proposed to establish post harvest laboratories at suitable locations for this purpose.

78. Demonstrations and Trainings

Demonstration and training are successful extension tools for providing latest production practices to the farmers which will not only help in supporting agriculture growth but also in availing better economic returns to the farmers. Emphasis has been proposed for such activities.

II. ANIMAL HUSBANDRY, DAIRY, POULTRY AND FISHRIES

(i) PROGRAMME FOR ANIMAL HUSBANDRY

To increase the productivity in animal sector the major contribution rests on the genetic upgradation of livestock. So far as Dairy Development is concerned, induction of additional milch animals and transforming the backyard dairy units into commercial dairy farms with minimum ten animals is required. Farmers training for better herd and milk management need to be done through latest techniques and farm practices.

79. Year round production of Green Fodder to Provide Balanced Nutrition to Cattle

It has been realized that seed is the most limiting factor in fodder production. The fodder crops being very shy seedsetter, sufficient quantity of good quality seed is not available. In the present situation, the cost of barseem seed is taken as Rs. 100 /kg and 20 kg seed will be needed for one hectare. Accordingly following norms for fodder seed production and seed acquisition by the government for further distribution be followed.

Barseem seed may be distributed to registered farmers having mixed farming system @ 4 kg / farmer costing Rs 400. Two hundred farmers per block will be covered each year with 50 % subsidy in selected district and selected blocks. It is proposed to implement the programme in 70 districts with total financial outlay of Rs 34.75 crores for entire U.P.

Deliverables

- It will support the dairy farming in the district.
- Farmers will incentivised to produce their own seed.
- It will improve the soil fertility.
- It is self sustaining scheme and the seed of green fodder will remain available even after the termination of the scheme.

80. Strengthening of Artificial Insemination Centres

For genetic upgradation of milch and other cattle, it is proposed that Artificial Insemination (AI) centres be upgraded, particularly for storage under liquid nitrogen and other facilities. During the XI plan 68 AI centres are proposed for upgradation at a cost of Rs 26.587 crores.

81. Improvements of Cattle (Cow and Buffalo)

The average milk production per milch cattle and per capita milk availability is substantially low inspite of largest number of cattle in India among the various states. One of the contributing factors for the above state affair is lower level of breed improvement. Instead of going for breeds like Jersey, and replacing the existing cattle genetic material, it is advisable to optimize the yield by sustained breed improvement by using, in case of cow, Red Sindhi/Sahiwal and in case of buffalo Murrah breed.

Minimum number of he-bulls/buffaloes need to be provided to each veterinary hospital for breed improvement. The capital investment for the suggested incorporation will vary from district to district depending upon the number of veterinary hospital and breeding facilities available. A total sum of Rs 57.18 crores are proposed under this programme for implementation in 50 districts.

82. Improvements of Goat

Two goats per Nyaya Panchayat will be provided. The unit cost per goat is 15000.00.

83. Goat and Piggery Development

Rearing of goats and pigs is quite common in all the blocks of district. Rejected potatoes are used as a feed for pigs. There is a need for promoting commercial goat and piggery units.

84. Livestock Disease Surveillance and Quick Alert System

Indian cattle industry is an integral part of Indian agriculture and contributes to the well being of its people. Population estimates show that India will have to provide food for 1.5 billion people in 2010. In addition to this, India has an equal percentage of livestock population.

Livestock disease Surveillance

It is recognizing that veterinary diseases pose a significant threat both to the animals and human beings. Livelihood of millions of farmers is dependent on health of livestock. Besides, animal diseases have become a serious threat for contamination of human food chain. Entire farm economics can run into huge losses due to emergence of diseases such as foot and mouth, rinder pest, bird flu to cite a few. There is a need for developing a system of animal disease survey and surveillance and its on line reporting so that the spread of diseases before reaching epidemic proportion is contained. This will help save huge losses to livestock wealth in particular and farming system in general.

Objectives

The various objectives of this project are as follow:

1. Development of electronically managed Disease Surveillance System, through customized online data management systems.
2. Development of risk assessment and risk management tools for various endemic diseases

The overall mission of this project is to thoroughly revamp the Livestock husbandry so as to erase the stigma of poor hygiene and elevate it to the global standards in production, processing and marketing of Livestock derivatives.

To implement the programme in a comprehensive manner, asum of Rs 99.01 crores are proposed for entire XI plan period.

85. Development of Modern Meat Market

Unlike most other animal protein industries, demand for meat far exceeds our domestic ability to supply. In some instances, demand escapes the realm of

viable markets. The safe and hygienic marketing of meat is of utmost importance to increase its consumption rate and also from human health point of view.

Goats farming for meat production are an increasingly profitable enterprise adding real value to pastoral farming. Consumption of meat in recent year although increasing to a greater extent, there is not much development in their market infrastructure. The poor infrastructure facilities leads to several healths hazardous which ultimately reduce the economy governed through this food sector. This is evidenced by the existence of meat markets in various localities which are absolutely unfit to be called sanitary source of hygienic meat supply. These markets are full of filth and dirt has accumulated in rear rooms, where mice and rats have free play, and where employees, themselves are not clean by cleaning code and in appearance.

Keeping the above scenario in mind, the need of developing a hygienic and modern meat market is of high priority.

It is proposed to develop an air conditioner meat market in major meat producing district with following components.

1. Mini Slaughter House
2. Carcass disposal system
3. One hall with Air Conditioned facility which contains; (i) 20 Nos. 3 x 5 raised cemented table with rack provision to keep the fresh stock, (ii) Generator, (iii) Coordinator office and (iv) Maintenance

It is proposed that the two markets in each district will be developed within five years.

Deliverables:

1. Hygienic and safe food production.
2. Increase in meat sale and consumption.
3. Organized Market facility in the centre of production area.
4. Brand development based on area and kind of meat.
5. Better prices realization which will encourage scientific goat farming

Keeping in view of the importance, it is proposed to develop 22 markets in 22 districts with total financial outlay of Rs 88.74 crores.

86. Cattle Fair

To organize Cattle fair at a regional level is an important component to sale & purchase of poor quality as well as good quality animals, respectively. In such type of fair Govt. should provide some facilities like fodder, drinking water, temporary shelter, animal registration arrangements etc. at free of cost. So the farmers can easily do for sale and purchase of animals. Such type of fairs should be provided once or twice in a year and publicity also required for the same in respect to convenience.

(ii) PROGRAMMES ON DAIRY DEVELOPMENT

87. Programme for Quality & Hygienic Milk Production

Production of clean milk is as important as the production of milk itself. The bacteria in the milk multiply because of the hot environment and dust, dirt and other foreign matter and adulteration. Unhygienic state of utensils used for the storage and transportation of milk adds to the problem. Therefore, there is an urgent need to maintain the quality of milk by creating facility of cooling the milk at the source immediately on milking and educating the milk producers and milk handlers to maintain proper sanitation and hygiene. For the cooling of milk at the dairy farm level, Bulk Milk Coolers are needed to be made available, but the investment is quite high, which cannot be afforded by the milk producers themselves. It is proposed to support for establishment of 2138 bulk milk coolers in 64 districts through 25% subsidy. The total cost of subsidy to government will be Rs 42.76 crores.

88. Promotion of Commercial Dairy Farming Units

Dairy is being practiced by the farmers in the state as a house hold enterprise and not as a commercial activity. To promote the commercial dairy farming, it is proposed to provide interest subsidy on the cost of animals for the first year up to a maximum of Rs. 60000 per animal. It is proposed to encourage to setting up of commercial dairy farms units in the selected district with minimum 10 milch animals in each. Unit cost of each dairy will be about Rs 6.0 lakhs. This cost of subsidy on interest for first year on each unit will be about s. 0.60 lakhs. In addition, every commercial dairy farm unit will be provided with Rs 2 Lakhs as capital subsidy to develop infrastructure like animal sheds, milching parlours with machines.

It is proposed to support for establishment of about 4123 commercial dairy unit in the state spread over 68 districts with total financial cost to government at Rs 500.06 crores.

89. Mini Milk Processing Units

Preservation and value addition in milk and milk products can be done at cottage level. A mini milk plant of 500 litres per day capacity can be set up in each block for making ghee, cheese, butter, lassi, etc. These products can earn handsome returns to milk producers. The producers can avail the benefit of forward linkages and can become successful dairy entrepreneurs. Such mini plants will cost Rs. 25.00 lakhs, on which 30% capital subsidy is proposed to be provided. Total subsidy cost to government during XI plan period is proposed for Rs 85.657 crores.

90. Dairy Training Workshops for Women

The first step will be to sell the idea of dairy farming aggressively in the target area. This will be done by holding Dairy Training workshops extensively in the district, so as to cover the entire area repeatedly. These will be high tech camps wherein the requisite message will be passed across the audience in a very cordial, conducive and friendly environment.

Dairy training workshop will be conducted to encourage and equip with knowledge to prospective dairy farmers and 50 per cent target beneficiary should be women. It is proposed to hold five such workshops in each block each year in the selected districts. In all 779 blocks spread over 66 districts will be covered with total cost of Rs14.41 crores during XI plan period.

(iii) PROGRAMMES ON DEVELOPMENT OF FISHRIES

91. Demonstration and Training of Fish Culture

Now a day's fish culture is developing at alarming rate in India especially in rural areas because most of the people are habitual to relish fish food along with rice. The fish farming is also providing an extra income to the poor and small farmers, another advantage of fish culture is to increase the level of underground water and utilization of rain water.

Therefore, the demonstration on fish culture in each block of the state would provide a technology of fish cultivation along with various advantages like nutrient support, extra income, increase underground water level etc. The budget provision under RKVY is to be made available at block level for development of demonstration units.

92. Renovation of Village/ Urban Ponds for fish production

Ponds left unattended or new ponds for water harvesting need to be made. These ponds can be used for fish culture. The water of these ponds can be purified by dutch -weed technique and fish farming can be done to cater additional income by panchayats. This job will include excavation, boundary lining and development of existing ponds. Fifty ponds per year are planned covering 250 ponds in five years. The cost of new pond will cost Rs. 2.0 lakh per pond. The total cost involved for new ponds will cost Rs. 100 lakhs per year and Rs. 500 lakhs in five years. It is also proposed that this project may be converged with *National Rural Employment Guarantee Programme*.

93. Development of New Hatcheries for production of fingerlings

It is proposed that Rs. 10.00 lakhs per hatchery be provided to the department of the fisheries for developing new hatcheries. New hatcheries are required to be developed in the state at a total cost of Rs. 37.64 lakhs during XIth plan period under RKVY.

94. Development of Modern Fish Market

Fresh water fish production is gradually becoming economical to farmers due to increase in demand of fish, introduction of newer technologies, improved fish culture techniques.

Fish production could be very attractive to marginal farmers. The major limiting factor for supply of quality fish to the consumer is absence of proper storage and marketing of fish in temperature controlled hygienic conditions.

It is proposed to provide A/C market facilities in major fish production areas at district headquarters with following components.

4. One hall with Air conditioned facility.
5. 20 Nos. 3 x 5 raised cemented table with rack provision to keep the fresh stock.
6. Generator.
7. Coordinator office.
8. Parking place for Tractor trolleys and shed for animals along with feed structure & drinking water facility.

Deliverables:

6. Hygienic and safe food production.
7. Increase in fish production, sale and consumption.
8. Organized Market facility in the centre of production area.
9. Brand development based on area and kind of fish.
10. Better prices realization.

In all a total of 35 advanced fish market will be established spread over 30 districts with a financial outlay of Rs 24.20 crores.

(iv) PROGRAMME FOR POULTRY DEVELOPMENT

It is estimated that there are 2.04 lakh poultry birds in the district. There is huge potential to develop poultry sector. Small poultry units need to be encouraged to help small and marginal farmers.

Projects Approved in First SLSC held on March 3rd 2008

- I. **Nine projects** (Energization of tubewells through Minor Irrigation Department, Sprinklar set and Drip irrigation, Seed production by Agriculture University, Faizabad and Kanpur, Strengthening of Deep Frozen Semen Production Centres, Training and Extension programme, Fodder Seed Production, Strengthening of State Seed farms, Exposure visit of the farmers, Programmes for fisheries and Customized Farmers Training and Extension Programme by AFC) **of Rs. 82.00 crores** under stream-I **and 5 projects** (Strengthening of Soil Testing Laboratories, Establishment and Strengthening of Seed Farm Units, Establishment of Agri-mart in Hapur and Lucknow, Land Development of Ravine Katari Land of Ramganga, Certification of Organic Agriculture Management System by NAFAD) **of Rs.27.00** under stream-II were approved in 2007-08. Details of the approved projects are given in *Annexure IV*.
- II. Against the approved amount of Rs. 109.00 crore, Rs. 103.90 crores were sanctioned by GOI, against which Rs. 100.24 crore has been released.

6. EXISTING AND ANTICIPATED GROWTH RATES OF FARM SECTOR

High growth in the agriculture sector is necessary for attaining higher growth in the overall economy of the State, as also for reduction in the incidence of poverty. The target for average annual growth rate of agriculture sector during the 10th Plan was 5.1 percent. However, the achievement was only about 2 percent. A lower growth rate of this order is indicative of the fact that there was 'something' missing in our efforts and strategies for agriculture development. If we look at the past growth rates in the agriculture sector shows that the state achieved a growth rate of 5.7 percent during Fifth Plan. Thus, the State has potential for achieving higher growth in this sector. It is in this background that a growth rate of 5.7 percent has been envisaged in agriculture sector during Eleventh Plan. The growth rate in the Agriculture and Allied sector since First Five Year Plan is given in the following Table 42.

Table 42: Agriculture and Allied Sectors Growth Rate During the Plan Periods

S.No.	Plan	Agriculture & Allied Sectors (percent)		Overall Economy (percent)	
		U.P.	India	U.P.	India
1.	First Plan (1951-56)	1.7	2.7	2.0	3.6
2.	Second Plan (1956-61)	1.4	3.2	1.9	4.0
3.	Third Plan (1961-66)	(-) 0.5	(-) 0.7	1.6	2.2
4.	Three Annual Plans (1966-69)	0.6	4.2	0.3	4.0
5.	Fourth Plan (1969-74)	0.8	2.6	2.3	3.3
6.	Fifth Plan (1974-79)	5.7	6.3	5.7	5.3
7.	Sixth Plan (1981-85)	9.7	2.5	8.7	5.3
8.	Seventh Plan (1985-90)	2.7	3.5	5.7	5.8
9.	Two Annual Plans (1990-92)	5.4	4.0	3.1	2.5
10.	Eighth Plan (1992-97)	2.7	3.9	3.2	6.8
11.	Ninth Plan (1997-02)	0.8	1.9	2.0	5.6
12.	Tenth Plan (2002-07)	2.10	1.1	5.3	7.7
13.	Eleventh Plan (2007-12)	5.70	4.1	10.0	9.0

With the launching of Rashtriya Krishi Vikas Yojana (RKVY) in the XI th plan period the state has an opportunity to re-examine it's growth rate in the farm sector based on district agriculture plans as well as to achieve a growth rate in the XI th plan those are more realistic and achievable. An in depth analysis of growth rates in crop sector including horticulture, and for animal sector including dairy and fisheries has been done. The analysis based on surveys and brain storming with farm planners of repute is brought out in Tables 43, 44, 45 and 46.

Table 43: Weighted growth rate of Crop Sector after adoption of programmes under RKVY

Crop	Tenth Plan End Productivity (Tons/ ha)	Tenth Plan End Production (Million Tons)	Productivity after adoption of DAP (Tons/ ha)	Production after adoption of DAPs (Million tons)	Addition to production (Million tons)	Annual growth rate (%)
Paddy	1.99	11.13	3.00	16.74	5.61	10.081
Wheat	2.63	24.07	3.50	32.06	7.99	6.639
Maize	1.3	1.05	3.00	2.43	1.38	26.286
Bajra	1.44	1.25	2.25	1.9575	0.7075	11.320
Gram	0.89	0.66	1.50	1.11	0.45	13.636
Lentil	0.70	0.43	1.50	0.915	0.485	22.558
Potato	24.32	12.33	33.0	16.731	4.401	7.139
Vegetable	16.72	26.60	30.0	47.73	21.13	15.887
Fruits	10.8	8.88	16.0	13.184	4.304	9.694
Weighted Growth rate* for Crop (Agriculture & Horticulture) Sector						11.35

Note: We assume this growth rates and all the programmes given in DAPs are drawn to achieve this growth rate.

The above values are estimated as under:

- Present (Tenth Plan End) Productivity (Tons/ ha) = Production / Area
- Productivity after adoption of DAPs = Present (Tenth Plan End) Productivity + Productivity Gap
- Production after adoption of DAPs = Productivity after adoption of DAPs x Area
- Addition to production = Production after adoption of DAPs minus Present Production
- Annual growth Rate = {(Addition to production / Present Production) X 100} / 5

**The Weighted Growth Rate was estimated as under*

$$\frac{\sum p_i \times r_i}{\sum p_i} = \text{Weighted Growth Rate}$$

Where, p_i means production of i th crop after adoption of DAP
 r_i mean annual growth rate of i th crop
 GR = overall growth weighted with production

Table 44: Weighted growth rate of Dairy Sector after adoption of programmes under RKVY

No of Milch Animal Lakhs	Total Milk Production Lakhs MT	Milk Production /animal/year Lakhs T	Av. Production /Improved Animal lakhs Tons	Animal provided under RKVY	Milk Production by Improved animals Tons	Overall GR	Annual GR
117.87	173.56	1.47	3	41230	123690	1.68	0.33

Growth Rate of Milk Production: Increase in milk production by Replaced improved animal / Present Milk Production x 100 = 1.53 / 1.47 x 100 = 104 %

Annual GR of Replaced improved Milch Cows = 20.8%

We assume that the milk production through the animal provided in UP under RKVY will be 3000 Lit per annaum (Lactation)

Table 45: Overall Annual Growth Rate of Fisheries Sector after adoption of Programme under RKVY

Present Productivity (T/ha)	Total Present Production (Tons)	Productivity of Renovating Tank (T/ha)	Present Production of Renovating Tanks (Tons)	Producti on after renovati on (Tons)	Increase in Producti on (Tons)	Overall Annual Growth Rate
2.8	352290	4.4	22369	35151	12782	0.725

Note: the annual growth rate of renovated pond under RKVY is 11.4

Table 46: Weighted Overall Growth Rate of Agriculture and Allied Sector after Adoption of Programmes under RKVY

Crop	Area (Million ha)	Tenth Plan End Productivity (Tons/ ha)	Tenth Plan End Production (MillionTon.)	Productivity after adoption of DAP (Tons/ ha)	Production after adoption of DAPs (Million tons)	Addition to production (Million tons)	Annual growth rate (%)
Paddy	5.58	1.99	11.13	3.0	16.74	5.61	10.081
Wheat	9.16	2.63	24.07	3.5	32.06	7.99	6.639
Maize	0.81	1.3	1.05	3.0	2.43	1.38	26.286
Bajra	0.87	1.44	1.25	2.25	1.9575	0.7075	11.320
Gram	0.74	0.89	0.66	1.5	1.11	0.45	13.636
Lentil	0.61	0.7	0.43	1.5	0.915	0.485	22.558
Potato	0.507	24.32	12.33	33.0	16.731	4.401	7.139
Vegetable	1.591	16.72	26.6	30.0	47.73	21.13	15.887
Fruits	0.824	10.8	8.88	16.0	13.184	4.304	9.694
Fish			3.0				0.75
Dairy			17.0				0.33
Weighted Overall Growth Rate							8.806

Therefore for farm sector as a whole a growth rate of **8.80 percent** appears more realistic and achievable after launching RKVY programmes in project mode.

7. Budge estimates for Programmes in Crop Sector under RKVY

Division	District	Soil	Org. Farming	Water	Seed	Technology	Agri-clinic	Farm mechanization	New Labs	Total (Lakhs)
Agra	Agra	491.5	140.0	1650	1684.62	3574.2	1275.0	747.5	30	9592.8
	Firozabad	294.0	35.00	341.30	881.65	2621.5	225.00	513.5	0	4912.0
	Mainpuri	538.7	70	321.3	467.5	3076.1		533.0	0	5006.6
	Mathura	747.0	140.0	300.0	1234.4	3584.0	250.0	578.5	0	6833.9
Allahabad	Allahabad	1005.2	17.5	1614.0	246.7	4019.9	500	1976.0	2175	11554.3
	Fatehpur	649.8	70.0	904.1	2081.6	3380.6	325	858.0	0	8269.0
	Kaushambi	347.3	35.0	548.0	52.9	3039.8		0.0	0	4023.0
	Pratapgarh	828.5	35.0	385.0	663.4	3907.0	1080	1111.5	0	8010.4
Aligarh	Aligarh	870.0	35.0	500	3075	3736.0	1080.0	283.0	55.5	9634.5
	Etah	407.3	70.00	781.6	280.1	3006.6	200.00	461.5	0	5207.2
	Kashiram Nagar	730.4	35	434.9	1016.32	2649.9	595	500.5	0	5962.0
	Mahamaya Nagar (Hathrus)	464.7	70.0	400.0	292.9	2701.2		208.0	0	4136.8
Azamgarh	Azamgarh	911.2	70	510.0	775.4	4575.0		1254.5	0	8096.1
	Ballia	937.4	35.0	1386.9	1121.3	3855.2		529.8	0	7865.5
	mau	532.8	35	341.3	559.65	2867.6	810	598.0	0	5744.3
Bareilly	Bareilly	730.2	140	835.5	264.7	3444.5	375	994.5	0	6784.4
	Badaun	1014.0	35.0	733	4087.34	1587.0		533.0	0	7989.3
	Pilibhit	229.0		609.9	1197.4	2899.6	175.00	474.5	0	5585.4
	Shahjahanpur	831.4		635.5	1762.2	3568.9	402	375.0	0	7575.0
Basti	Basti	833.9	49.0	800.0	714.4	3226.5		416.0	0	6039.8
	Sant Kabir Nagar	759.4	70.0	345.0	637.7	3388.3	1440	552.5	0	7192.9

	Siddharth Nagar	744.5	35	319.8	495	3370.6	1250	1001.0	0	7215.9
Chitrakoot	Chitrakoot	685.0	35.00	1650.0	1601.98	2536.0		614.8	0	7122.7
	Banda	561.5	35.00	400.0	811.30	2795.5	200.00	715.0	0	5518.3
	Hamirpur	509.5	35.0	2970	1246.75	3087.5	595.0	2096.5	160	10700.3
	Mahoba	1423.0	35.0	2600	4680.13	2553.5		253.5	0	11545.1
Devi Patan	Bahraich	556.5	35.0	714.8	1525.5	2727.0		793.0	0	6351.8
	Balrampur	598.2	35.00	291.3	582.6	2636.5		656.5	0	4800.1
	Gonda	1012.2	80	701.2	1467.3	3874.3		1079.0	0	8214.0
	Shravasi	636.0	35.00	2941.00	829.55	2511.2		522.5	0	7475.3
Faizabad	Faizabad	673.8		1000	123.75	1288.4		0.0	0	3085.9
	Ambedkar Nagar	687.8	35.00	541.30	154.55	2852.6	225.00	728.0	0	5224.3
	Barabanki									6648.06
	Sultanpur	1083.0	70.00	761.10	2089.45	3774.4	575.00	1222.0	0	9575.0
Gorakhpur	Gorakhpur	955.5	70	798.3	1087.9	3852.6		620.8	0	7385.1
	Deoria	912.4	70	621.2	699.25	4051.5	245	1235.0	0	7834.3
	Kushinagar	567.7	239	619.8	143.6	3845.1		916.5	130	6461.7
	Maharaj Ganj	627.1	35.0	760.0	615.6	3392.0	1080	708.5	0	7218.2
Jhansi	Jhansi	992.5	105.0	3000.0	2416.9	3391.2		422.5	0	10328.1
	Jalaun	1437.5	35.0	7100.0	683.5	3068.2		526.5	0	12850.7
	Lalitpur	724.0	105	3600.0	2888.9	2348.4		312.0	0	9978.3
Kanpur	Auraiya	967.4	35.0	1249.9	1250.3	2927.2		208.0	0	6637.8
	Etawah	182.0	70	600.0	1588.6	2832.7		968.5	0	6241.8
	Farrukhabad	256.5	35.0	1759.9	573.6	1527.8		282.8	0	4435.5
	Kannauj	323.5	70.00	0.00	1895.55	2504.1	200.00	526.5	0	5519.7
	Kanpur Dehat	936.5	70.00	157	692.74	3238.1	250.00	663.0	0	6007.3
	Kanpur Nagar	960.0	35.00	1500.00	416.85	205.0		61.3	0	3178.1

Lucknow	Lucknow	471.8		1875.6	80.655	3015.8	660	624.0	725	7452.9
	Hardoi	498.0	35.00	155.80	1842.40	3948.0		2034.5	0	8513.7
	Lakhimpur Khiri	837.9	35.00	323.00	1568.25	3270.1		1046.0	0	7080.3
	Rai Bareilly	1276.0	35	2875	1255	986.5		0.0	0	6427.5
	Sitapur	921.7	35.00	698.30	136.88	3934.2		1449.5	0	7175.6
	Unnao	73.3		2850	359.7	569.3		2174.0	0	6026.3
Meerut	Meerut	2830.2	525.0	192	1943	1944.0	267.0	30.0	1710	9441.2
	Bhagpat	372.5	52.5	494.2	1049.11	2774.8	510	200.0	0	5453.1
	Bulandshar	456.5	70.0	651.2	1341.95	3247.7		1001.0	0	6768.4
	Gautam Budh Nagar	229.0	18.0	400	80	2564.0	340.0	247.0	0	3878.0
	Ghaziabad	366.5	70.0	400	153.02	3070.5	680.0	481.0	0	5221.0
Moradabad	Moradabad	782.2	70.0	1661.5	931.5	3787.5	1105.0	615.7	0	8953.4
	Bijnor	1168.5	210.0	1375.0	582.6	3203.3	275.0	845.0	0	7659.4
	Jyotiba Phule Nagar	868.6	35.0	1650.0	165.0	2830.0	225.0	312.0	0	6085.6
	Rampur	287.0	18.0	522	198	2200.0	1440	487.5	0	5152.5
Saharanpur	Saharanpur	570.5	35.0	664.4	335.7	3837.0	260	367.3	0	6069.8
	Muzaffar Nagar	730.8	70.0	500.0	104.6	3566.5	305.0	728.0	0	6004.9
Varanasi	Varanasi	269.0	35.0	625.6	1329.7	3118.4		702.0	0	6079.7
	Chandauli	751.6	70.00	157.0	392.5	3241.1	250.00	331.5	0	5193.7
	Ghazipur	780.4	70	280.0	661.5	3201.6	1440	627.3	0	7060.8
	Jaunpur	1549.6	70	712.2	1094.15	3947.4		708.5	130	8211.8
Vindhyachal	Mirzapur	696.5	35.00	3588.40	570.95	2863.5		715.0	0	8469.4
	Sonbhadra	661.5	35.00	2400.00	1907.45	2468.4		435.5	0	7907.9
	Sant Ravidas Nagar	742.5	35.0	677.0	328.3	2909.0	225.0	513.5	0	5430.3
TOTAL (Rs. Lac)		51359.2	4289.0	76762.1	72069.9	210399.4	21334.0	47308.0	5115.5	495285.1

8. Budge estimates for Programmes in Horticulture Sector under RKVY

Division	Name of the District	small & marginal farmer	Entrepreneur	Arid fruits	Commercial	Sericulture	Total (Lakhs)
Agra	Agra	578.5	595.9	84.38	0.0		1258.78
	Firozabad	422.80	70.00	0.00	0.0		492.8
	Mainpuri	461.4	70.0	0.0	0.0		531.407
	Mathura	215.1	592.0	0.0	173.0		980.1
Allahabad	Allahabad	183.7	1122.5	0.0	650.0		1956.2
	Fatehpur	187.8	313.7	0.0	19.0		520.47
	Kaushambi	159.0	167.5	0.0	480.0		806.5
	Pratapgarh	270.0	207.8	0.0	57.0		534.75
Aligarh	Aligarh	313.5	310	0	43.0		666.5
	Etah	167.0	70.0	0.0	120.0		357
	Kashiram Nagar	90.25	183.75	0	39.4		313.4
	Mahamaya Nagar (Hathrus)	407.3	80.5	0.0	45.1		532.9
Azamgarh	Azamgarh	307.5	721.8	0.0	123.0		1152.25
	Ballia	210.0	207.2	0.0	0.0		417.185
	mau	105.25	216.25	0	50.6		372.1
Bareilly	Bareilly	456.7	252.8	0.0	95.7		805.125
	Badaun	634.5	190	0	36.0		860.5
	Pilibhit	124.35	155.3	0.0	111.6		391.2625
	Shahjahanpur	296	354.0	0.0	120.0		770
Basti	Basti	186.0	240.6	0.0	0.0		426.625
	Sant Kabir Nagar	241.3	143.1	0.0	57.0		441.425
	Siddharth Nagar	198.4	183.75	0	78.6		460.75
Chitrakoot	Chitrakoot	129.0	202.50	427.50	160.4		919.4
	Banda	119.0	50.00	213.80	135.0		517.8
	Hamirpur	114.5	583	78.75	135.0		911.25
	Mahoba	62.5	70	338	18.0		488.5
Devi Patan	Bahraich	219.0	70.0	0.0	99.8		388.75
	Balrampur	71.0	70.0	0.0	0.0	168.4	309.4
	Gonda	403.75	806	0	45.0	150	1404.75
	Shravasi	129.00	152.15	0.00	262.2	75.00	618.3

Faizabad	Faizabad	168.81	732.04	0	173.2		1074.05
	Ambedkar Nagar	124.00	70.00	0.00	0.0		194
	Barabanki	0	0	0	0.0		1706.9
	Sultanpur	194.00	727.00	0.00	86.3		1007.3
Gorakhpur	Gorakhpur	339	787.25	0	174.6		1300.85
	Deoria	210	0	0	0.0		210
	Kushinagar	480.5	192.5	0	281.3		954.25
	Maharaj Ganj	232.6	167.5	0.0	57.0		457.1
Jhansi	Jhansi	159.0	0.0	675.0	0.0		834
	Jalaun	1959.0	70.0	65.1	50.6		2144.7
	Lalitpur	149.0	0.0	675.0	0.0		824
Kanpur	Auraiya	171.0	167.5	0.0	0.0		338.5
	Etawah	544.4	70.0	0.0	0.0		614.39
	Farrukhabad	576.0	70.0	0.0	0.0		646
	Kannauj	470.50	70.00	0.00	0.0		540.5
	Kanpur Dehat	193.0	301.4	0.0	0.0		494.37
	Kanpur Nagar	43.8	152.0	8.5	0.0	74.5	278.73
Lucknow	Lucknow	133.5	521.5	0	570.0		1225
	Hardoi	174.00	301.37	0.00	103.4		578.77
	Lakhimpur Khiri	229.00	402.00	0.00	106.9	75.00	812.9
	Rai Bareilly	162.5	5	0	0.0		167.5
	Sitapur	374.50	710.17	0.00	67.7		1152.37
	Unnao	2040.02	0	0	0.0		2040.02
Meerut	Meerut	215.5	505.5	0	9.0		730
	Bhagpat	469.5	620	0	8.6		1098.05
	Bulandshar	239	544	0	15.9		798.9
	Gautam Budh Nagar	103.5	1428.5	0	0.0		1532
	Ghaziabad	159	735	0	288.7		1182.7
Moradabad	Moradabad	266.0	507.5	0.0	92.0		865.5
	Bijnor	219.9	440.0	0.0	38.5		698.4
	Jyotiba Phule Nagar	139.1	136.0	0.0	42.0		317.1
	Rampur	47	186	0	43.0		276
Saharanpur	Saharanpur	202.5	604.0	0.0	437.6	75	1319.1
	Muzaffar Nagar	255.5	240.0	0.0	151.5		647
Varanasi	Varanasi	184.0	339.5	0.0	67.7		591.2
	Chandauli	202.0	476.3	0.0	0.0		678.25
	Ghazipur	293.8	200.0	0.0	57.0		550.75

	Jaunpur	170.52	205.65	0	149.6		525.77
Vindhyachal	Mirzapur	139.00	70.00	0.00	0.0		209
	Sonbhadra	159.00	70.00	427.50	0.0	75.00	731.5
	Sant Ravidas Nagar	100.8	70.0	0.0	42.0	75.0	287.8
TOTAL (Rs. Lac)		20157.6	21347.2	2993.5	6268.3	767.9	53241.44

9. Budget Estimates for Dairy Development Programmes under RKVY

Division	District	Quality & Hygienic Milk	Commercial Dairy Farming Units	Milk Processing Units	Trainings	Milk Collection Unit	Total
Agra	Agra	60.0	780.0	112.5	15.0		967.5
	Firozabad	36.00	750.00	67.00	18.00		871.0
	Mainpuri	38	650	67.5	18		773.5
	Mathura	240.0	1300.0	150.0	150.0		1840.0
Allahabad	Allahabad	80.0	300.0	150.0	100.0	55.6	685.6
	Fatehpur	104.0	1040	726.7	65		1935.7
	Kaushambi	64.0	520.0	120	40.0		744.0
	Pratapgarh	68	650	127.5	17		862.5
Aligarh	Aligarh	48.0	390.0	90.0	12.0		540.0
	Etah	100.00	1040.00	187.50	15.00		1342.5
	Kashiram Nagar	28	910	52.5	14		1004.5
	Mahamaya Nagar (Hathrus)	110.0	715.0	52.5	13.0		890.5
Azamgarh	Azamgarh	28	910	165	7		1110.0
	Ballia	68.0	650.0	425.0	34.0		1177.0
	mau	90	585	67.5	18		760.5
Bareilly	Bareilly	60	1040	112.5	15		1227.5
	Badaun	72.0	650.0	135.0	18.0		875.0
	Pilibhit	30.00	910.00	52.50	14.00		1006.5
	Shahjahanpur	100	260	187.5	30		577.5
Basti	Basti	56.0	910.0	105.0	14.0		1085.0
	Sant Kabir Nagar	36	780	120	9		945.0
	Siddharth Nagar	140	910	105	28		1183.0
Chitrakoot	Chitrakoot	20.00	650.00	37.50	5.00	20.00	732.5
	Banda	32.00	390.00	60.00	8.00		490.0
	Hamirpur	28.0	260.0	53.0	7.0		348.0
	Mahoba	80.0	520.0	60.0	8.0		668.0
Devi Patan	Bahraich	56.0	1300.0	105.0	20.0		1481.0
	Balrampur		1040.00		8.00	55.00	1103.0
	Gonda	160	1040	120	32		1352.0
	Shravasi	40.00	325.00	75.00	12.00		452.0
Faizabad	Faizabad		156.8			39.6	196.4
	Ambedkar Nagar	36.00	750.00	67.50	18.00		871.5
	Barabanki				13.81	887.95	901.76

	Sultanpur	92.00	1300.00	172.50	23.00		1587.5
Gorakhpur	Gorakhpur	38	650	67.5	19		774.5
	Deoria	64	1110	120	16		1310.0
	Kushinagar	56	910	105	70		1141.0
	Maharaj Ganj	48	780	90	12		930.0
Jhansi	Jhansi	80.0	520.0	60.0	8.0		668.0
	Jalaun	108.0	1500.0	135.0	32.0		1775.0
	Lalitpur	80	520	60	8		668.0
Kanpur	Auraiya	28.0	910.0	105.0	7.0		1050.0
	Etawah	270	910	60	30		1270.0
	Farrukhabad	28.0	260.0	52.5	7.0		347.5
	Kannauj	96.00	390.00	300.00	32.00		818.0
	Kanpur Dehat	50.00	260.00	187.50	15.00		512.5
	Kanpur Nagar			1040.00			1040.0
Lucknow	Lucknow	32	1040	60	8		1140.0
	Hardoi	76.00	1300.00	142.50	38.00		1556.5
	Lakhimpur Khiri	60.00	650.00	112.50	15.00		837.5
	Rai Bareilly		323.4				323.4
	Sitapur	76.00	1300.00	142.50	19.00		1537.5
	Unnao						0.0
Meerut	Meerut	48.0	1560.0	90.0	30.0		1728.0
	Bhagpat	24	780	45	12		861.0
	Bulandshar	64.0	1040.0	240.0	16.0		1360.0
	Gautam Budh Nagar	16.0	260.0	30.0	8.0		314.0
	Ghaziabad	32.0	390.0	60.0	16.0		498.0
Moradabad	Moradabad	52.0	750.0	97.5	13.0		912.5
	Bijnor	44.0	520.0	82.5	11.0		657.5
	Jyotiba Phule Nagar		780.0		11.0		791.0
	Rampur	24.0	260.0	53.0	6.0		343.0
Saharanpur	Saharanpur	154.0	455.0	82.5	60.0		751.5
	Muzaffar Nagar	56.0	1050.0	105.0	15.0		1226.0
Varansi	Varansi	32.0	520.0	120.0	8.0		680.0
	Chandauli	100.00	260.00	187.50	15.00		562.5
	Ghazipur	64	910	120	16		1110.0
	Jaunpur	84	546	52.5	21		703.5
Vindhyachal	Mirzapur	48.00	1300.00	90.00	24.00		1462.0
	Sonbhadra	32.00	390.00	60.00	8.00		490.0

	Sant Ravidas Nagar	12.0	520.0	81.0	10.0		623.0
TOTAL		4276.0	50006.2	8565.7	1441.0	170.2	65360.86
Budget of Project not added in Tables							1217.05
Grand Total (Rs. Lakhs)							66577.91

10. Budget estimates for Animal Husbandry and Poultry Sector under RKVY

Division	District	A1	A4	A5	A7	A8	A9	A10	A13	A14	Total
Agra	Agra	30.0	30.0	26.8	67.5		28.5		202.5	395.0	780.3
	Firozabad	54.00	30.00		234.00		711.80		121.50		1151.3
	Mainpuri	36	30	26.8	58.75	24.6	65.112		121.5		362.8
	Mathura	240.0	50.0	214.4	81.3			30.5	135.0		751.2
Allahabad	Allahabad	40	30.0	26.8	675	228.0		35.0	270	436.0	1740.8
	Fatehpur	26	80	26.8	1143.75	313		339	175.5		2104.1
	Kaushambi	176	30	26.8	93.75	313		28.05	108		775.6
	Pratapgarh	35	30.0	26.8	281	25.7		108.4	229.5	436	1172.4
Aligarh	Aligarh	24.0	30.0	27.0	131.0			168.0	162.0		542.0
	Etah	16.00	30.00	26.80	102.50	93.00	169.57		108.00		545.9
	Kashiram Nagar	14	30	26.8	43.75	11.55	134.4		94.5	436	791.0
	Mahamaya Nagar (Hathrus)	14.0	50.0		67.5	19.2		27.1	94.5	395.0	667.3
Azamgarh	Azamgarh	44	30		206.25			54	297		631.3
	Ballia	34.0	30.0	26.8	312.5	48.0		54.4	229.5	436.0	1171.2
	mau	36	30	26.8	42.2	13.8	172.8		121.5	436	879.1
Bareilly	Bareilly	60	30		262.5	45.9		94.92	202.5	393	1088.8
	Badaun	36.0	30.0		150.0			49.0	243.0	395.0	903.0
	Pilibhit	14.00	30.00		43.75		40.71		94.50		223.0

	Shahjahanpur	40	230	51.8	178.25	93	294		202.5		1089.6
Basti	Basti	28.0	30.0	26.8	350.0	21.6		68.0	189.0	436.0	1149.4
	Sant Kabir Nagar	18	30.0	26.8	262.5			13.6	121.5		472.4
	Siddharth Nagar	56	30		96.25			132.7	189	436	940.0
Chitrakoot	Chitrakoot	10.00	30.00	26.80				273.00	67.50		407.3
	Banda	16.00	30.00	26.80		187.50		287.00	108.00		655.3
	Hamirpur	14.0	30.0	26.8	67.5		40.7		94.5		273.5
	Mahoba	8.0	30.0	20.0	185.0			112.0	54.0		409.0
Devi Patan	Bahraich	28.0	30.0	26.8	325.0	68.1	52.61		189.0	436.0	1155.5
	Balrampur	18.00	30.00	26.80	290.5			135.60	12.15		513.1
	Gonda	128	60		75	24.9	307.2		216	436	1247.1
	Shravasi	10.00	30.00	26.80				105.00	67.50		239.3
Faizabad	Faizabad	64.5	44.67	96.25						8.8	214.2
	Ambedkar Nagar	54.00	60.00	26.80	187.50		499.40		121.50		949.2
	Barabanki	40.0	155.15	222.0							417.15
	Sultanpur	46.00	30.00		111.25		582.00		310.50	436.00	1515.8
Gorakhpur	Gorakhpur	38	30		89.2		364.8		256.5	436	1214.5
	Deoria	32	30	26.8	275	57.6	149.2		216	436	1222.6
	Kushinagar	56	30		136.25		189.84		189		601.1
	Maharaj Ganj	24	30.0	26.8	500		29.2		150		760.0

Jhansi	Jhansi	174.8	30.0	26.8	480.0			448.0	108.0		1267.6
	Jalaun	162.0	48.8		156.3		58.8		94.5		520.4
	Lalitpur	136	30.0	26.8				112	81		385.8
Kanpur	Auraiya	64.0	30.0	26.8	162.5			48.8	94.5		426.6
	Etawah	16	30		290	44.7	178.9		108		667.6
	Farrukhabad	14.0	30.0		67.5		40.7		94.5		246.7
	Kannauj	48.00	90.00	26.80	57.50		147.50		108.00		477.8
	Kanpur Dehat	20.00	30.00	26.80	312.50	30.60	189.96		135.00		744.9
	Kanpur Nagar	50		332.20							382.2
Lucknow	Lucknow	16	30	26.8	290.5			135.6	108	436	1042.9
	Hardoi	76.00	60.00	26.80	315.00		395.00		256.50		1129.3
	Lakhimpur Khiri	30.00	30.00	26.80	268.00		2530.90		202.50		3088.2
	Rai Bareilly	172	30	40.41	301.4		53.58	71.4			668.8
	Sitapur	38.00	30.00		116.05		672.50		256.50		1113.1
	Unnao	346.8									346.8
Meerut	Meerut	24.0	30.0		88.0				162.0		304.0
	Bhagpat	12	50	26.8	87.5		30.51		81.2		288.0
	Bulandshar	32.0	60.0		137.5		81.4		216.0	393.0	919.9
	Gautam Budh Nagar	16.0	20.0	27.0	29.0		29.0		54.0		175.0
	Ghaziabad	64.0	105.3	29.5	63.9	5.0	34.4		128.0		430.1
Moradabad	Moradabad	26.0	30.0	723.6	149.5	28.5		67.8	175.5	395.0	1595.9

	Bijnor	22.0	30.0	428.8	143.5	67.8		39.0	137.5		868.6
	Jyotiba Phule Nagar	12.0	30.0	28.8	200.0				81.0		351.8
	Rampur	12.0	30.0		90.0			20.0	81.0	395.0	628.0
Saharanpur	Saharanpur	22	30	697.0	59.0				148.5		956.5
	Muzaffar Nagar	28.0	30.0	1822.4	149.5				189.0		2218.9
Varanasi	Varanasi	16.0	30.0	26.8	450.0	33.0	63.5		108.0		727.3
	Chandauli	40.00	30.00	26.80	350.00	25.60		135.6	135.00		743.0
	Ghazipur	32	30		250			13.6	216		541.6
	Jaunpur	84	30	26.8	26.25	32.7	118.65		283.5	436	1037.9
Vindhyachal	Mirzapur	24.00	60.00	26.80	61.60		802.50		162.00		1136.9
	Sonbhadra	16.00	30.00	26.80	68.80		158.30		108.00		407.9
	Sant Ravidas Nagar	12.0	30.0	241.2	125.0	23.5		65.5	23.7		520.9
TOTAL (Rs. Lakhs)		3475.1	2658.7	5718.4	12472.4	1879.8	9417.9	3272.6	9901.6	8873.8	57670.2
Budget of Prj not added in Tables											9367.21
GRAND TOTAL (Rs. Lakhs)											67454.55

Note: 1. Projects A2 (2121.6 lakhs), A3 (150 lakhs), A6 (111.1 Lakhs), A11 (50.0 lakhs), A12 (43.7 lakhs), A13 (9901.6 lakhs), A14 (8873.80 lakhs), A17 (67.5 lakhs), A19 0.0 lakhs) and A20 (115.5 lakhs) are added only in few districts, these projects are not given in above table.

Note: 2. A1, Programme for year round production of Green Fodder to Provide Balanced Nutrition to Cattle; A2, Fodder Bank Development for Animal Survival in Drought Period (small marginal & SC farmers); A3, Mineral & Vitamins Supplements to Breedable Cattle's to Check Infertility During Summer Season; A4, Strengthening of Artificial Insemination Centre; A5, Improvements of Cattle (Cow and Buffalo); A6, Poultry Development; A7, Improvements of Goat; A8, Goat and Piggery Development; A9, Goat Rearing; A10, Pig Rearing; A11, Cattle Crush; A12, Mass Deworming of Animals; A13, Free H.S. Vaccination; A14, Strengthening of Regional Diagnostic Lab of Veterinary; A15, Livestock Disease Surveillance and Quick Alert System; A16, Development of Modern Meat Market; A17, Slaughter House Upgradation; A18, Programme for Cattle Damage Control; A19, Mobile Van on Block Level for surveillance; A20, Hire/Purchase of vehicle for each AI centre; A21, Education Tour; A22, Cattle Fair.

11. Budget estimates for Fisheries Sector under RKVY

Division		C1	C2	C3	C4	TOTAL
Agra	Agra		200.0	50.0		250.0
	Firozabad		200.00			200.0
	Mainpuri		250	50		300.0
	Mathura	24.0	300.0	50.0		374.0
Allahabad	Allahabad		250	50.0	70.0	370.0
	Fatehpur		200.0	50		250.0
	Kaushambi		200.0	50.0	80.0	330.0
	Pratapgarh	7.0	500.0	100.0	70.0	677.0
Aligarh	Aligarh		50.0	10.0		60.0
	Etah		100.00	50.00	70.00	220.0
	Kashiram Nagar	21	200	50		271.0
	Mahamaya Nagar (Hathrus)	19.0	40.0		70.0	129.0
Azamgarh	Azamgarh	7	200	50		257.0
	Ballia	21.0	200.0	100.0	70.0	391.0
	mau	21	200	100		321.0
Bareilly	Bareilly	30	500	100	70	700.0
	Badaun	7.0	400.0	50.0	70.0	527.0
	Pilibhit		500.00	50.00	70.00	620.0
	Shahjahanpur	25.0	50.0	50.0		125.0
Basti	Basti	21.0	250.0	50.0	70.0	391.0
	Sant Kabir Nagar	7	200	50		257.0
	Siddharth Nagar	21	500	50	70	641.0
Chitrakoot	Chitrakoot	21.00	500.00	100.00	70.00	691.0
	Banda	50.00	100.00	20.00		170.0
	Hamirpur	17.0				17.0
	Mahoba		200.0	50.0	70.0	320.0
Devi Patan	Bahraich		200.0	50.0	70.0	320.0
	Balrampur	1.62	250.00	50.00		301.6
	Gonda	50		50	50	150.0
	Shravasi	21.00	250.00	100.00		371.0
Faizabad	Faizabad		136.75		75	211.8
	Ambedkar Nagar	50.00	100.00	20.00		170.0
	Barabanki	28.5			300	328.5
	Sultanpur	50.00	100.00	20.00		170.0
Gorakhpur	Gorakhpur	21	250	100	70	441.0
	Deoria	22	300	50	70	442.0

	Kushinagar	7.5	400	100	70	577.5
	Maharaj Ganj	7	200	50		257.0
Jhansi	Jhansi		200.0	50.0	70.0	320.0
	Jalaun		300.0	8.0		308.0
	Lalitpur		200	50.0	70.0	320.0
Kanpur	Etawah					0.0
	Farrukhabad		440	40		480.0
	Kannauj		200.0	250.0	70.0	520.0
	Kanpur Nagar		200.00	50.00		250.0
Lucknow	Lucknow					0.0
	Lakhimpur Khiri			43.0		43.0
	Rai Bareilly	22	250	50	70	392.0
	Sitapur					0.0
	Unnao	21.00	500.00	300.00		821.0
Meerut	Meerut		42	54.1		96.1
	Bhagpat	21.00	500.00	100.00	70.00	691.0
	Bulandshar		103			103.0
	Gautam Budh Nagar		200.0	50.0	395.0	645.0
	Ghaziabad		200	50		250.0
Moradabad	Moradabad		400.0	100.0		500.0
	Bijnor	28.0				28.0
	Jyotiba Phule Nagar	5.0	200.5	7.0		212.5
	Rampur	7.0	300.0	50.0	70.0	427.0
Saharanpur	Saharanpur	35.0	250.0	52.0	70.0	407.0
	Muzaffar Nagar	7.0	220.0			227.0
Varansi	Varansi		200.0	50.0		250.0
	Ghazipur	19.0	100.0	50.0	70.0	239.0
	Jaunpur	7.0	350.0	100.0	70.0	527.0
Vindhyachal	Mirzapur	21.0	500.0	100.0	70.0	691.0
	Sant Ravidas Nagar					
TOTAL (Rs. Lakhs)		877.1	15392.2	3764.1	2420.0	23229.3
Budget of the projects added in only few distt.						548.8
TOTAL (Rs. Lakhs)						23778.1

12. CONVERGENCE OF STATE & CENTRAL SECTOR SCHEMES IN RKVY

Increasing productivity and profitability of farm sector, while maintaining its sustainability is the basis of farm planning in Uttar Pradesh. The state has the largest contribution to agriculture produce of the country. Therefore, the State Government of Uttar Pradesh has rightly accorded highest priority to the farm sector in planning and allocation of resources for upliftment of its over 21 million operational land holdings, highest in country.

Rashtriya Krishi Vikas Yojana (RKVY) a 100 per cent centrally funded scheme, to be operated as a state scheme seeks to encourage convergence/ integration of schemes in to District Agriculture Plans (DAP) and State Agriculture Plan (SAP). For judicious utilization of financial resources under RKVY, funds from three types of schemes could be considered for convergence:

1. Sectoral and District segment of the State Plan
2. Centrally sponsored schemes, viz., NREGS (National Rural Employment Guarantee Scheme), BRGF (backward Region Grant Fund), SGSY (Swarn Jayanti Gram Swarajgar Yojana) and Bharat Nirman.
3. Tied and untied grants from Central and State Finance Commissions

In almost all DAPs, deteriorating soil health has been identified as the major issue. In order to improve soil health, the state Government has been implementing various soil health programmes such as green manuring, dhainch seed production, soil health card and strengthening of soil testing facilities. Programmes proposed in DAPs under the head soil health improvement have been converged with above mentioned Schemes.

The National Rural Employment Guarantee Scheme, currently under implementation in 39 districts, proposed to be implemented all over the State in the year 2008-09. It may be possible to generate required mandays of employment in next five years for the purpose of renovation of village ponds under RKVY, hence partial convergence is possible

Similarly, advantage may also be taken of Dr. Ambedkar community Tube Well scheme for constructing new tube wells and improving the old ones .To supplement the govt. efforts in development of farm sector in UP funds from this scheme may be converged with RKVY.

A proposal for consideration of convergence of different schemes in RKVY wherever feasible is presented hereunder:

CONVERGENCE OF CENTRAL SECTOR & OTHER SCHEMES IN RKVY PROGRAMMES

S. No.	Name of Central Sector Scheme	Total Funds outlay for XI plan (2007-12) in Central Sec Scheme (Rs Crore)	Name of RKVY programmes in which funds could be utilized from these schemes	Estimated funds to be made available from central sce scheme for 2007-12 (Rs crore)	Name of the district in which RKVY programmes proposed
1	Bharat Nirman Yojana (renovation & modernization of medium irrigation)	7920.20	Installation of Under ground pipeline system to check surface water losses	126.00	12 district (Agra, Kashiram Nagar, Hamirpur, Gonda, Shravasti, Jalaun, Farrukhabad, Kanpur nagar, Lucknow, raiBareilly, Bijnor, J.P. Nagar)
	Dr. Ambedkar community tube Well scheme		State water Tubewells for small & Marginal farmers	12.98	3 districts (Ballia, Auraiya, Jaunpur)
2	National Rural Employment Guarantee scheme (NREGS)	100462.60	Renovation of village ponds for fish production	153.922	In all districts except Hamirpur, Gonda, Barabanki, Auraiya, Kanpur nagar, Kanpur dehat, Hardoi, Gautam budh nagar, Chandauli
3	Strengthening of Soil health (New scheme w.e.f 2008- 09)	366.9789	Enrichment of organic carbon content using green manuring	61.748	41 district
			Establishment of Integrated Nutrient Management System	116.496	All the 71 districts

			Soil Health Card	136.703	41 district
4	Integrated scheme of Oil Seeds, Pulses, Oil Palm and Maize (ISOPOM) (75% centre:25% Sate)	223.00	Programme on promotion of Composite Maize for Improving productivity	27.925	9 districts (Mainpuri, Aligarh, Badaun, Shravasti, Kanauj, Kanpur Nagar, Hardoi, Saharanpur, Sonbhadra)
			Programme on promotion of cultivation of Oil seeds for Improving productivity	172.603	28 districts (Agra, Firozabad, Mathura, Aligarh, Etah, Kashiram Nagar, Mau, Badaun, Pilibhit, Shahjahanpur, Siddarthnagar, Chitrakoot, Hamirpur, Mahoba, Balrampur, Sultanpur, Auraiya, Etawah, Kannauj, Kanpur Nagar, Hardoi, Lakhimpur Khiri, Meerut, Bhagpat, Moradabad, Varanasi, Jaunpur, Sonbhadra)
5	Beej Gram Yojana (100 % CS)	3170.35	Establishment of Seed treatment and Demonstration units at gram panchayat level	28.284	All the 71 district
6	Clean milk production (100%)		Programme for quality and hygienic milk production	42.76	64 district
7	Sawarn Jayanti SawRojgar Yojana (75: 25%)	2000	Incentive for Establishment of Backyard Mushroom Units	70.659	Proposed in 46 districts except 21 districts (Firozabad, Mainpuri, Etah, Mahamaya Nagar, Chitrakoot, Banda, Hamirpur, Mahoba, Bahraich, Balrampur, Ambedkar Nagar, Barabanki, Deoria, Jhansi, Jalaun, Lalitpur, Etawah, Farrukhanabad, Kannauj, Kanpur nagar, rai Bareilly, Unnao, Mirzapur, Sonbhadra, Sant Kabir Nagar)
			Entrepreneur Development in Commercial vegetable production	13.326	10 district (Mathura, Allahabad, Aligarh, Shravasti, Faizabad, Kanpur Nagar, Lucknow, Lakhimpur Khiri, Saharanpur)

8	Farmers Welfare Scheme (Kisan Hit Yojana)	170.56	Farmers Study Tour Within and Outside the State for exposure and Motivation towards Commercialized Agriculture	63.934	In all the 71 districts
9	Support to extension programmes for Extension Reforms (90 CS: 10% State)	364.794	Knowledge Dissemination at farmers field level by Subject Matter Specialists (SMS)	177.342	In all districts except Badaun, Bahraich, Barabanki, Faizabad, Kanpur Nagar, Unnao
10	Micro Irrigation in Horticulture (80:20)	60.00	Adoption and promotion of Precision farming techniques through Microirrigation (Sprinkler & Drip). The entire amount be dovetailed in this project as it will run in 62 districts and additional funds be provided by RKVY.	Proposed outlay 326.968	In all the districts except Faizabad, Kannauj, Kanpur nagar, Hardoi, Rai bareli, Bijnor, Chandauli
11	State Horticulture Mission (85: 15)	1165.2690	Entrepreneur Development in Floriculture	69.061	17 districts (Agra, Allahabad, Mahamaya Nagar, Azamgarh, Gonda, Faizabad, Sultanpur, Gorakhpur, Lucknow, Sitapur, Meerut, Bhagpat, Bulandshar, Gautam Budh nagar, Moradabad, Bijnor, Varanasi)
			Establishment of High tech green houses for entrepreneur development in Peri Urban area	0.61	1 districts (Agra)
			Value addition to horticultural produce through grading & packaging houses establishment	31.0	29 districts (Agra, Allahabad, Aligarh, Azamgarh, Bareilly, Basti, Sant Kabir Nagar, Chitrakoot, Bahraich, Sravasti, Sultanpur, Gorakhpur, Jalaun, Farrukhabad, Kannauj)

					Lucknow, Hardoi, lakhimpur Khiri, Sitapur Meerut, Bhagpat, Bulandshar, Ghaziabad, Moradabad, J.P. nagar, Saharanpur, Muzaffarnagar, Varanasi, Ghazipur)
12	Integrated Dairy Development (100% CS)		Promotion of Commercial Dairy Farming Units	500.0	In 71 districts, except Unnao, Barabanki and Kanpur Nagar
13	Mahila Dairy Project (100% CS)		Dairy Training workshop for women	14.548	66 district
14	Drought Prone Area Programme	28925.9667	Improvement of Practices for cultivation of seed spices in Arid region	5.86	In Five districts (Mahoba, Jhansi, Lalitpur, Jalaun, Kanpur Nagar)
			Improvement of package of practices for cultivation of Arid fruit crops	24.07	In 9 districts (Agra, Chitrakoot, Banda, Hamirpur, Mahoba, Jalaun, Jhansi, Lalitpur, Sanbhadra)
			Fodder Bank development for animal survival in Drought	35.15	In all the 71 districts
			Biofencing of Karonda plantation to check Trespassing of wild animals and prevention of Anna Pratha	25.525	In Five districts (Faizabad, barabanki, jalaun, Banda, Bhagpat)
15	Backward Region Grant Fund (50 % funds from RKVY and 50% from BRGF)	3027.39	Promotion of sericulture for enhancement of farmers income	8.179	In 9 Districts (Balrampur, Gonda, Shravasti, Barabanki, Kanpur Nagar, Lakhimpur Khiri, Saharanpur, Sonbhadra, Sant Ravidas Nagar)
			Improvement and creation of new market facilities for marketing of Agricultural Produce Practices	23.751	In all the 34 BRGF districts (Annexure VI)
16	National food Security		Production and Supply of Quality	118.018	In all the districts where NFSM

	Mission (NFSM)		Pulse Seeds for Improvement of Seed Replacement Rate (SRR)		programmes are being implemented
			Programme on Promotion of Cultivation of Summer/Winter Pulses for Improving Productivity	171.80	
	Total budget estimated to be available through Convergence			2,442.384 Cr	

COMPERIHENSIVE BUDGET ESTIMATES OF NEW PROGRAMMES DISTRICTWISE UNDER RKVY

The Detailed Project Report (DPR) for each of 113 new projects has been developed, so that selected and approved projects drawn up by bottom up approach are implementable in different districts. A budget summary district wise is presented in the following pages.

8. BUDGET SUMMARY

Budget Summary of new projects for all the districts under RKVY is presented in following tables, it takes care of crop sector including Horticulture and Animal sector including Animal husbandry, dairy, poultry and fisheries.

Prj code	Particulars/Name of the District	TOTAL (Rs. Lakh)
I.	CROP SECTOR	
A	SOIL MANAGEMENT AND LAND USE PROJECT	
1	Enrichment of Organic Carbon Content Using Green Manuring ^{††}	6174.8
2	Establishment of Integrated Nutrient Management System (INM) ^{††}	11649.61
3	Recycling of Agri Waste and Crop Residues through NADEP and Vermicompost for Soil Nutrition and Moisture Conservation	4542.5
4	Management of Sulfur Status in Soil of Intensive Agriculture System to Maintain Sulfur Availability to Plants	8262
5	Management of Zinc Status in Soil of Intensive Agriculture System to Maintain Zinc Availability to Plants	137.5
6	Renovation and Strengthening of Soil and Fertilizer Testing Laboratories and Soil Health Card Programme	
a)	Soil Testing & Fertilizer Testing Laboratories	7252.24
b)	Soil Health Card Programme ^{††}	13670.43
7	Strengthening of soil survey unit	93
8	Strengthening of RST lab and Tahsil soil testing lab	271
9	Soil sampling / testing	25
B	ADOPTION OF ORGANIC FARMING SYSTEM^{##}	4289
	Adoption and Certification of Organic Agriculture Management System with Online Traceability System for Facilitation of Exports and Domestic Retail Chain Uttar Pradesh	39.0

C	EFFICIENT USE OF WATER RESOURCES AND MANAGEMENT	
1	Installation of Underground Pipe Line System for Water Conveyance of Irrigation Water*	12600
2	Adoption and Promotion of Precision Farming Techniques through Microirrigation###	32696.76
3	Demonstration cum Training of Ridge and Furrow System of Paddy Cultivation for Increasing Water Use Efficiency and Ecofriendly Cultivation	7952.08
4	Water harvesting, storage and its utilization for irrigation	12230
5	State water tubewell for small and marginal farmers**	1298
6	Water Shed Mangement	12026.07
7	Water shed plus activity	600
8	Ravine Stablization	1200
D	SEED AND PLANTING MATERIAL	
1	Establishment of Seed Treatment and Demonstrations Units at Gram Panchayats Level for early and high germination rate to increase crop yield [†]	2828.375
2	Production and Supply of Quality Seeds and Planting Material for Improvement of Seed Replacement Rate (SRR)	14813.382
3	Programme on Promotion of Cultivation of Composite Maize for Improving Productivity ^{†††}	2792.5
4	Programme on Promotion of Cultivation of Hybrids of Bajra for Improving Productivity	1212.5
5	Programme on Promotion of Cultivation of Oilseeds for Improving Productivity ^{†††}	17260.25
6	Programme on Promotion of Cultivation of Summer/Winter Pulses for Improving Productivity	29670
7	Promotion of Basmati Rice Cultivation for Export in Compliance with Global GAP	350
8	Enhancement in Production Capacity of Seed and Planting Material at Government Farms.	2321.25
9	Strengthening of State Agriculture Input Centre (5 unit)	108
10	Programme on Promotion of Cultivation of Jowar	750
11	Production of supply of quality seed production of major crops (arhar, garm and lentil)	262.5
E	TECHNOLOGY DISSEMINATION	
1	Customized Farmer Trainings and Application of Information and Communication Technology (ICT)	18822.95
2	Establishment of Integrated Farmers Training Center (IFTC) at District Level	88330.5

3	Establishment of Agri- knowledge and Market Information Center at Block Level	50994.5
4	Knowledge Dissemination at Field level by Subject Matter Specialist (SMS) [#]	17734.19
5	Publication and Mass Campaign for Resource Development of Agri and Allied Sector using ICT	13200
6	Training cum Demonstration of Integrated Pest Management in Major Crops to Decrease the Pesticide Load in Food Chain	3294.88
7	Training and Demonstrations of Weed Management in Major Crop to Reduce the Yield Loss	2376
8	Farmers training and Demonstration at Krishi Vigyan Kendra	7052
9	Farmers Study Tour Within and Outside the State for exposure and Motivation towards Commercialized Agriculture ²	6393.4
10	Krishi Vikas Yatra	81.8
11	Publicity of New Technology through Multi & Print Media	265
12	Strengthening of Government Agriculture Workshop	1275.75
13	Regional Agriculture Research station	233
14	Soil Conservation Training Centre	5.03
15	Strengthening of training hall at sub division level	826.9
16	Farm field days	16.5
17	District Level Farmer Fare/Gosthi	7.5
18	Farmer Fare at Block Level	247.5
19	Strengthening of sub-divisional Agriculture executive and Deputy Director Agriculture office	20
F	AGRI-CLINIC AT BLOCK LEVEL FOR FIELD CROP ADVICE AND PLANT PROTECTION CENTRE	21334
G	FARM MECHANIZATION	
1	Establishment of Farm Mechanization Centers at Panchayat Level to Minimize the Energy Loss of Human Resources	46580.58
2	Mechanization of Agriculture	1735.25
3	Promotion of Zero seed drill machine under rice wheat cropping system	3.75
H	ESTABLISHMENT OF NEW LABORATORIES	
1	Establishment of Tissue Culture Laboratory.	260
2	Establishment of Modern Food Testing Laboratories including Facilities for Soil, Fertilizer & Bio fertilizer, Pesticide Residues to Study Soil Ionic Balance and Chemical Residues for Food Safety.	4855.5

II	<u>HORTICULTURE</u>	
A	PROGRAMMES FOR SMALL AND MARGINAL FARMERS AND WOMEN EMPOWERMENT	
1	Promotion of Protected Cultivation of Vegetable Crops under Low Tunnels for Early Production of Vegetables	7292.07
2	Augmentation of Quality Seed Potato Production at Farmer's Field Using 'Seed Plot Techniques'	3074.752
3	Demonstration and Supply of Healthy Nursery in Vegetable Crops	2946
4	Improvement of Productivity and Post Harvest Handling of Onion and Garlic	572.5
5	Development of Nutritional Kitchen Garden for Balanced Nutrition at Village Level and Involvement of women in Horticulture	4013.915
6	Potato Grader for each Block	127.5
7	Biofencing of Karonda Plantation to Check Treepassing of Wild Animals and Prevention of Anna Pratha [¥]	2552.46
8	Strengthening & Govt Agriculture & Garden	15
B	ENTREPRENEUR DEVELOPMENT PROGRAMMES	
1	Entrepreneur Development in Commercial Vegetable Production ^{\$\$}	1332.61
a)	Machan method in cucurbits	250
b)	Onion, Turmeric, Chilly, Garlic and Coriander	169
2	Entrepreneur Development in Floriculture [§]	6906.066
3	Incentive for Establishing Backyard Mushroom Units ^{\$\$}	7065.9
4	Promotion of Bee Keeping for Honey Production and Processing for Price Realization	4218.5
5	Establishing High-Tech Green Houses for Training and Demonstration of Commercial Horticulture for Entrepreneur Development in Peri Urban Areas [§] .	61
6	Expansion of Herbal crops (Aloe vera, Ashvghandha, Lemon Grass, Palmarosa)	94
7	Promotion of GLOBAL GAP in Vegetables Production (Including certification & Residue analysis)	1600
8	Programme for Promotion of Mentha Cropping	128.25
9	Strengthening of Government Nursery	110
10	Exposure Visit and Establishment of Horticulture Technology Dissemination Centre	0
11	Establishment of Private nursery	75
12	Establishment of rural vegetable market	37.5
	Establishment of Onion pack house	10
C	ARID AND RAINFED FARMING	

1	Improvement of Package of Practices for Cultivation of Seed Spices in Arid Regions [¥]	586
2	Improvement in Package of Practices for Cultivation of Arid Fruit Crops [¥]	2407.53
D	COMMERCIAL FRUITS	
1	Promotion of Rejuvenation of Senile, Old and Unproductive Orchards of Mango and Guava.	1436.45
2	Programme for High Density Planting of Mango and Guava	3947.05
3	High Density Planting in Litchi.	570.95
4	Early Bearing Grafted Tamarind, Pomegranate, Fig (Angir), Guava & Mango	95.6
5	Promotion of Banana Cultivation	478
III	Promotion of Sericulture for Enhancement of Farmer's Income^{¥¥}	817.88
IV	<u>POST HARVEST & AGRICULTURE MARKETING</u>	
A	DEVELOPMENT OF FACILITIES FOR MARKETING OF AGRICULTURAL PRODUCE	
1	Improvement and Creating of New Market Facilities for Marketing of Agricultural Produce ^{¥¥}	2375.138
2	Value addition to Horticultural Produce through Establishment of Grading and Packaging Houses [§]	3100
3	Grading and Acid Lime Waxing Package	100
4	Maintenance of Seed Distribution Godowns & Plant Protection Units	198.5
5	Promotion and Establishment of Maize Processing Unit	50
6	Fruit Preservation Unit	24
B	POST HARVEST TECHNOLOGY	
1	Establishment of Post Harvest Laboratory	101.5
2	Demonstrations and Trainings	33.75
	Agroforestry (proposed only in Barabanki)	58.1
	Grand Total of Crop sector	5,54,356.48
	<u>LIVESTOCK SECTOR</u>	
A	ANIMAL HUSBANDRY	
1	Programme for year round production of Green Fodder to Provide Balanced Nutrition to Cattle [¥]	3515.1

2	Fodder Bank Development for Animal Survival in Drought Period (small marginal & SC farmers)	2121.6
3	Mineral & Vitamins Supplements to Breedable Cattle's to Check Infertility During Summer Season	150
4	Strengthening of Artificial Insemination Centre	2813.87
5	Improvements of Cattle (Cow and Buffalo)	5940.36
6	Establishment of new cattle Breeding Centres	111.1
7	Poultry Development	12472.4
8	Improvements of Goat	1879.8
9	Goat and Piggery Development	9417.922
10	Goat Rearing	3272.58
11	Sheep rearing	72.48
12	Pig Rearing	74.58
13	Cattle Crush	330.142
14	Mass Deworming of Animals	400
15	Free H.S. Vaccination	50
16	Strengthening of Regional Diagnostic Lab of Veterinary	43.66
17	Livestock Disease Surveillance and Quick Alert System	9901.55
18	Development of Modern Meat Market	8873.8
19	Slaughter House Upgradation	20
20	Programme for Cattle Damage Control	5000
21	Mobile Van on Block Level for surveillance	67.5
22	Hire/Purchase of vehicle for each AI centre	625
25	Haemorrhagic Septicemia (H.S.) Disease Control Programme	115.5
26	Provision of generator at animal service center	9.35
27	Animal Disease Diagnostic Lab	83.66
28	Establishment of BAIF Centers	200
29	Provision of Cow/Buffalo Bulls at remote village Panchayat (free of cost)	92
30	Training of farmers in Animal Husbandry	19.7
31	Anti sterility Programme in Animals	100
B	DAIRY	
1	Programme for Quality & Hygienic Milk Production ^{\$}	4276
2	Promotion of Commercial Dairy Farming Units ^{\$\$\$}	50006.2
3	Mini Milk Processing Units	8565.7
4	Dairy Training Workshops for Women ^{\$\$}	1454.81
5	Installation of Bulk Milk Collecting Units	1058.15
6	Procurement and Marketing of Milk	1207.05
7	Alfa can with lids	10

C	FISHERIES DEVELOPMENT	
1	Demonstration and Training of Fish Culture	905.62
2	Renovation of Village/ Urban Ponds for fish production [†]	15392.248
3	Development of New Hatcheries for production of fingerlings	3764.1
4	Development of Modern Fish Market	2720
5	Education Tour/Training and exposure visit	13
6	Renovation of Existing Hatcheries	125.5
7	Ornamental Fish Production Hatcheries	60
8	Seed Unit	33
9	Fish market strengthening	2.25
10	Innovative activity like prawn culture	57
11	Deeping of State Owned Ponds	125
12	Renovation of Govt Fish tank	40
13	Infrastructure Development	78
14	Fish Farmer Training and Extension	5
15	Renovation and improvement of GOOJAR TALL	10
	Total of Livestock Sector (in lakhs)	1,57,682.3
	PLANNING, MONITORING AND EVALUATION OF DAP	1650
	TOTAL	7,13,688.78

* Part of the fund may be obtained by the way of convergence with Central sector Scheme, "Bharat Nirman Yojana"

** Part of the fund may be obtained by the way of convergence with "Dr. Ambedkar community tube Well scheme"

[†] Part of the fund may be obtained by the way of convergence with "National Rural Employment Guarantee Scheme"

^{††} Part of the fund may be obtained by the way of convergence with "Strengthening of Soil Health"

^{†††} Part of the fund may be obtained by the way of convergence with "Integrated scheme of Oil Seeds, Pulses, Oil Palm and Maize"

[‡] Part of the fund may be obtained by the way of convergence with "Beej Gram Yojana"

[§] Part of the fund may be obtained by the way of convergence with "Clean Milk Production"

^{§§} Part of the fund may be obtained by the way of convergence with "Swarn Jayanti SawRozgar Yojana"

- \$\$\$ Part of the fund may be obtained by the way of convergence with “Integrated Dairy Development scheme”
- ♀ Part of the fund may be obtained by the way of convergence with “Farmers Welfare Scheme”
- # Part of the fund may be obtained by the way of convergence with ”Support to extension programmes for Extension Reforms”
- ## Part of the fund may be obtained by the way of convergence with “National Project of Organic Farming”
- ### Part of the fund may be obtained by the way of convergence with “Micro Irrigation in Horticulture”
- § Part of the fund may be obtained by the way of convergence with “State Horticulture Mission”
- ¥ Part of the fund may be obtained by the way of convergence with “Drought Prone Area Programme”
- ¥¥ Part of the fund may be obtained by the way of convergence with “Backward Region Grant Fund”

COMPREHENSIVE LIST OF NEW PROPOSED PROGRAMMES UNDER RKVY

Prj code	Particulars/Name of the Disrict
I.	CROP SECTOR
A	SOIL MANAGEMENT AND LAND USE PROJET
1	Enrichment of Organic Carbon Content Using Green Manuring
2	Establishment of Integrated Nutrient Management System (INM)
3	Recycling of Agri Waste and Crop Residues through NADEP and Vermicompost for Soil Nutrition and Moisture Conservation
4	Management of Sulfur Status in Soil of Intensive Agriculture System to Maintain Sulfur Availability to Plants
5	Management of Zinc Status in Soil of Intensive Agriculture System to Maintain Zinc Availability to Plants
6	Renovation and Strengthening of Soil and Fertilizer Testing Laboratories and Soil Health Card Programme
a)	Soil Testing & Fertilizer Testing Laboratories
b)	Soil Health Card Programme
7	Strengthening of soil survey unit
8	Strengthening of RST lab and Tahsil soil testing lab
9	Soil sampling / testing
B	ADOPTION OF ORGANIC FARMING SYSTEM
C	EFFICIENT USE OF WATER RESOURCES AND MANAGEMENT
1	Installation of Underground Pipe Line System for Water Conveyance of Irrigation Water
2	Adoption and Promotion of Precision Farming Techniques through Microirrigation.
3	Demonstration cum Training of Ridge and Furrow System of Paddy Cultivation for Increasing Water Use Efficiency and Ecofriendly Cultivation
4	Water harvesting, storage and it's utilization for irrigation
5	State water tubewell for small and marginal farmers
6	Water Shed Mangement
7	Water shed plus activity
8	Ravine Stablization
D	SEED AND PLANTING MATERIAL

1	Establishment of Seed Treatment and Demonstrations Units at Gram Panchayats Level for early and high germination rate to increase crop yield
2	Production and Supply of Quality Seeds and Planting Material for Improvement of Seed Replacement Rate (SRR)
3	Programme on Promotion of Cultivation of Composite Maize for Improving Productivity
4	Programme on Promotion of Cultivation of Hybrids of Bajra for Improving Productivity
5	Programme on Promotion of Cultivation of Oilseeds for Improving Productivity
6	Programme on Promotion of Cultivation of Summer/Winter Pulses for Improving Productivity
7	Promotion of Basmati Rice Cultivation for Export in Compliance with Global GAP
8	Enhancement in Production Capacity of Seed and Planting Material at Government Farms.
9	Strengthening of State Agriculture Input Centre (5 unit)
10	Programme on Promotion of Cultivation of Jowar
11	Production of supply of quality seed production of major crops (arhar, gram and lentil)
E	TECHNOLOGY DISSEMINATION
1	Customized Farmer Trainings and Application of Information and Communication Technology (ICT)
2	Establishment of Integrated Farmers Training Center (IFTC) at District Level
3	Establishment of Agri- knowledge and Market Information Center at Block Level
4	Knowledge Dissemination at Field level by Subject Matter Specialist (SMS).
5	Publication and Mass Campaign for Resource Development of Agri and Allied Sector using ICT
6	Training cum Demonstration of Integrated Pest Management in Major Crops to Decrease the Pesticide Load in Food Chain
7	Training and Demonstrations of Weed Management in Major Crop to Reduce the Yield Loss
8	Farmers training and Demonstration at Krishi Vigyan Kendra
9	Farmers Study Tour Within and Outside the State for exposure and Motivation towards Commercialized Agriculture.
10	Krishi Vikas Yatra
11	Publicity of New Technology through Multi & Print Media
12	Strengthening of Government Agriculture Workshop
13	Regional Agriculture Research station
14	Soil Conservation Training Centre
15	Strengthening of training hall at sub division level
16	Farm field days

17	District Level Farmer Fare/Gosthi
18	Farmer Fare at Block Level
19	Strengthening of sub-divisional Agriculture executive and Deputy Director Agriculture office
F	AGRI-CLINIC AT BLOCK LEVEL FOR FIELD CROP ADVICE AND PLANT PROTECTION CENTRE
G	FARM MECHANIZATION
1	Establishment of Farm Mechanization Centers at Panchayat Level to Minimize the Energy Loss of Human Resources
2	Mechanization of Agriculture
3	Promotion of Zero seed drill machine under rice wheat cropping system
H	ESTABLISHMENT OF NEW LABORATORIES
1	Establishment of Tissue Culture Laboratory.
2	Establishment of Modern Food Testing Laboratories including Facilities for Soil, Fertilizer & Bio fertilizer, Pesticide Residues to Study Soil Ionic Balance and Chemical Residues for Food Safety.
II	<u>HORTICULTURE</u>
A	PROGRAMMES FOR SMALL AND MARGINAL FARMERS AND WOMEN EMPOWERMENT
1	Promotion of Protected Cultivation of Vegetable Crops under Low Tunnels for Early Production of Vegetables
2	Augmentation of Quality Seed Potato Production at Farmer's Field Using 'Seed Plot Techniques'
3	Demonstration and Supply of Healthy Nursery in Vegetable Crops
4	Improvement of Productivity and Post Harvest Handling of Onion and Garlic
5	Development of Nutritional Kitchen Garden for Balanced Nutrition at Village Level and Involvement of women in Horticulture
6	Potato Grader for each Block
7	Biofencing of Karonda Plantation to Check Treepassing of Wild Animals and Prevention of Anna Pratha
8	Strengthening & Govt Agriculture & Garden
B	ENTREPRENEUR DEVELOPMENT PROGRAMMES
1	Entrepreneur Development in Commercial Vegetable Production
a)	Machan method in cucurbits
b)	Onion, Turmeric, Chilly, Garlic and Coriander

2	Entrepreneur Development in Floriculture
3	Incentive for Establishing Backyard Mushroom Units
4	Promotion of Bee Keeping for Honey Production and Processing for Price Realization
5	Establishing High-Tech Green Houses for Training and Demonstration of Commercial Horticulture for Entrepreneur Development in Peri Urban Areas.
6	Expansion of Herbal crops (Aloe vera, Ashvaghanda, Lemon Grass, Palmarosa)
7	Promotion of GLOBAL GAP in Vegetables Production (Including certification & Residue analysis)
8	Programme for Promotion of Mentha Cropping
9	Strengthening of Government Nursery
10	Exposure Visit and Establishment of Horticulture Technology Dissemination Centre
11	Establishment of Private nursery
12	Establishment of rural vegetable market
	Establishment of Onion pack house
C	ARID AND RAINFED FARMING
1	Improvement of Package of Practices for Cultivation of Seed Spices in Arid Regions.
2	Improvement in Package of Practices for Cultivation of Arid Fruit Crops.
D	COMMERCIAL FRUITS
1	Promotion of Rejuvenation of Senile, Old and Unproductive Orchards of Mango and Guava.
2	Programme for High Density Planting of Mango and Guava
3	High Density Planting in Litchi.
4	Early Bearing Grafted Tamarind, Pomegranate, Fig (Angir), Guava & Mango
5	Promotion of Banana Cultivation
III	Promotion of Sericulture for Enhancement of Farmer's Income
IV	<u>POST HARVEST & AGRICULTURE MARKETING</u>
A	DEVELOPMENT OF FACILITIES FOR MARKETING OF AGRICULTURAL PRODUCE
1	Improvement and Creating of New Market Facilities for Marketing of Agricultural Produce
2	Value addition to Horticultural Produce through Establishment of Grading and Packaging Houses

3	Grading and Acid Lime Waxing Package
4	Maintenance of Seed Distribution Godowns & Plant Protection Units
5	Promotion and Establishment of Maize Processing Unit
6	Fruit Preservation Unit
B	POST HARVEST TECHNOLOGY
1	Establishment of Post Harvest Laboratory
2	Demonstrations and Trainings
	<u>LIVESTOCK SECTOR</u>
A	ANIMAL HUSBANDRY
1	Programme for year round production of Green Fodder to Provide Balanced Nutrition to Cattle
2	Fodder Bank Development for Animal Survival in Drought Period (small marginal & SC farmers)
3	Mineral & Vitamins Supplements to Breedable Cattle's to Check Infertility During Summer Season
4	Strengthening of Artificial Insemination Centre
5	Improvements of Cattle (Cow and Buffalo)
6	Establishment of new cattle Breeding Centres
7	Poultry Development
8	Improvements of Goat
9	Goat and Piggery Development
10	Goat Rearing
11	Sheep rearing
12	Pig Rearing
13	Cattle Crush
14	Mass Deworming of Animals
15	Free H.S. Vaccination
16	Strengthening of Regional Diagnostic Lab of Veterinary
17	Livestock Disease Surveillance and Quick Alert System
18	Development of Modern Meat Market
19	Slaughter House Upgradation
20	Programme for Cattle Damage Control
21	Mobile Van on Block Level for surveillance
22	Hire/Purchase of vehicle for each AI centre
25	Haemorrhagic Septicemia (H.S.) Disease Control Programme
26	Provision of generator at animal service center
27	Animal Disease Diagnostic Lab

28	Establishment of BAIF Centers
29	Provision of Cow/Buffalo Bulls at remote village Panchayat (free of cost)
30	Training of farmers in Animal Husbandry
31	Anti sterility Programme in Animals
B	DAIRY
1	Programme for Quality & Hygienic Milk Production
2	Promotion of Commercial Dairy Farming Units
3	Mini Milk Processing Units
4	Dairy Training Workshops for Women
5	Installation of Bulk Milk Collecting Units
6	Procurement and Marketing of Milk
7	Alfa can with lids
C	FISHERIES DEVELOPMENT
1	Demonstration and Training of Fish Culture
2	Renovation of Village/ Urban Ponds for fish production
3	Development of New Hatcheries for production of fingerlings
4	Development of Modern Fish Market
5	Education Tour/Training and exposure visit
6	Renovation of Existing Hatcheries
7	Ornamental Fish Production Hatcheries
8	Seed Unit
9	Fish market strengthening
10	Innovative activity like prawn culture
11	Deeping of State Owned Ponds
12	Renovation of Govt Fish tank
13	Infrastructure Development
14	Fish Farmer Training and Extension
15	Renovation and improvement of GOOJAR TALL

Details of the Projects Approved in First SLSC held on March 3rd 2008

S.No.	Name of the Scheme	Approved Budget Year 2007-08 (Lakhs)
1	Energization of tubewells through Minor Irrigation Department	5000.00
2	Sprinklar set and Drip irrigation by Department of Agriculture	479.40
3	Establishment of 500 Solar Photo Voltaic Irrigation Pumps for Irrigation in Bundelkhand*	355.56
4	Seed Production Programme by Agriculture University, Faizabad	363.40
5	Seed Production Programme by Agriculture University, Kanpur	602.00
6	Strengthening of Deep Frozen Semen Production Centres, Training and Extension programme, Fodder Seed Production	400.00
7	Strengthening of State Seed farms, Strengthening of Training Centres, Exposure visit of the farmers, Fencing of New orchards	400.00
8	10 programmes proposed by fisheries Department	400.00
9	Customized Farmers Training and Extension Programme by AFC	200.00
	Total	8200.00
10	Strengthening of Soil Testing Laboratories	600.00
11	Establishment and Strengthening of Seed Farm Units	500.00
12	Establishment of Agri-mart in Hapur and Lucknow	433.00
13	Land Development of Ravine Katari Land of Ramganga	100.00
14	Certification of Organic Agriculture Management System by NAFAD	1067.00
	Total	2700.00
	Grand Total	10900.00

*Project not implemented.

Details of the Projects Approved in Second SLSC for 2008-09

(Rs. in lakh)

Sl.No.	Department/Scheme	Amount
1	Agriculture Department	
a	Soil health improvement programme	2664.00
b	Strengthening of soil survey programme	44.00
c	Promotion of organic farming	1000.00
d	Strengthening of extension support system	1700.00
e	Exposure visit & agriculture technology awareness scheme	345.60
f	Customized farmer training and extension activities and online monitoring and application of ICT	1002.00
g	Strengthening of IPM programme and awareness through different IPM measures	283.00
	Sub total	7038.60
2	Animal Husbandry Strengthening of Artificial Insemination Center	1603.18
3	PCDF(Dairy)	1201.75
4	Horticulture	3285.40
5	Fisheries	
a	Development of demonstration site for integrated fish farming	112.00
b	Development/ establishment of modern fish market	283.00
	Sub Total	395.00
6	Minor irrigation	5409.00
	Grand Total	18932.93

Sl.No.	Department/Scheme	Amount
1	Agriculture Department	
a	Strengthening of Agriculture farms and seed production	1365.99
b	Strengthening of Agriculture seed store at block level.	1219.50
c	Strengthening of Seed Testing Lab in U.P. RKVY	162.00
d	Scheme of Adoptive Trials/Demonstrations and organizing farmers at 9 RATDS	45.79
e	Assessment of crop yield in demonstrated field under various components i.e. NFSM, Macro Management of Agricultural & ISOPAM (RKVY).	16.10
f	Strengthening & Renovation of Communication and Training Infrastructure at Head Quarter	210.36
g	Strengthening of Seed Processing	353.20
h	Farm Mechanization at State Institute of Management of Agriculture (SIMA) Rahmankhera, Lko	45.64
	Sub Total	3418.58
2	Animal Husbandry	34.13
	Production of foundation Seeds at Government Livestock Farm	
3	Fisheries	
a	Fish Seed Production at Govt. Fish Farms	65.00
b	Establishment of training and Awareness Centre at Badalpur (Gautam Budh Nagar)	15.00
c	Development of Departmental water bodies of the state	58.00
	Sub Total	138.00
4	Horticulture Development Programme	707.00

5	PCDF- Vehicle Tracking System (Dairy Development Department)	74.97
6	Remote Sensing Application Centre U.P.	108.43
	Total	4481.11
	Contingency 1% of total outlay	316.00
	Diversified Agriculture Support Project (DASP)	86916.59
	Grand Total	1,10,646.63

**Brief note on Diversified Agriculture Support Project-II &
Financial Requirement for the year 2008-09 to 2012-13 (for 05 years)**

Project has been prepared with detailed Project Implementation Plans (PIPs) for approximately Rs. 869.16 crores including physical and cost contingency of Rs. 113.00 crore as shown on **Annexure-A**.

Requirement for the Financial Year 2008-09:

The year 2008-09 will be the first year of the IInd phase of the project. Based on the preliminary discussions with various departments. The project has been sanctioned by the S.L.S.C. for five years and 139.00 crores allocated for the financial year 2008-09.

Diversified Agriculture Support Project-II

State Government with the support of World Bank has implemented the multi dimensional Diversified Agriculture Support Project (DASP) in 157 blocks of 32 districts from September 1998 to March 2004. First phase of UPDASP, which succeeded in increasing agricultural productivity and diversification through disseminating demand driven technologies. A key lesson from DASP-I project was that commercialization of agriculture and private sector involvement are necessary to produce sustained increase in rural incomes. The Implementation Completion Report (ICR) concludes that lack of adequate market linkages and farmer skills/ capacity to produce for the market (choice of appropriate varieties, post-harvest handling and quality control etc) has emerged as the biggest challenges to sustaining productivity enhancement and income diversification.

In view of success of Phase-I and in order to diversify agriculture to address emerging market demands, State Government has prepared proposals for DASP-II including many innovative and market oriented features. The objective of the project would be to increase the productivity, product diversity and market access of the state's farmers, livestock producers and fishermen. Key indicators of success would be increased areas and yields of diversified field and tree crop, livestock, and fish products; complemented by an increase in the proportion of production that is marketed as fresh produce or is processed or value added in some form. In support of this objective, the project would aim to increase private sector investment in all facets of the agricultural and allied sectors (from production and service provision through to commodity trading and processing/ value adding); and to promote more effective use of government funds already allocated to these sectors.

Preliminary Project Description

2.The proposed project would cover all 70 districts in the state (32 phase I districts from the first UPDASP, and 38 new phase II districts) with the project pursuing intensive involvement of agriculture and horticulture activities in 38 districts, dairy development, animal husbandry, mandi, fisheries and food processing interventions in all seventy districts. The project activities would be grouped into two components:

(i) Promoting Intensification and Diversification of Agricultural Production - by making extension and adaptive research more relevant and accessible to farmers; encouraging the development and introduction of more effective agricultural production systems; and reducing the risk associated with change, especially for small operators.

(ii) Increasing Farmer Access to Expanding Market Opportunities-by improving the relevance of market information and regulatory framework; improving supply

chain management; increasing market infrastructure and making market management more responsive to farmers needs; and promoting private sector investment in agribusiness

Major Project Interventions:

Component	3.Major Interventions
Agriculture	<ul style="list-style-type: none"> • Integrated Pest Management practices • Integrated Crop Technology Demonstrations • Increasing cropping intensity • Improvement in soil health through promotion of organic manure • Promoting oilseed and pulses production • Intensification of market potential cereals like Basmati Rice, Durum Wheat and Rabi Maize
Horticulture	<ul style="list-style-type: none"> • Promotion of vegetables, fruits, spices, aromatic plants and flowers • Promotion of processing varieties • Production of bio / safe food • Promotion of low cost storage technology Zero Energy Cool Chamber, Onion Storage Godowns • EUREPGAP and Organic Certification of selected vegetables, fruits and medicinal plants
Food Processing	<ul style="list-style-type: none"> • Capacity building on packaging, storage and primary processing • Certification of produce (Strengthening of Regional Food Research & Analysis Centre) and establishment of Quality Control Lab for honey processing • Organizing Buyer-Seller meet
Animal Husbandry	<ul style="list-style-type: none"> • Capacity building of 1500 unemployed rural youths for delivering AH services at farmers' doorstep • Increasing milk productivity of cows & buffalos and production of genetically improved bulls

Component	3.Major Interventions
	<ul style="list-style-type: none"> Promotion of goatry, piggery, poultry units for improvement of local stock and increasing farm agri-income of livestock keepers subsequently Organizing nutritional demonstrations & health camps
Dairy Development	<ul style="list-style-type: none"> Strengthening & establishment of infrastructure for improvement in quality of milk Same day and transparent payment system to provide remunerative prices to milk producers Pilot in five districts for establishment of Bulk Milk Coolers.
Fisheries	<ul style="list-style-type: none"> Optimum utilization of available water resources in U. P. Integrated fish farming Fish pond development Prawn farming on pilot basis Establishment of hatcheries and nurseries in private sector Establishment of fish mandis
Mandi Parishad	<ul style="list-style-type: none"> 30 Farmer Service Centre) Establishment of 10 NDDB and 13 NAFED outlets
Other new interventions on pilot basis	<ul style="list-style-type: none"> Risk Management through insurance module Warehouse linked credit availability Future marketing through MCX and NCDEX Web based marketing Promotion of Information Technology

Project Period:

Project will be for five years and is expected to start during FY 2008-13.

DIVERSIFIED AGRICULTURE SUPPORT PROJECT
Summary Of Cost Table (Rs in Lacs)

S.no.	Component	2008-09	2009-10	2010-11	2011-12	2012-13	Total Cost
1	Agriculture	711.75	1189.73	2443.30	2537.74	1597.16	8479.68
2	Horticulture	968.03	1712.83	2169.45	1863.56	1251.79	7965.66
3	Animal Husbandary	2496.49	2412.40	2477.90	1700.73	1639.02	10726.54
4	Dairy	1472.63	2446.30	3164.42	2909.22	1968.71	11961.28
5	Food Processing	376.32	510.39	428.98	330.85	183.32	1829.86
6	Fisheries	982.73	1669.44	2083.03	2552.15	2642.76	9930.11
7	Mandi Parishad	863.92	1821.90	1226.51	1034.94	0.00	4947.27
8	Private Sector Market Facilities	1507.21	2138.53	3852.56	4721.27	2214.96	14434.53
9	NGOs	199.41	211.67	224.28	237.23	249.90	1122.49
10	ABDF	701.28	984.06	1291.60	1082.28	1128.22	5187.44
11	Risk Mng	422.06	426.36	597.79	126.40	96.31	1668.92
12	PCU	853.68	766.56	780.44	662.85	653.85	3717.38
13	DPCU	1362.05	822.60	863.73	953.94	943.11	4945.43
	Total	12917.56	17112.77	21603.99	20713.16	14569.11	86916.59

List of Backward Region Grant Fund District

1	Ambedkar Nagar	2	Azamgarh
3	Bahraich	4	Balrampur
5	Banda	6	Barabanki
7	Basti	8	Budaun
9	Chandauli	10	Chitrakoot
11	Etah	12	Farrukhabad
13	Fatehpur	14	Gonda
15	Gorakhpur	16	Hamirpur
17	Hardoi	18	Jalaun
19	Jaunpur	20	Kaushambi
21	Kheri	22	Kushi Nagar
23	Lalitpur	24	Maharajganj
25	Mahoba	26	Mirzapur
27	Pratapgarh	28	Rae Bareli
29	Sant Kabeer Nagar	30	Shravasti
31	Siddharth Nagar	32	Sitapur
33	Sonbhadra	34	Unnao