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ACCELERATING SUSTAINABLE AGRICULTURE PROGRAM



Bamyan Province Agricultural Profile 2008



Prepared by the National Agriculture Information System (NAIS)/AgNet
for the Afghan Ministry of Agriculture, Irrigation and Livestock (MAIL)

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Agriculture

Profile and Data

In Bamyan Province



Bamyan Brief Introduction:

Bamyan is located in the central high lands of Afghanistan between 33.91-35.48 degrees latitude and 66.28-68.28 degrees longitude. As the cultural center of the Hazarajat, the province is home to the majority of Afghanistan's Hazara ethnic minority. Bamyan borders the provinces of Samangan and Saripul to the north, Baghlan, Prwan and Maidan to the east, Ghor to the west and Ghazni and Daikundi to the south. The 7 administration districts of the province encompass 18,292.25 square kilometers of which 96,808.28 hectares are used for agricultural purposes. Bamyan has 2,403 villages with an estimated population of 462,497 (based on a 2008 census). Bamyan is famous for producing Qroot, Namad and potatoes and the majority of Hazara people are involved in animal husbandry, mostly raising sheep and goats.



BAMYAN PROVINCE AGRICULTURE MAP

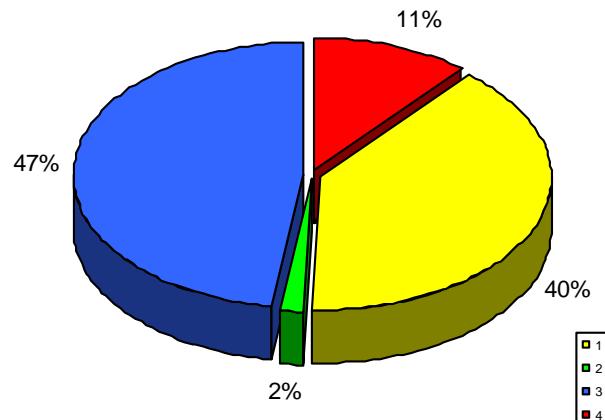


In 2008, Bamyan farmers grew 33 different crops on 82,963 hectares of land (4.5 percent of total area). The province's cultivated area is concentrated mostly along the Bamyan River basin where the soil is the most fertile. Sixty-five percent of the province's cultivated land is concentrated in 5 of its 7 districts and livestock raising is equally distributed throughout the province's districts.

The districts of Bamyan are:

- | | |
|------------------|--------------|
| 1) Punjab | 5) Shebar |
| 2) Waras | 6) Yakawlang |
| 3) Bamyan Center | 7) Saighan |
| 4) Kohmard | |

Bamyan's total 2008 crop production was surveyed at 229,164 metric tons (MT) mostly consisting of vegetables (47.55 percent) followed by grains (39.58 percent), animal fodder (11.25 percent) and fruit (1.6 percent). The total market value of 2008 of agricultural production before undergoing value added processing was estimated at \$87 million.



Grain 90,695 tons (39.58%)	Fruit 3,708 tons (1.62%)	Vegetable 108,977 tons (47.55%)	Fodder and Industrial Crops 25,782 tons (11.25%)
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Of the province's 7 districts, Yakawlang was the most productive, generating 41 percent of total agricultural output in 2008. Bamyan Center placed second followed by Kohmard as third in terms of agricultural production. Yakawlang and Bamyan Center districts together accounted for almost all (94 percent) major crops grown in the province. Meanwhile, Yakawlang and Kohmard districts jointly produced 37 percent of Bamyan's wheat as a major food crop in 2008.

Research Methodology

This report was prepared based on information provided by AgNet/NAIS system. In 2007 and 2008 AgNet Conducted two separate surveys (1) district profile survey and (2) agricultural statistic survey in 19 provinces of Afghanistan with the support of ASAP and MAIL at district level. During a period of 4 months each, more than 50 surveyors collected information related to the number of hectares land cultivated types of products produced number of livestock, crop calendar, sources of water and much more agricultural information. The information presented in this report is based exclusively in the area surveyed, not in the total farm land of the provinces. The AgNet/NAIS data base for Kapisa is the most accurate database available in the country in spite there is not estimation rewarding the level of exactitude of the information. All data related to harvest amounts was checked in July 2008 by ASAP personnel (Prof. A. Ghani Taj Agricultural Information Specialist and former professor of Kabul University and Ahmad Jawid Abid Survey and Data Assistant) by comparing the national average productivity level of each products. Crop value information was determined on wholesale price in Bamyan and collected by Bamyan AgNet officer Mr. A. Basir and approved by deputy director of Bamyan Provincial Agriculture department Mr. in October 2008.

Food Grain

Annual grain production surveyed in 2008 was approximately 90,695 MT with a representing market value of \$50.7 million. Wheat made up the largest portion (82 percent) and resulted in profits of \$41 million. The remaining 18 percent comprised other grain crops valued at \$9.7 million.

Grain	Tons	Value USD \$
Wheat	73,734	41,290,956
Barely	7,618	3,199,350
Maize	3,500	2,030,000
Red bean	14	17,628
Other Grain	5,829	4,196,880
Total	90,695	50,734,814

Wheat is the main source of grain in the Bamyan and its production is almost evenly distributed throughout all provincial districts. Barley and maize are the second and third most grown grains (5 percent and 2.2 percent, respectively) and amounted to a combined 11,000 MT in 2008. Figures presented in the below table are listed in kg.

	Wheat	Barely	Maize	Red bean	Other grain
Yakawlang	14,363,850	1,365,000	-	2,400	600,000
Shebar	7,230,000	420,000	-	2,800	525,000
Waras	11,040,000	1,125,000	-	1,250	1,950,000
Punjab	11,110,000	852,500	-	750	1,425,000
Bamyan Center	5,440,000	510,000	-	3,360	579,000
Kohmard	12,700,000	2,030,000	1,500,000	1,500	525,000
Saighan	11,850,000	1,315,000	2,000,000	1,500	225,000
Total in KG	73,733,850	7,617,500	3,500,000	13,560	5,829,000

Fruits

In 2008, Bamyan farmers grew 3,708 MT of fruits with profits estimated at over \$5 million. Apples represented 63.4 percent of the fruit harvest and generated the largest profits (\$2 million). Almonds were the second most profitable fruits for Bamyan farmers (\$960,000).

Fruit	Tons	Value USD \$
Apple	2,352	2,352,000
Mulberries	114	205,200
Almond	160	960,000
Plum	91	91,450
Apricot	311	248,800
Sour Cherry	40	64,000
Walnut	54	380,800
Other Fruit	586	703,680
Total	3,708	5,005,930

Of all the major fruits grown in Bamyan, apples were found growing in all districts of the province, as listed below. Apricot production in these districts reached 8.38 percent of the fruit harvest in Bamyan and almonds followed with 4.3 percent as the third single highest fruit harvested in 2008. Figures presented in the below table are listed in kg.

	Apple	Mulberries	Almond	Plum	Apricot	Sour Cherry	Walnut	Other Fruits
Yakawlang	800,000	100,000	120,000	6,650	15,000	-	2,400	26,400
Shebar	330,000	5,000	20,000	45,000	64,000	10,000	10,000	113,000
Waras	250,000	-	-	-	-	-	-	60,000
Punjab	300,000	-	-	-	8,000	-	-	72,000
Bamyan Center	420,000	-	4,000	20,000	64,000	10,000	14,000	105,000
Kohmard	132,000	4,500	8,000	18,000	80,000	10,000	14,000	105,000
Saighan	120,000	4,500	8,000	1,800	80,000	10,000	14,000	105,000
Total	2,352,000	114,000	160,000	91,450	311,000	40,000	54,400	586,400

Vegetables

Vegetable production surveyed in Bamyan province during 2008 was estimated at 108,977 MT, with a value of almost \$25 million. Bamyan farmers produced more than 10 different types of vegetables. Potatoes were the most grown vegetable, amounting to 95 percent of the 2008 harvest (over \$22 million in value).

Vegetable	Tons	Value USD \$
Potato	103,941	22,867,020
Onion	237	94,800
Tomato	146	116,800
Spinach	154	123,200
Garlic	174	174,000
Round Red Reddish	226	180,480
Carrot	410	164,000
Squash	273	163,800
Turnip	556	222,200
Other Vegetables	2,860	1,759,690
Total	108,977	25,865,990

Yakawlang district produced 68 percent of all potatoes, 96 percent of all tomatoes and 59 percent of the province's onions in 2008. Bamyan Center ranked second in vegetable production during 2008. Figures presented in the below table are listed in kg.

	Potato	Onion	Tomato	Spinach	Garlic	Radish	Carrot	Squash	Turnip	Other Vegetable
Yakawlang	70,000,000	140,000	140,000	150,000	140,000	70,000	180,000	200,000	280,000	1,905,500
Shebar	1,200,000	6,500	1,200	1,000	8,000	72,000	50,000	15,000	50,000	282,000
Waras	920,000	6,500	1,200	-	8,000	5,800	60,000	15,000	100,000	209,800
Punjab	1,071,000	6,500	1,200	-	8,000	5,800	40,000	15,000	80,000	166,300
Bamyan Center	28,000,000	50,000	-	1,000	-	60,000	50,000	14,000	32,500	215,850
Kohmard	1,750,000	16,500	1,200	1,000	5,000	6,000	15,000	7,000	6,500	40,500
Saighan	1,000,000	11,000	1,200	1,000	5,000	6,000	15,000	7,000	6,500	40,500
Total	103,941,000	237,000	146,000	154,000	174,000	225,600	410,000	273,000	555,500	2,860,450

Fodder and Industrial Crops

Bamyan's climate is characterized as cold with long winters and moderate summers. As a result, the growing season is relatively short compared to other provinces. Wheat, barley, potato, vetch and lucerne are the main sources of fodder and industrial crops. Alfalfa and clover both have very high value for Bamyan farmers, amounting to almost 6 million dollars annually.

Fodder	Tons	Value USD \$
Alfalfa	16,200	3,888,000
Clover	9,570	1,914,000
Other Industrial	12	12,080
Total	25,782	5,814,080

Farmers in almost all districts of Bamyan were found to be growing alfalfa, clover and vetch in order to feed their livestock. In addition, farmers collected many tones of hay from mountains and hills in order to feed their livestock during the cold winter season. Figures presented in the below table are listed in kg.

	Alfalfa	Clover	Other Ind
Yakawlang	1,750,000	1,500,000	4,000
Shebar	1,200,000	750,000	1,200
Waras	2,250,000	1,120,000	1,600
Punjab	1,500,000	700,000	1,200
Bamyan Center	2,500,000	500,000	1,200
Kohmard	4,000,000	2,500,000	1,800
Saighan	3,000,000	2,500,000	1,200
Total in KG	16,200,000	9,570,000	12,200

Livestock

Based on the 2008 statistic survey, Bamyan farmers grew 33 types of agricultural crops and raise 9 types of household livestock. Bamyan farmers keep 60, 6810 of various household livestock and 242456 poultry. (See annex -V)

Province	District	Total No livestock	Poultry
Panjshir	Yakawlang	71,419	16,000
	Shebar	41,900	11,790
	Punjab	59,433	54,050
	Waras	69,330	67,600
	Bamyan	43,496	52,560
	Saighan	39,195	15,340
	Kohmard	43,582	25,115
Total		368,355	242,455

In 2008, household livestock in Bamyan totaled 368,355, not including 363,455 chickens, ducks and turkeys. Farmers in Waras and Yakawlang districts raised 38.21 percent of all livestock in 2008 and the remaining 62.8 percent was found in all 5 districts of Bamyan province. Sheep are the dominant household livestock.

Animals	Cow	Sheep	Goat	Donkey	Mule	Horse	Total	Chicken	Turkey	Ducks	Total
Heads	91,258	190,536	48,823	35,844	149	1,745	368,355	236,300	5,550	605	242,455
Percentage	24.77	51.73	13.25	9.73	0.04	0.47	100%	97.46	2.29	0.25	100%

Cattle in the province are composed of oxen and dairy cow. The number of donkeys could be a good indicator for the development of transportation. The number of donkeys is slightly higher in all districts which means that there is some transportation and communication difficulties in Bamyan province.

Annex 1

Bamyan province crop surveyed by Hec, Tons & USD

	Crops	Hectares	Metric Tons	Value USD \$
1	Wheat	52,407	73,734	41290956
2	Barely	5,480	7,618	3199350
3	Maize	1,000	3,500	2030000
4	Red bean	50	14	17628
5	Potato	7,750	103,941	22867020
6	Onion	65	237	94800
7	Tomato	15	146	116800
8	Eggplant	4	5	3150
9	Okra	2	3	3000
10	Cucumber	4	8	10500
11	Spinach	14	154	123200
12	Garlic	25	174	174000
13	Round red Redish	36	226	180480
14	White Redish	29	214	149800
15	Carrot	66	410	164000
16	Cauliflower	42	1,639	983400
17	Leek	28	256	20480
18	Squash	17	273	163800
19	Turnip	50	556	222200
20	Apple	221	2,352	2352000
21	Mullberries	23	114	205200
22	Almond	40	160	960000
23	Plum	54	91	91450
24	Apricot	112	311	248800
25	Peach	1	8	9600
26	Sour Cherry	8	40	64000
27	Walnut	20	54	380800
28	alfalfa	6,200	16,200	3888000
29	Clover	5,000	9,570	1914000
30	Other Industrial	60	12	11760
31	Other Grain	3,886	5,829	4196880
32	Other Vegetable	84	737	589200
33	Other Fruit	170	578	694080
Total		82,963	229,164	87420334

ANNEX 2

Ranking of Bamyan Province districts by Tons surveyed annually

District	Tons	Hectares	Value USD \$	% total tons
1 Yakawolang	93,861	10,849	\$ 28,839,526	40.96%
2 Shiber	12,412	6,615	\$ 6,397,540	5.42%
3 Waras	19,124	14,158	\$ 9,585,413	8.35%
4 Panjab	17,363	12,001	\$ 8,921,041	7.58%
5 Center of Bamyan	38,594	16,939	\$ 11,560,994	16.84%
6 Kahmard	25,479	12,978	\$ 11,627,054	11.12%
7 Saighan	22,329	9,423	\$ 10,488,766	9.74%
Grand Total	229,162	82,963	\$ 87,420,334	100%

Annex 3 Harvest seasons for Bamyan Agricultural crops surveyed

Annex NO. 4:

NAIS/ASAP 2008

DISTRICT PROFILE:		Center Bamyan	
1	DEMOGRAPHICS	7	Water
Region:	Central	Rain fed	
Province:	Bamyan	Kariz	
District:	Center Bamyan	Canals	
Villages:	165	Springs	30%
Households:	11,972	Other irrigated	30
Estimated population:	83,807	Access/irrigated water	70%
2	Land	8	Infrastructure
Sharecroppers, %	10%	Access/drinking water	
Arable land, jeribs	60,490	Schools	43
Arable land, hectares (/5)	12,098	Electricity costs, Afs/KWH	70/bulb/month
Grazing land, jeribs	169581	Cell phone access	yes
Geographic area, Km2	1938.703	Health clinic, #	1
Landowner, %	40	VFUs, #	
Irrigated land area, hectares	11,398	9	Livelihood
Rainfed land in use,hectars	700	Agro-horticulture sector, %	60
3	Primary Crops	Livestock sub-sector, %	20
Spring wheat, hectares	7,600	Bussiness and Trade %	9.5
Fall wheat, hectares	3,000	Government and NGO %	3.5
Barley, hectares	1000	Daily Labor %	7
Potato, hectares	4000	10	Small Enterprises
Apple, hectares	35	General shops, #	15002
Carrots, hectares	10	Food service,#	40
Turnap, hectares	5	Flour mills,#	12
Corn, hecarts	0	Shoe repair,#	6
Other vegetables,hectares	15	Blacksmith,#	19
Other fruits,hectares	20	Carpet shop#	10
4	Livestock	Butcher shops, #	19
Livestock owners, %	20	carpet weaving, #	
Dairy cows, #	4000	11	Agricultural Facilities
Beef cattle & Draught oxen, #	8,900	Artificial Insimilation	
Sheep & Goats, #	13,068	Rentable Ag Machinary	yes
Donkey, #	4280	Improved wheat seed	yes
Horses, #	120	Fruit Nurseries, #	yes
Checkens & Turkey, #	52,560	Credit facility	yes
Camels, #		Poultry farm, #	
Kuchi, (families),#		Agrochemicals,	
Kuchi sheep, #		Cool storage, #	
Kuchi goats, #		Green houses, #	
Camels, #		12	Household (HH) Indices
Kuchi other, #		Arable land/HH, jeribs	5.052
5	Transportation	Grazing land/HH, jeribs	14.164
Distance to center, km	40	Irrigated land/HH, jeribs	0.952
Time to center, minutes	120	Rainfed land/HH, jeribs	0.058
Cost to center, Afs	60	Total livestock/HH, #	1.077
Truck cost to center, Afs	25 Afg/ 7kg	Sheep&goats/HH, #	1.091
District roads	Paved	Poultry/HH, #	4.39
Provincial roads	Paved	13	Checks
Accessibility		Household/village	72.557
6	Markets	Population/ HH	7
Provincial	yes	School/ village	0.26
District, General, day	all days	No. of Bored wells/ village	
District, livestock, day	all days	No. of Enterprize/village	91.563
Traders/assemblers	yes		

Annex 5: The number of HH livestock in Bamyan in 2008

Provir	Districts	Livestock statistics								Poultry					
		Oxen	Cow	Sheep	Goats	Horse	Donkey	Mule	Total	Kock	Hens	Checks	Duck	Turkey	Total
Bamyan	Yakawlang	7,820	7,383	42,720	8,641	820	4,000	35	71,419	5,000	7,000	3,200	300	500	16,000
	sheber	6,900	7,000	15,600	8,160	160	4,080	-	41,900	3,700	5,000	3,000	60	30	11,790
	Panjab	7,500	10,440	33,600	2,662	325	4,896	10	59,433	18,000	20,000	15,000	50	1,000	54,050
	waras	5,700	9,000	31,440	14,000	95	9,000	95	69,330	19,600	22,000	24,000	60	1,940	67,600
	Bamyan	8,900	4,040	21,576	4,560	138	4,280	2	43,496	15,000	18,000	18,000	60	1,500	52,560
	Saighan	2,300	4,040	19,200	7,200	126	6,324	5	39,195	5,000	7,000	3,000	40	300	15,340
	kohmard	6,235	4,000	26,400	3,600	81	3,264	2	43,582	5,100	7,300	12,400	35	280	25,115
		45,355	45,903	190,536	48,823	1,745	35,844	149	368,355	71,400	86,300	78,600	605	5,550	242,455

Annex 6: Land use mainly arable and pasture land in Bamyan province in 2008

Province	District	Village	Rainfed Land	Irrigated Land	Total land	Orchar ds &viens	Vegetab le and Furrows crops	Cereal Crops	Forage crops	Forest land	Pasture land	Non-areble land	Mountai ns	Total Land area
Bamyan	Panjab	550	21,534	32,972	54,506	43	1,890	8,703	1,600	200	183,411	300	2,000	240,417
	Sheber	200	900	12,137	13,037	130	20	10,500	45	180	107,168	300	1,000	121,685
	Waras	880	11,900	19,737	31,637	90	10	5,355	3,100	20	253,346	500	3,000	288,503
	Yakawlang	487	1,048	14,733	15,781	340	15	15,376	50	240	596,313	500	900	613,734
	Bamyan cef	165	700	11,398	12,098	67	4,070	15,098	1,000	200	169,581	200	2,500	184,579
	Saighan	68	2,000	13,648	15,648	70	213	9,098	2,100	180	183,411	80	3,000	202,319
	Kohmard	53	2,000	7129,5	9,130	46	364	9,098	2,400	150	193,412	90	3,500	206,282
		2,403	40,082	104,625	151,837	786	6,582	73,228	10,295	1,170	1,686,642	1,970	15,900	1,857,519

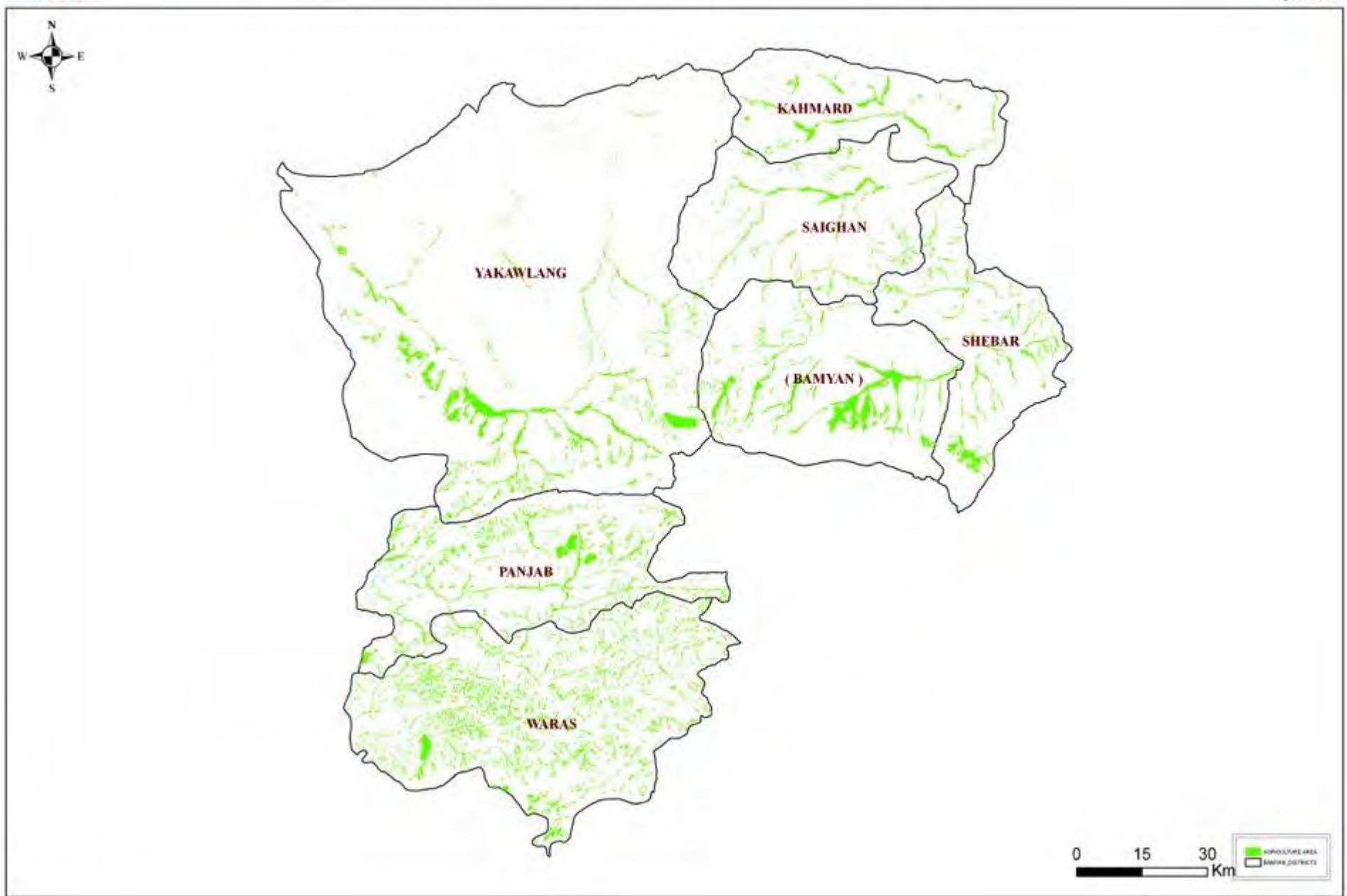
Annex No.7:
Crop Calendar
NAIS/ASAP

Activities		District: Yakawlang	Province: Bamyan	Date: 16/6/2008	GPS HQ_____	Elev.HQ_____							
Fruit and Nut Crops	Season	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Apples	spring fall												
Grapes													
Pomegranates													
Apricots													
BukharaPlums													
Citrus													
Lukot													
Figs													
Almonds													
Walnuts													
Pistachio													
Pine nuts													
Mulberries													
Vegetable Crops													
Tomatoes													
Potatoes													
Watermelon													
Melon													
Carrots													
Cabbage													
Luck													
Letus													
Onion													
Cauliflower													
Spinach													
Cash Crops													
Cotton													
Cowpeas													
Rice													
Wheat	spring fall												
Corn													
Mungbean													
Sesame													
Flax													
Cumin													
Sunflower													
Canola													
Safran													
Peas													
	Planting:			Treatment:			Harvesting:						

BAMYAN PROVINCE STANDARD MAP



BAMYAN PROVINCE AGRICULTURE MAP



Bamyan Province (Wheat Production)



Source : NAIS 2008

Production in Ton

5440
7230
11040
11110
11850
12700
14384

0 25 50 KM

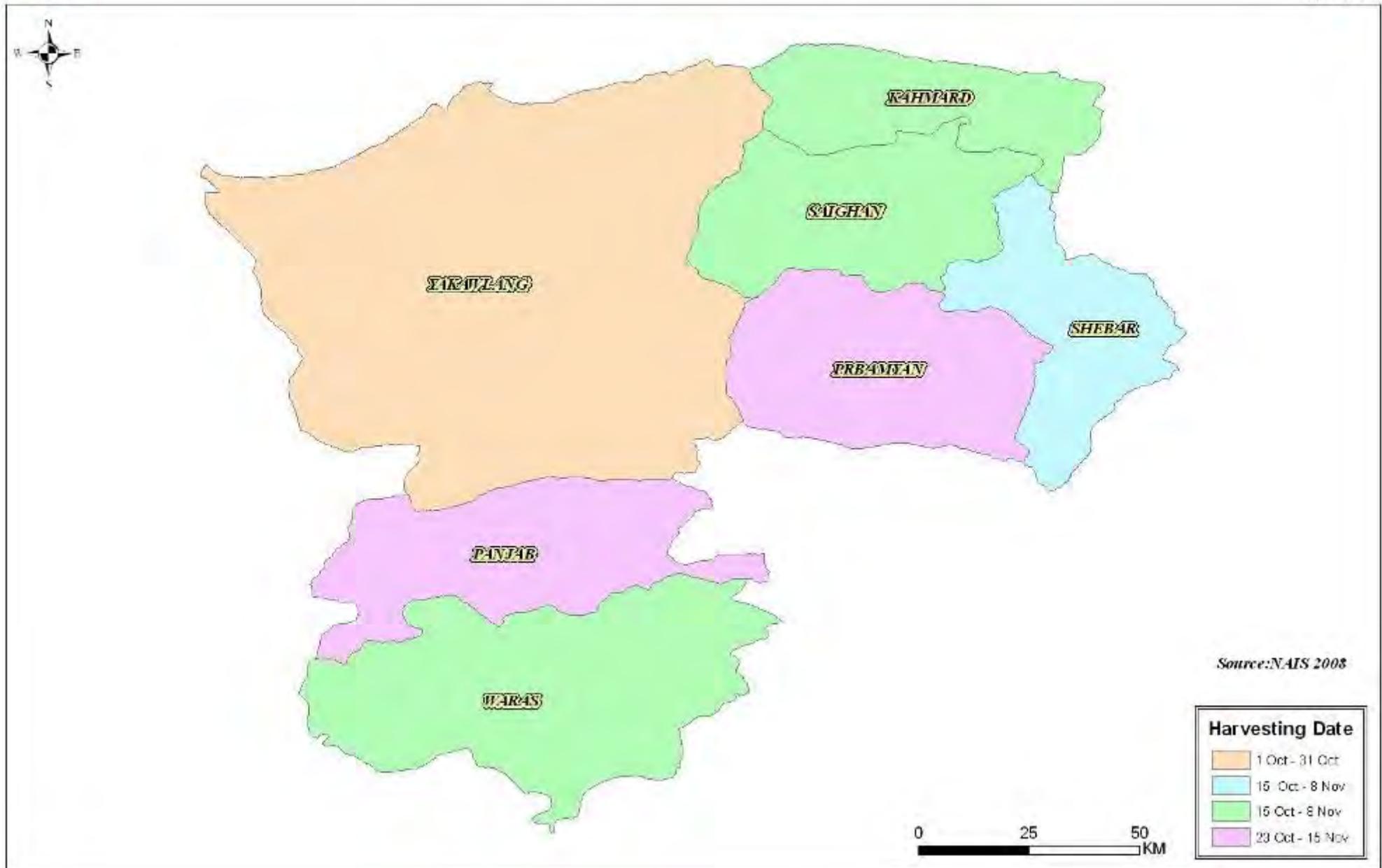
Bamyan Province (Alfalfa Production)



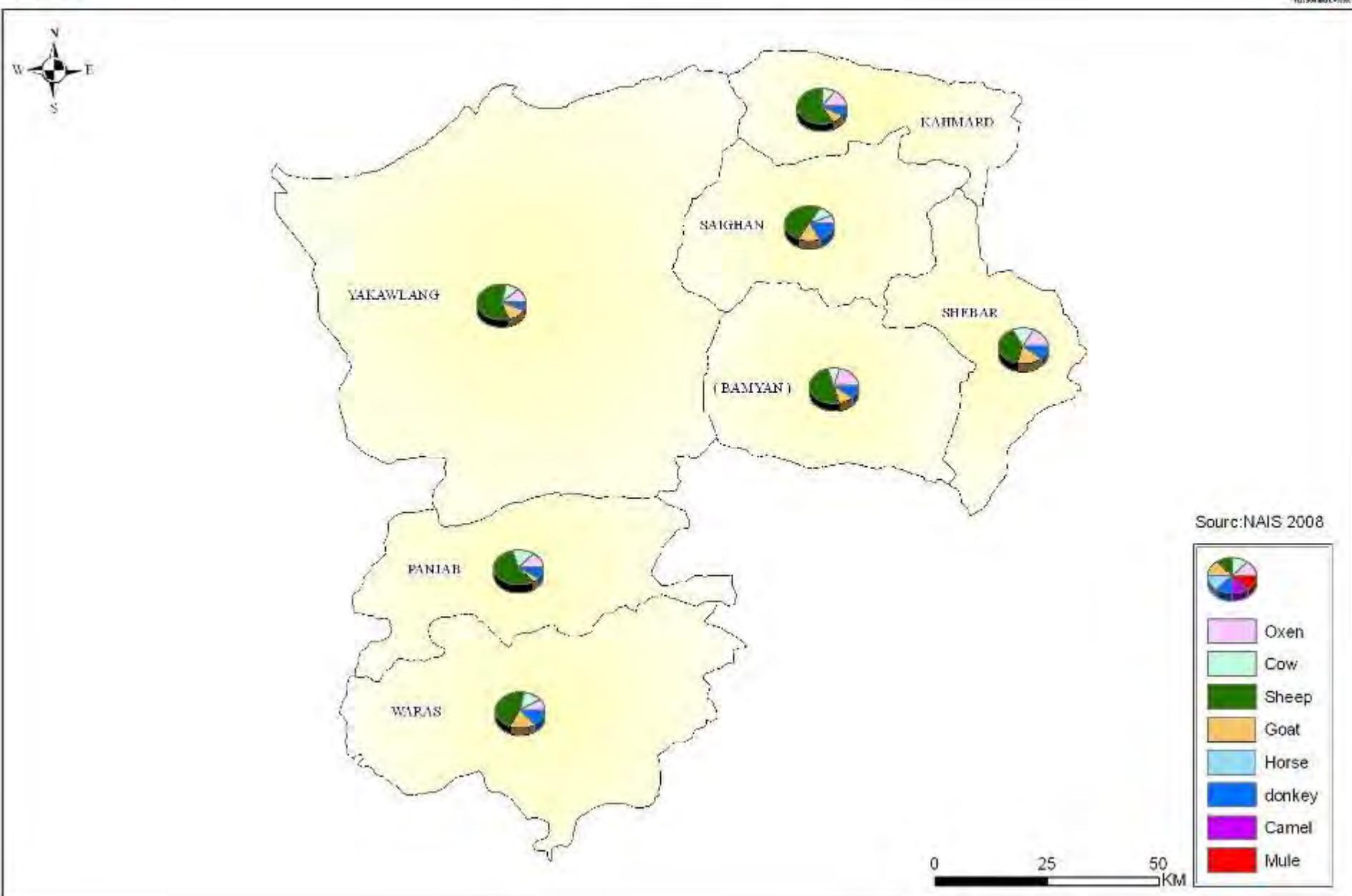
Bamyan Province Crop calendar (Onion)



Bamyan Province Crop calendar (Onion)



Bamyan Province Livestock



Bamyan Province Livestock(Goats)



Bamyan Province Livestock

