

### TNAU SOIL HEALTH CARD

Name of the farmer	:	
Postal address	:	
Location of farm	:	
Total cultivable area	:	
Cropping system adopted	:	
Varieties adopted	:	
Mean annual rainfall	:	
Source of irrigation	:	
Quality of irrigation water	:	
Quantity and nature of manures used	:	
Source of manure	:	
Types and quantities of fertilizers used	:	
Fertilizer recommendation followed	:	
Soil colour	:	
Other farm activities for income generation	:	
Activities of value addition to farm produce	:	
Mode of produce sale	:	
Women empowerment in farm decision making	:	

INDICATORS	DESCRIPTIVE RATINGS		
	GOOD	FAIR	POOR
<b>SOIL TILTH</b>			
Structure	Good crumb structure Tills easily leaving no clods Soil breaks apart easily	Moderate crumb structure Some clods Soil breaks apart with some pressure	Hard massive structure Tills with difficulty Tillage creates lots of clods
Surface Crusting	Soil maintains open / porous surface in all growing season Seedling emergence not affected	Moderate surface sealing Minimal effect on seedling emergence	Soil surface seals easily after tillage and rain events Inhibits seedling emergence
Sub-surface compaction	Loose soil Unrestricted root penetration	Firm soil Root penetration some what restricted	Hard layers with tight soil Severely restricted root penetration
<b>SOIL WATER</b>			
Internal drainage	Soils drain easily Limited delays in field operations Good balance between air and water in the soil Yield reduction only in very wet years	Soils drain moderately Some delays in field operations Water-logging after heavy Minimal yield reduction	Soil stay wet for long periods Delays in field operations Soil doesn't breathe and reduces yield
Water holding capacity	Soil holds water well Deep topsoil for water storage Crops seldom suffer from moderate dry spells	Soil has moderate capacity to hold water Crops begin to suffer from moderate dry spells	Soil has limited capacity to hold water Crops suffer in moderate dry spells
Run off	Water soaks in easily Very little runoff and erosion Water does not pond	Absorbs water but slowly Some runoff and erosion Ponding after heavy rains	Absorbs water very slowly Lots of runoff and erosion Ponding after moderate rains
<b>FERTILITY STATUS</b>			
Nutrient levels	Soil test levels are adequate for crop growth and yield goals No visible signs of plant nutrient deficiency	One or more soil test levels are less than adequate for crop growth and yield goals No visible signs of plant nutrient deficiency.	One or more soil test levels are deficient or excessive for crop growth and yield goals Visible signs of plant nutrient deficiency toxicity
Organic matter content	Organic matter is at high level	Organic matter is at medium level and needs to be improved	Organic matter is at low level and needs frequent organic manuring
Soil pH	pH is within the acceptable range for plant growth	pH is slightly above or below the acceptable range for crop growth	pH is too high or too low and will affect plant growth
Soil EC	EC is within the acceptable range for plant growth	EC is slightly above the acceptable range for crop growth	EC is too high and will injure plant growth

<b>SOIL BIOLOGY</b>			
Earthworms	Lots of earthworms with many holes and casts	Some earth worms with few holes and casts	No visible signs of earth worm activity
Smell	Soil has a fresh earthy smell	Soil has little or no smell	Soil has a swampy, stagnant smell
Residue decomposition	Residue at various stages of decomposition on soil surface and in the topsoil	Some visible non-decomposed residue in the topsoil	Rapid decomposition with little or no visible residue or very slow decomposition with relatively un-decomposed residue in the topsoil
<b>PLANT VIGOUR</b>			
Uniformity in growth in the field	Uniform deep-green in colour, even stand (height and population) Rapid growth with no visible signs of stress	Some variation in colour, height and population Moderate growth with mild stress	Uneven colour, variable height and population Stunned growth and stress due to nutrient deficiency
Seedling emergence	Rapid and even emergence	Slow and uneven emergence	Poor emergence
Root systems	Healthy uninhibited root growth Lots of fine roots	Root growth somewhat restricted Some fine roots	Restricted root growth Few fine roots.