SOIL HEALTH

In general, Amritsar soils are deficient in nitrogen and phosphorus which has to be supplemented by applying chemical fertilizers during various stages of crop growth. As far as status of micronutrient are concerned, Amritsar faces some deficiency of zinc, iron and manganese and recently some parts of the district have also started showing salt accumulation / alkali soils

Table 11: Information about soil in different blocks of district Amritsar

Name of the Block	Alluvial	Alkaline	Micro nutrient deficient soil
Ajnala	M-H	N-A	Zn
Chogawan	M-H	N-A	Zn
Attari	M-H	Alkaline	Mn,Zn
Harsha Chhina	M-H	N-A	Zn,Fe
Jandiala Guru	L-M	Normal	Mn, Zn
Majitha	M-H	Normal	Zn, Fe
Rayya	L-M	Normal	Mn, Zn ,Fe
Tarsikka	L-M	Normal	Mn, Zn ,Fe
Verka	M-H	N-A	Mn, Zn

Note: L = Light; M = Medium; H = Heavy; N-A = Non-alkaline

As per land capability classification 75% soil in the district is under class I (very good cultivable land) and 25% soil is under Class II (good cultivable land) (Figure 11)

Table no 12. Status of Soil Testing Laboratories in District Amritsar

Soil Testing Laboratories Under	No. of Soil Testing Laboratories			Annual Analyzing Capacity	No. of Samples Analyzed	No. of Soil Testing Laboratories having Annual Analyzing System
	Static	Mobile	Total			
Govt. Sector	5	1	6	30000	16899	4
Co-operative & PAU	1	-	1	10000	1200	1
Private Sector	-	-	-	-	-	-
Total	6	1	7	40,000	18099	5

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 9 where as an overall picture of the district regarding soil fertility indices is shown in Figure 16 to 22.

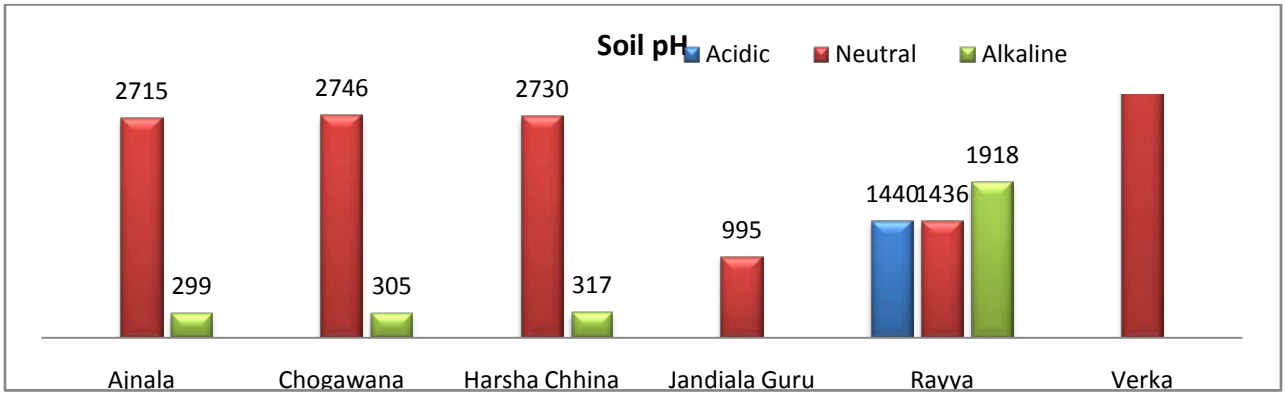

Figure 17: Blockwise Soil pH in in Soils of District Amritsar

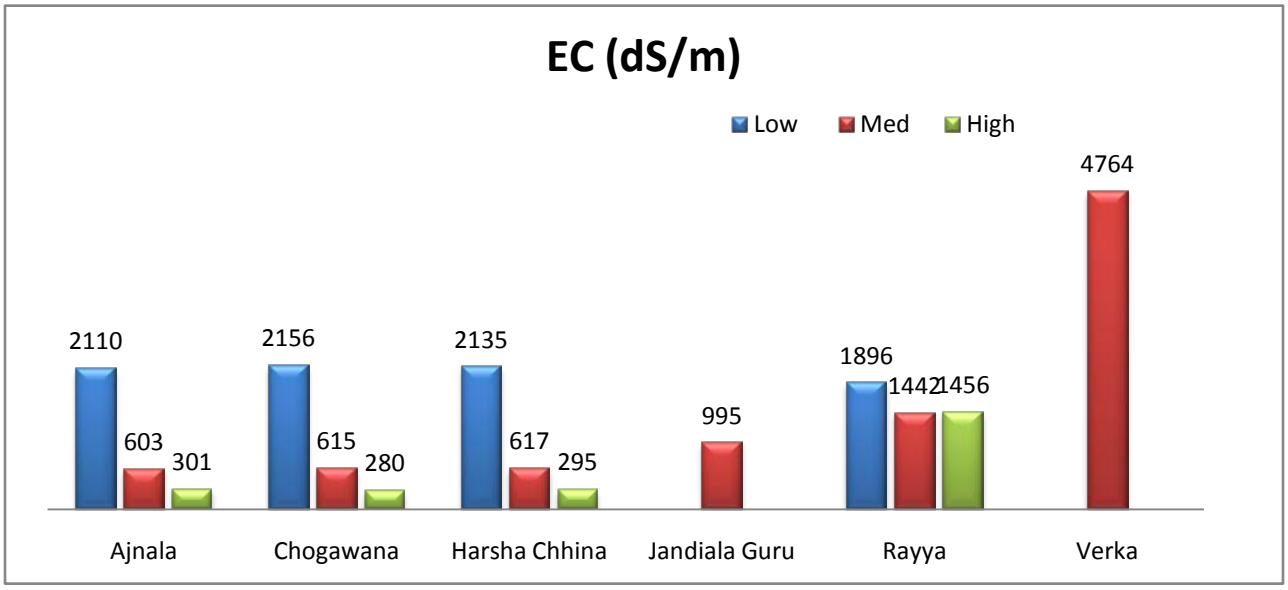

Figure 18: Blockwise Electrical Conductivity (EC) in Soils of District Amritsar

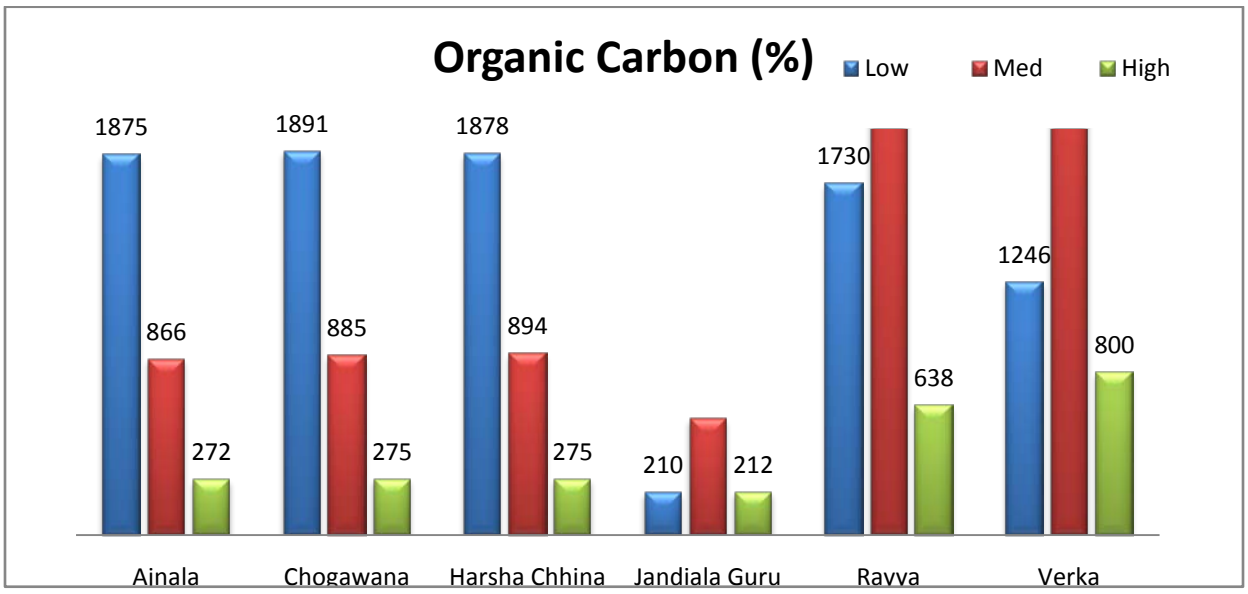

Figure 19: Blockwise Electrical Conductivity (EC) in Soils of District Amritsar

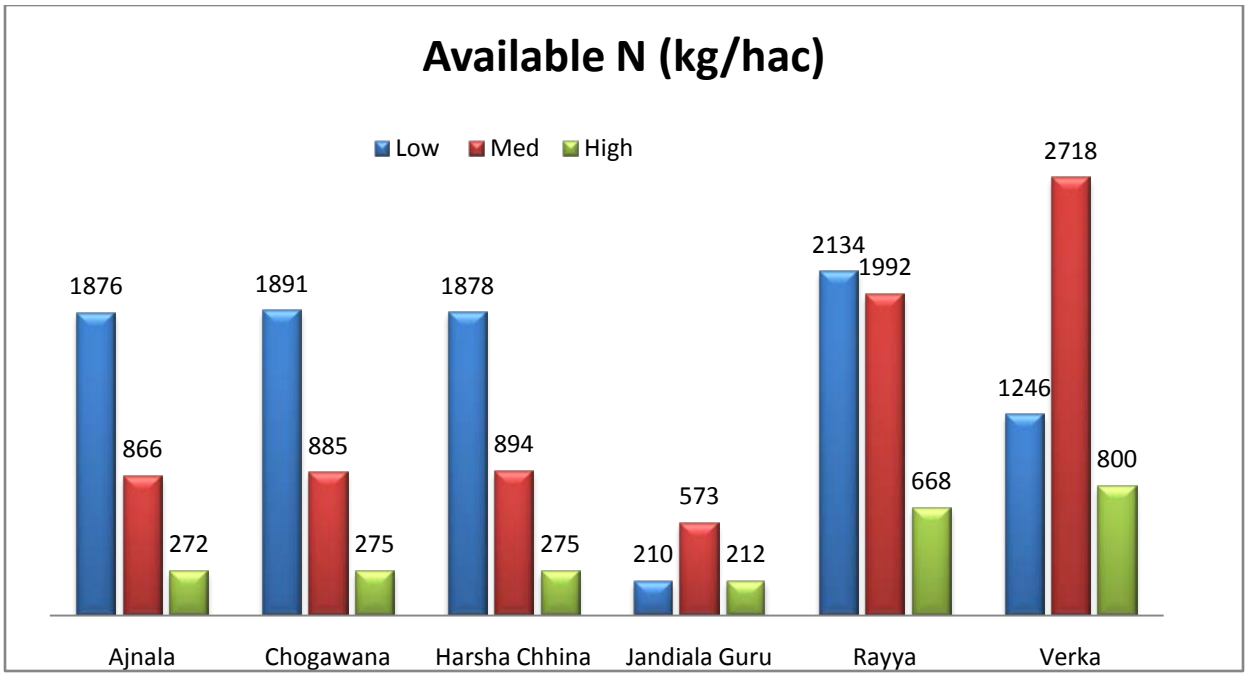

Figure 20: Blockwise avialble Nitrogen in Soils of District Amritsar

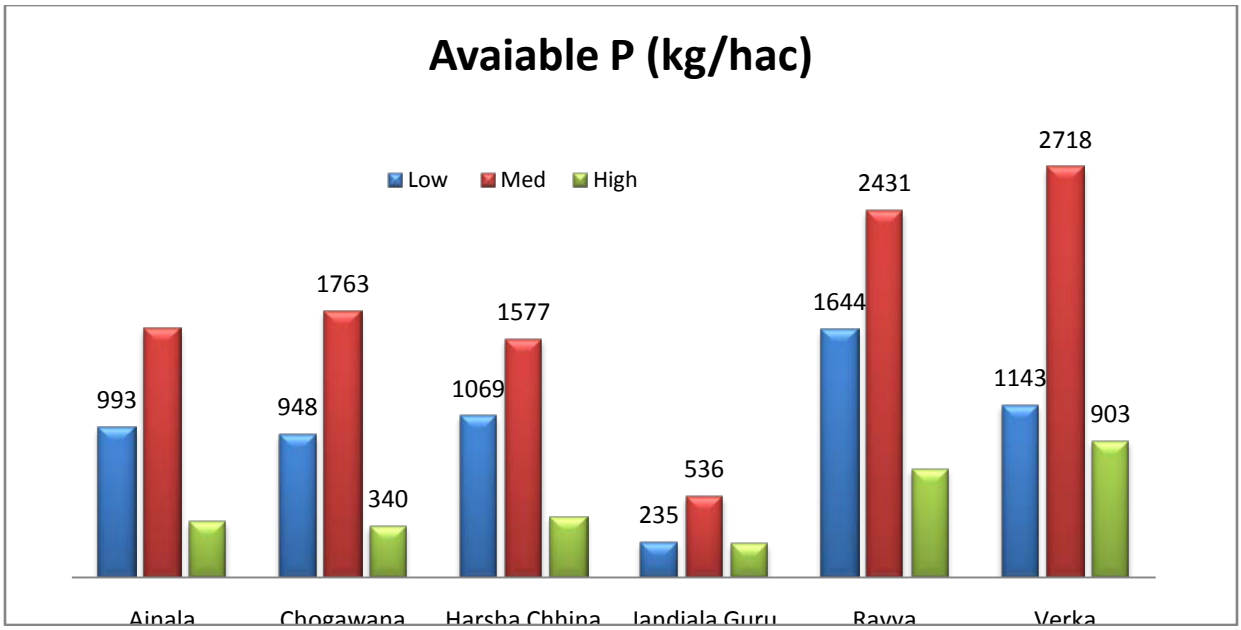

Figure 21: Blockwise available phosphorous in Soils of District Amritsar

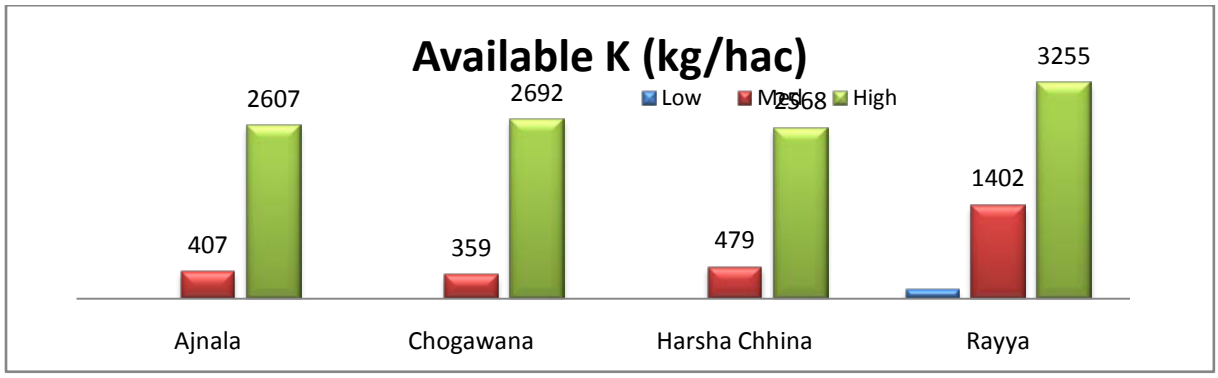

Figure 22: Blockwise available phosphorous in Soils of District Amritsar

Source: Soil Testing Labs, Deptt of Agriculture

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