Name of project : Cultivation of lettuce

Location : Sophia Practical Institution Centre (S.P.I.C.)

Duration : 7 weeks

Description of Activities :

* Land clearing – removal of plastic, garbage, etc., from planting site
* Primary tillage – breakdown of unusable soil
* Secondary tillage – further breakdown of unusable soil
* Drain formation – formation of drains to allow drainage
* Incorporating pen manure – provision of nutrients
* Preparation of seed box/beds – the creation of the location where the crop is to be plant
* Transplanting – the planting of crop in the soil
* Shading – the removal of the interaction with sunlight with the crop
* Irrigation – the watering of the crop
* Weed control – the removal or other plants which take nutrients meant for a certain crop
* Pest control – the control of small organisms which infest the crop
* Harvesting – the collection of fully grown crops

Materials and equipment :

Cutlasses, forks, water cans, shovels, rakes, wheelbarrow, seedlings, coconut branches

Schedule of operation :

|  |  |  |
| --- | --- | --- |
| Week | Activity | Remarks/Observation |
| 1 | Land clearing, primary and secondary tillage, drain formation, incorporating pen manure. | The beds should be equal positioned for plants to grow expeditiously. |
| 2 | Preparation of beds, transplanting | The plants should be planted so that only the roots are in the soil. |
| 3 | Irrigation, shading | They are shaded to prevent contact with sunlight. |
| 4 | Irrigation, weed control | Weeds “steal” nutrients from other plants. |
| 5 | Irrigation, Mulching | Mulching prevents moisture loss |
| 6 | Irrigation | Plants should be watered daily |
| 7 | Irrigation, weed control, pest control | Pests are organisms which infest the plant. |
| 8 | Irrigation | Water is vital for the plant. |
| 9 | Harvesting, Sales | Only the plant head should be cut. |

Projected Income :

|  |  |
| --- | --- |
| No. of plants | 300 |
| Price | $130 |
| Total | $39000 |

Projected Expenditure :

|  |  |
| --- | --- |
| 1pk seed lettuce | $200 |
| 15 bags pen manures @ $800 per manure | $12000 |
| 250g sevin powder @ $1760 per 500g | $880 |
| 5kg urea @ $500 per 2kg | $1250 |
| Labor cost:  Land clearing  Primary tillage  Secondary tillage  Drain formation  Cultural practices  150 plastic bags  Miscellaneous | $500  $1000  $500  $500  $2000  $450  $1000 |
| Total | $20280 |

Projected Surplus :

|  |  |
| --- | --- |
| Projected Income | $39000 |
| -Projected Expenditure | -$20280 |
| Profit | $18720 |

Actual Income :

|  |  |
| --- | --- |
| No. of plants | 300 |
| Price | $60 |
| Total | $18000 |

Actual Expenditure :

|  |  |
| --- | --- |
| 300 seedlings @ $10 | $3000 |
| 250g sevin powder @ $1800 per kg | $450 |
| 150 plastic bags @ $5 | $750 |
| Transportation | $3000 |
| Total | $7200 |

Actual Surplus :

|  |  |
| --- | --- |
| Actual Income | $18000 |
| -Actual Expenditure | -$7200 |
| Profit | $10800 |

Analysis :

The projected and actual incomes were $39000 and $18000. Their difference was $21000. The reason examined for this is that the crops were sold for a lower price than expected. The rates of lettuce experienced a decline in the market during the time between transplantation and harvesting which further explains the income decline in the actual income.

The projected expenditure was $20280 whereas the actual expenditure was $7200. The expenditure projected was seen to be $13080 higher than the actual. The main causes for this was that there was no labor cost or urea present. Pen manure was used by the students instead of urea.

The projected and actual surpluses were $18720 and $10800 respectively. The difference between the two surpluses was $7920 because of the various factors listed above.

General Comments :

Lettuce is a leafy crop widely known all over the world for its use in salads, toppings and dressing for presentation of food. It is vital that the plant be given adequate amounts of light, water, and minerals from the soil if a good produce is to be expected. The lettuce grew in 7 weeks because of the high temperature which prolonged the growth period from 6 weeks. Lettuce requires constant maintenance because it is prone to pests and weeds. Land clearing requires the planter to provide labour force capable of evenly dispersing the soil needed for growth so that the plants do not grow disorganized or disarranged. Irrigation was seen to be an everyday necessity which requires clean maintenance of the water and needs the irrigator to evenly water the plants so that growth is equal. Cultural practices such as shading, requires previous knowledge of the activities by the planter. Fertilizers used must be minimal so that the growth is efficient and less time-consuming. Weeds should carefully eliminated before use so that the growth of the plant is not hindered by the weeds. From the experience from planting lettuce, it can be said that weeding is best when done by hand but one should always be careful of shallow roots.

Lettuce is a cool season crop and is best grown in spring and late summer. Lettuce should be tilled in compost or fertilizer 1 week before actual transplantation. Each lettuce should be placed at least 4-16 inches away from each other depending on the type of lettuce. Lettuce should thoroughly be watered/irrigated after transplanting. Lettuce should be planted at least ½ inch deep into the soil to provide shelter from wind and cold weather. Garden lettuce is generally far superior to supermarket brands, both in vitamin A content and in taste.

Conclusion :

In conclusion, it was learnt, that in order to grow good produce; the crops should be daily irrigated and given the right proportions of nutrients. The basic needs of the plant were found to be the ones most important such as light, water, soil and air and temperature.

Recommendations :

It can be recommended that:

* Crops should be grown using more urea than the current so that the crops can receive equal proportions of nutrients.
* The cutlasses should be sharpened to accelerate the time taken to till and disunite the particles of the soil.
* The water can requires maintenance so that water is not wasted while watering.
* The area used to grow crops should be increased as it would yield a greater produce and would thus increase profit potential.
* Fertilizers should be utilized so as to provide a profitable and productive crop more efficiently.