

DEVELOPMENT OF AGRICULTURE SECTOR

4.1 Introduction:

Agriculture is the back bone of the district and an overwhelming 65% of its population lived in rural areas and is engaged in agriculture. The major kharif crops are Sugarcane, Paddy & Maize and rabi crops are Wheat, Gram, Lintel and Oil Seeds. Apart from this, Rupnagar city hosts the offices of District Training Officer, Assistant Agricultural Engineer (Imp) and PD ATMA

4.2 Land Use

The total geographical area of Rupnagar District is 138245 Ha. Out of this area 54 % area is under cultivation, Forest cover 23 % and 19 % area is under non agricultural use. During kharif season area under Paddy, Maize is 85.5%, 0.5% and 0.13% respectively where as in rabi season, area under Wheat and Oilseeds in the District is 90.2% and 0.35% of the net sown area respectively.

Table: Land Utilization Statistics (preceding 3 years average)

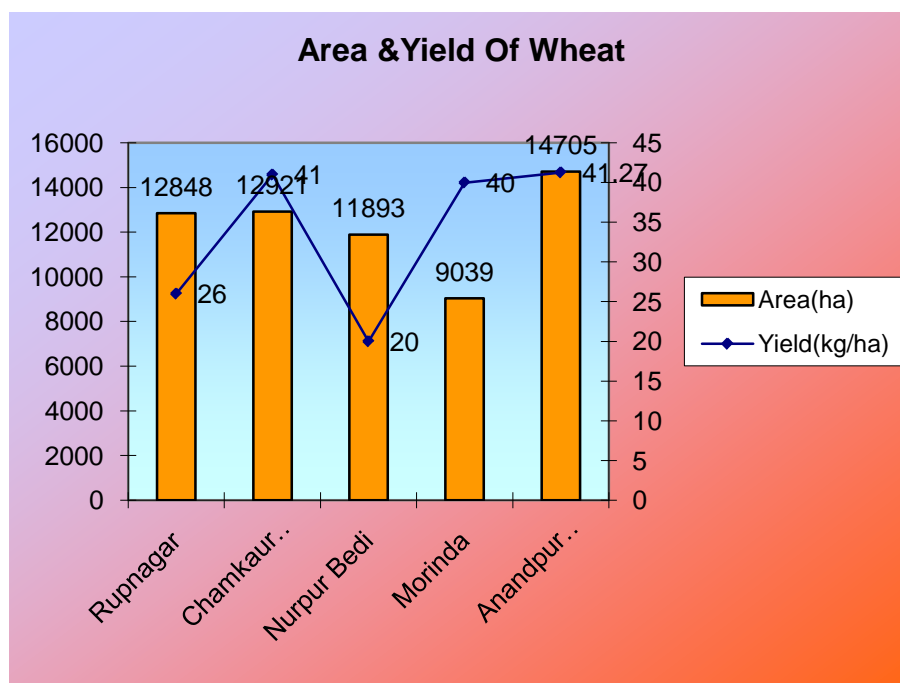
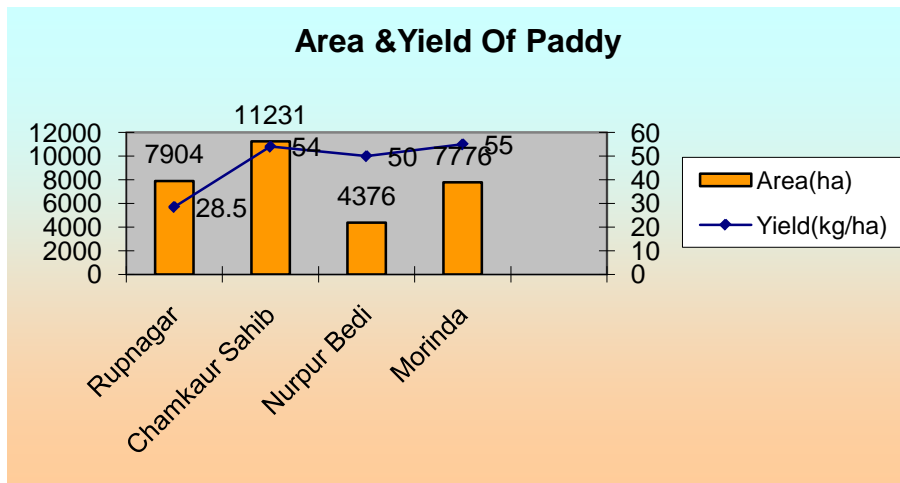
(Area in 000' hectares)

| Block | Geographical area | Forest Area | Under Non-agril. Use | Culti. waste | Perma- nent pastures | Land under miscellaneous tree crops and groves | Current Fallows | Other Fallows | Net sown area | Gross cropped area | Croppin g intensity (%) |
|-----------------------|-------------------|---------------|----------------------|--------------|----------------------|--|-----------------|---------------|---------------|--------------------|-------------------------|
| Rupnagar | 38.421 | 8.797 | 9.185 | 0 | 0 | 0.220 | 0 | 0.103 | 16.936 | 32.064 | 176 |
| Anandpur Sahib | 31.510 | 5.301 | 8.330 | 0 | 0.702 | 0.252 | 0 | 0.104 | 16.318 | 24.763 | 162 |
| Nurpur Bedi | 35.322 | 11.601 | 2.400 | 1.275 | 0.870 | 1.985 | 0.840 | 0.392 | 15.074 | 28.610 | 183 |
| Chamkaur Sahib | 19.529 | 6.200 | 3.862 | 0.162 | 0 | 3.700 | 0 | 0 | 15.164 | 30.213 | 191 |
| Morinda | 13.463 | 0.084 | 2.200 | 0 | 0 | 0 | 0 | 0 | 11.261 | 22.594 | 188 |
| TOTAL | 138.245 | 31.983 | 25.977 | 1.437 | 1.572 | 6.157 | 0.840 | 0.599 | 74.753 | 132.964 | 162 |

Source: Dy. Economic Advisor & Village level Survey under RKVY

Area, Production and Yield of Major Crops in Irrigated/ Rain fed Conditions in District Rupnagar:

As Rupnagar is predominantly Rice – Wheat district and 88 % of its area is tubewell irrigated and 4% from other sources (canal and lift irrigation), while 11000 ha of its area is rain fed. Block wise area and its corresponding yield of these three major crops of the district is given below (Figure 13). Area, Productivity and Yields of other crops of the district under kharif and rabi season is given in Annexure V.

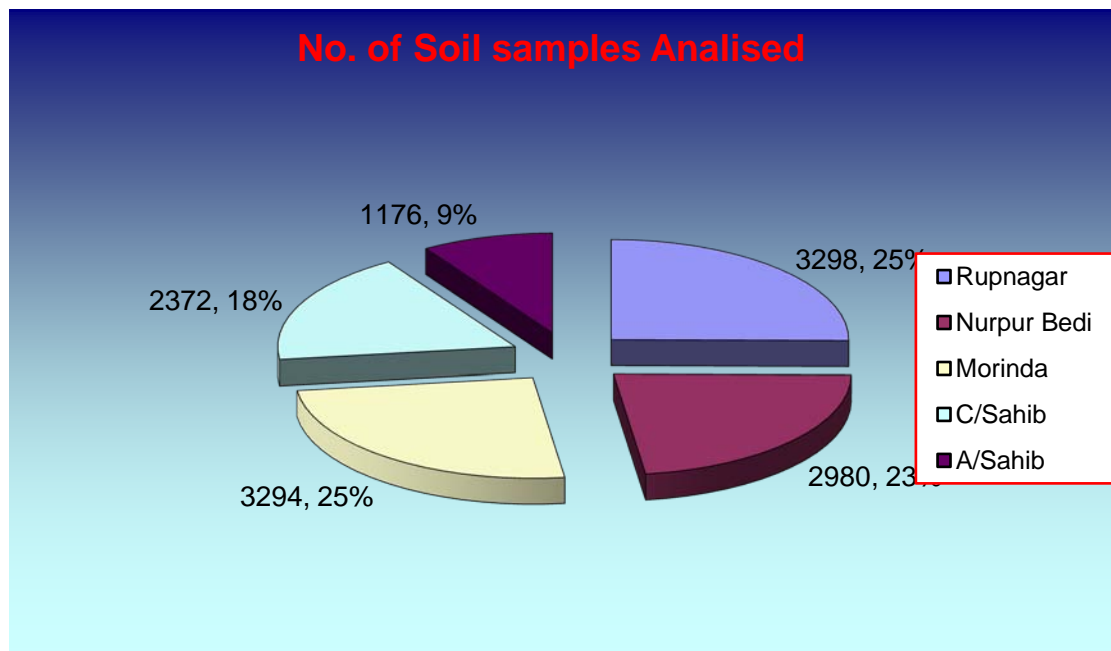


4.3 Soil Health

In general, soil is deficient in nitrogen and phosphorus. As per land capability classification 90-95% soil in the district is under class I (very good cultivable land) and 5-10% soil is under Class II (good cultivable land).

Table Soil Testing Laboratories in District Rupnagar

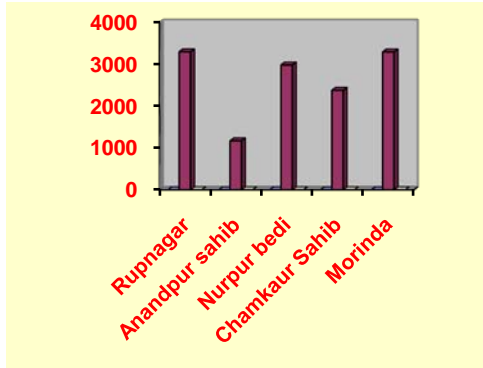
| S. No. | Location of Lab | Block | Stationary/ Mobile | Whether test soil /micro-nutrient | Working under |
|--------|----------------------------------|-------------|--------------------|-----------------------------------|-------------------------|
| 1. | O/oCAO, Rupnagar | Rupnagar | Stationery | NPK | CAO |
| 2. | Morinda | Morinda | Stationery | NPK | CAO |
| 3. | Nurpur Bedi | Nurpur Bedi | Stationery | NPK | District Planning Board |
| 4 | Giani Zail Singh Nagar, Rupnagar | Rupnagar | Stationery | NPK and Micro-nutrients | MARKFED |
| 5. | Haveli Kalan | Rupnagar | Stationary | NPK and Micro-nutrients | KVK |



Soil Fertility Indices

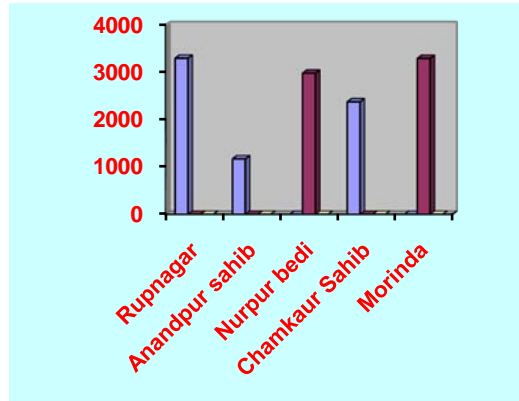
The details of Soil pH, EC, organic carbon, available NPK on the basis of total soil samples tested by soil testing laboratories of department of Agriculture throughout the year covering all blocks is given in table attached as Annexure VI where as an overall picture of the district regarding soil fertility indices is shown in Figures 15a to 15 f.

Soil pH



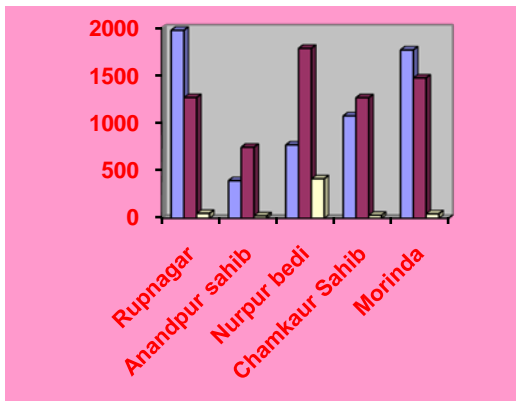
■ Acidic ■ Neutral □ Alkaline

EC(dc/m)



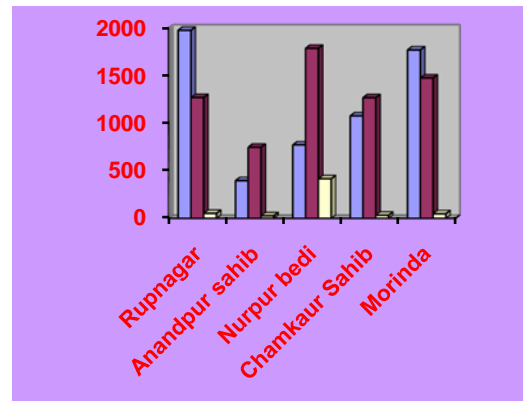
■ Low ■ Medium □ High

Organic Carbon(%)



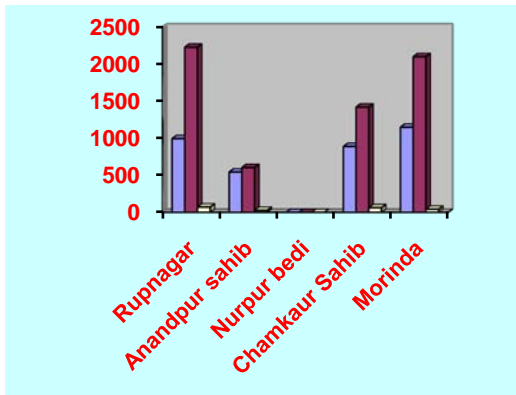
■ Low ■ Medium □ High

Available Nitrogen(kg.ha)



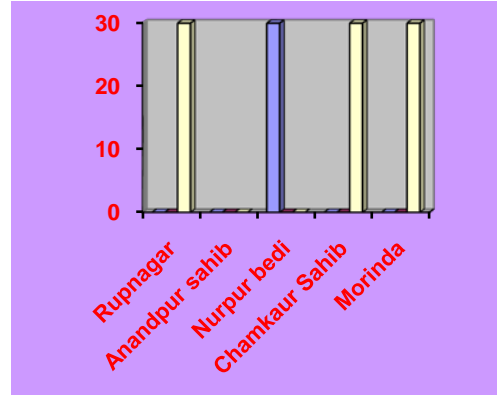
■ Low ■ Medium □ High

Available Phosphorus(kg/ha)



■ Low ■ Medium □ High

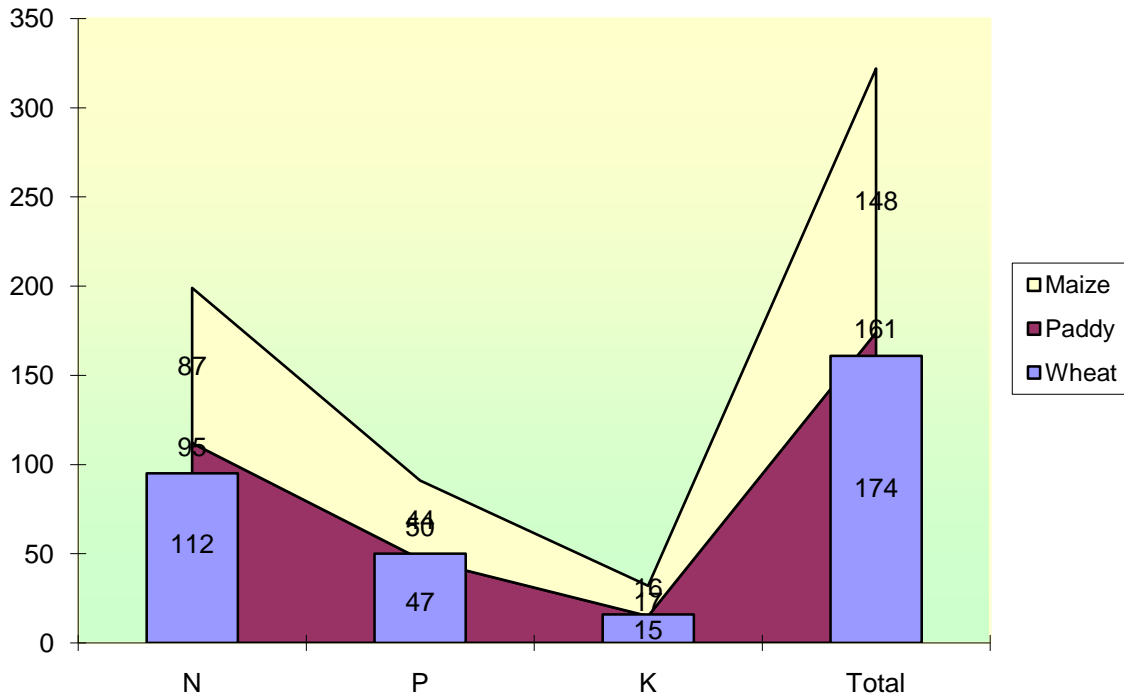
Available Potash(kg/ha)



■ Low ■ Medium □ High

Source: Soil Testing Labs, Deptt of Agriculture

Cropwise Fertiliser consumption(m-ton)

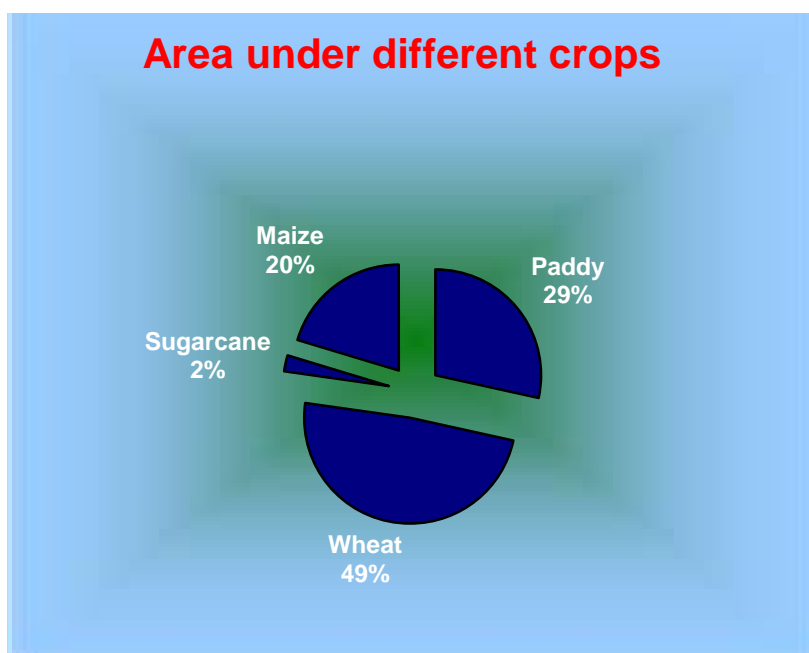


It is quite clear from the figures above that except availability of Potash (K), the district soils are low to medium as far as availability of Organic carbon, Nitrogen and Phosphorous is concerned. Further the N and P can be supplemented using chemical fertilizers however the content of Organic Carbon in soil can only be increased when we use FYM, Organic manures, mulching of straw residue of previous crop etc. Further poor carbon content of soil may lead to many complex problems such as

- Non availability of micro nutrients from the soil
- Poor crop growth
- Poor water retention capacity
- Ineffectiveness of weedicides etc

4.5 Major Crops and Varieties in the District

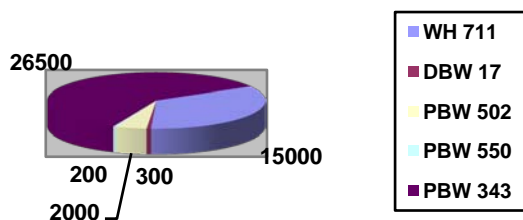
Paddy/Rice is the major crop of the kharif season as it covers more than 28 % of the net sown area and during rabi, wheat, accounting for more than 50% (**Figure 12**) area, is the major crop and the detailed table is given in Annexure V.



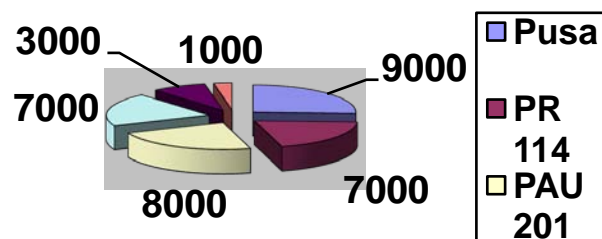
Varieties of Major crops grown in Rupnagar

| S. No | Crop | Type | Varieties sown in the district |
|-------|-----------|-----------|---|
| 1 | Rice | Paddy | Pusa 44, HKR- 47, PR 113, PB I, PR114, 116, 118, 113, PAU 201 |
| | | Basmati | Punjab Basmati 1, 370, Pusa 1121 |
| | | Hybrids | 6444,6129(Proagro) PHB71,72(Advanta) NK3325(Sygenta), Snehwhite(VivaAgro)207(Nizuvidu) RH257(Monsanto)RH 10 |
| 2 | Wheat | Hexapod | WH 711, DBW 17, PBW 502, PBW 550,PBW 343 |
| 3 | Maize | Hybrid | Hybrid Shell, Double (Monsanto), 31Y45 (Pioneer), Swarna (Nizuvedu),Swarna, Mukta(Syngenta),MRM3824(Mahyco), BUS2015,Hycork 2000(Vibha)Bio 9637 (Sri Ram) |
| | | Composite | Buland, PARAS (PAU), |
| 4 | Sugarcane | | TL 15 (toria), Hyola (sarson), sunflower |

Area under different Varieties of Wheat(Ha)



Area under Different varieties of Rice(ha)



4.6 Input Management

The district has wide spread network of input dealers which are well connected to all parts of the district via good roads. Rupnagar has the distinction of having first rake point at the entry level on the main rail link at Rajpura & Khanna. Inputs of various kinds are readily available when ever required through the following

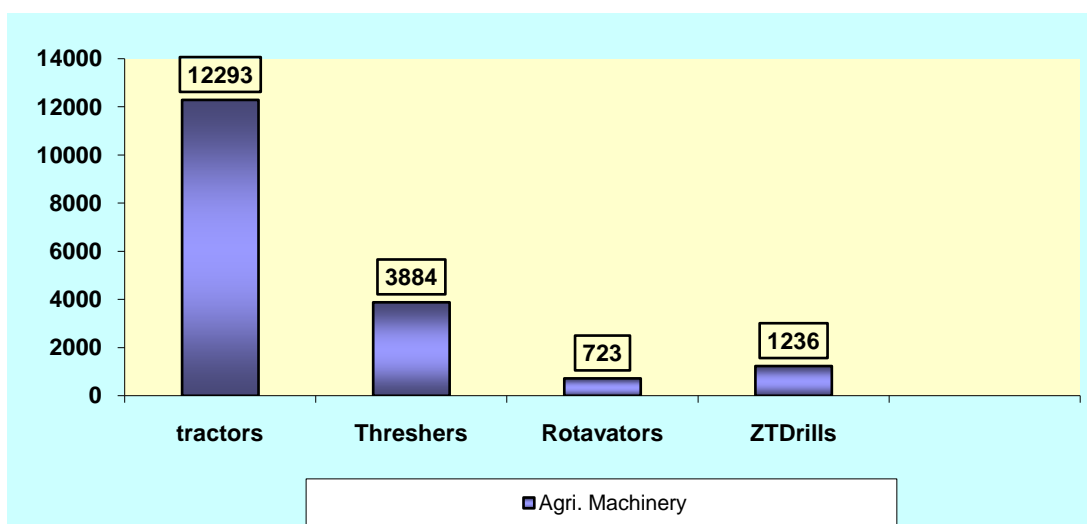
Input supply mechanism

| S.No | Sector | Input Supplying agents | No. |
|------|--------------------|---|------------------|
| 1 | Public sector | Agriculture Department | 5 |
| 2 | Cooperative sector | <ul style="list-style-type: none"> • IFFCO, Markfed • PUNSEED (seed only) • Coop societies | 13 6 85 |
| 3 | Private sector | <ul style="list-style-type: none"> • Seed Dealers • Fertilizer Dealers • Pesticide Dealers | 86 151 160 |

4.7 Farm Mechanization

Agricultural mechanization like any other input is a critical input timely performance of various agricultural operations for increasing the production and productivity. Mechanization is viewed as package of technology to insure timely field operations for increasing productivity, reduce crop losses and to improve quality of agro produce, increase land and other inputs productivity, increase labor saving, drudgery reducing devices being cost effective & eco friendly. To ensure sustainability of agriculture by conservation of natural resources like water, soil health and environment, it is very much essential to popularize the new technological interventions like raised bed planter, zero till drill technology precision leveling of fields manipulation of crop residue into the soil. To promote these interventions it is necessary that farmers be provided some assistance in acquiring newly developed agricultural machinery to carry out these interventions. These agricultural machinery/equipment are generally cost intensive and it is not possible for individual farmer specially the small and marginal farmers to acquire without any financial assistance from the government. It is proposed to provide these machines with the co-op societies by subsidizing to @ 50 % of the cost so that all types of equipment needed can be provided in the co-op societies and member farmers can use these equipment by paying nominal fee necessary for up keep of these machines plus a little extra to promote the financial help of the co-op societies. This will ensure the greater annual use of the machine thereby reducing the cost of operation and will also eliminate the necessity of individual farmer owning the machine for a very limited annual use. The status of various types of machinery possessed by Rupnagar farmers is given in table annexed as Annexure VIII and the major farm power implements of the district are shown in

Figure 17: Status of Major Farm Power Machinery in District Rupnagar



There is dire need to create more awareness among the farmers in respect of proper use of farm machineries for high efficiency saving human and energy resources.

4.8 Special projects going on in the District:

1. Centrally Sponsored (90:10) Agricultural Technology Management Agency (ATMA) Scheme is being implemented in District Rupnagar since 2004-05 for strengthening the present extension system under the Extension Reforms Scheme
2. National Food Security Mission (Wheat) has been implemented since 2007-08
3. The integrated scheme of oil seed, pulses and maize (ISOPOM) is being implemented in the District since 2004-05
4. Macro Management Mode of Agriculture is also being implemented in the District to strengthen the mechanization in agriculture since 2006-07