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APPENDIX - I

LAND CHARACTERISTICS IN RELATION TO LAND CAPABILITY

A. LAND SUITABLE FOR CULTIVATION

Sr. No.	Land capability class	Characteristics	Limitations	Suitable for only the most intensive safe use	Special need or precautions
1	2	3	4	5	6
1	very good cultivable land	Level land with deep, well drained soil and satisfactory texture and structure. Free from harmful factors like excessive lime, acidity, alkalinity or salts, fit for a variety of crops, responsive to manuring the soil texture in these cases usually may range from fine sandy loam to loam or silty loam and well furnished with soil organic matter and plant nutrients. These soils have capability to maintain physiological availability of water	Few or no limitation of soil depth, erosion water table, subsoil barrier overflow or wetness etc.	Intensive cultivation to all climatically adapted crops	No special difficulty in farming, usual good farming practices and maintain soil fertility and conserve water

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1	2	3	4	5	6
2	Good cultivable land	Gently to moderately sloping land with deep soil of fairly satisfactory texture and structure, subject to occasional overflow or wetness easily correctible, slightly affected by salinity and such harmful factors. Moderately susceptible to erosion or slightly to moderately eroded. Sandy loam to loamy soil overlying heavier sub-soil, with moderate permeability & drainage. Fine sandy loam to loamy soil overlying sand or gravel deep soil but rapidly permeable. Silty loam to loam on clay or silty clay, moderately deep, slowly permeable.	A) Susceptible to moderate erosion B) Slight drainage impendence C) Slight marshiness D) Droughtiness E) Moderate condition of salinity and acidity slightly affecting crops F) Nutrient reserve poor	Cultivation with precaution with management of excess water & selection of crops adapted to wet conditions. Cultivation with selection of crops adapted to soil limitations	Protection from erosion. Use conservation methods Drainage improvement or flood protection on. Treatments to offset soil limitations and to conserve irrigation water
3	Moderately good cultivable land	Gentle to moderately to strongly sloping lands to moderately deep soil of satisfactory texture, subject to frequent overflow or wetness, presence of harmful factors including salinity or alkali, high water table etc. Moderately affecting crop growth, soils of heavy texture subject to severe erosion hazards or having adverse effects of part erosion. Coarse to medium texture soil, moderately deep underlain by sand or gravel. Silt loam to loam, poorly drained. Moderately permeable over very slowly permeable sub-strate, claypan, fragipan etc.	A) Very susceptible to erosion B) Drainage impendence rather marked C) Marshiness D) Droughtiness and root zone limitation marked E) Salinity reserve poor F) Poor moisture holding capacity	Cultivation with precautions against permanent land damage. Cultivation with careful management of excess water and selection of crops adapted to wet conditions. Cultivation with careful selection of crops adapted to soil limitations	Special attention to erosion control and conservation irrigation. Intensive drainage improvement or protection from flooding. Intensive treatment to offset overcome soil limitations and conserve irrigation water. Conserve all rainfall develop water for irrigation or convert to pasture or grazing use

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1	2	3	4	5	6
4	Fairly good land suited for occasional limited cultivation	Strongly sloping to steep land deep to shallow soil favourable texture soils severely affected by salt tolerant crops to grow. Soil under severe erosion, sandy or concretionary soil with very low moisture holding capacity. Highly saline organic soil. Gravelly or concretionary soil overlying gravelly or concretionary sub-soil rapidly permeable, well drained. Sand to loamy sand overlying sand or coarse material, well drained rapidly permeable	A) Severe past erosion limitation B) Severe root zone limitation C) Pronounced marshiness D) Bad droughtiness E) Strong salinity or alkali hazard	Occasional cultivation in rotation with hay or pasture or orchards protected by permanent cover crops. Cultivation to special summer crops hazard of crop failure is always present. Cultivation during wet years, frequent crop failure. Better in permanent vegetation	Intensive erosion control when in cultivation. Intensive drainage. Special attention to seedling and harvest dates to minimise crop failure on over flow land
5	Very well suited for grazing Not arable	Level or nearly level land with stony or rocky soil, marshy soil etc.	LAND NOT SUITABLE FOR CULTIVATION A) Cultivating implements cannot be applied B) Crop management practices cannot be applied A) Very rapid runoff attaining high velocity causing deep cutting B) Stoniness & erosion condition hindering cultivation of arable crops by application of arable crops by usual management practices C) Low moisture holding capacity and nutrient reserve D) Severe salinity or alkali hazard		
6	Well suited for grazing or forestry Not arable	Steep to very steep land with deep to shallow soil. Shallow to very shallow soils with severe erosion hazard or very severe past erosion soils with extreme salinity and alkali hazards, soil under severe climatic restrictions		Grazing or forestry of both	Proper season of use and rate of stocking protecting from qualling Manage grazing & logging to maintain sufficient residue & litter on the soil for soil and moisture conservation fir protective Manage grazing to prevent soil padding to favour desirable plants Good range & forestry management practices fire pro.

1	2	3	4	5	6
7	Fairly well suited for grazing or forestry not arable	Bad lands, rock cut crops etc	A) Severe root limitations	Grazing or forestry or both	Carefully manage grazing and logging to maintain enough plant litter for soil and moisture conservation. Fire protection. Range grazing to favour desirable plant Good range and forestry management fire protection
8	Suited only for wild life recreation and protection of water supplies	-	-	Watershed & wildlife, recreation and water spreading	Maintain maximum cover for erosion control Improve for wildlife and recreation

SOURCE : Soil Survey Manual All India Soil and Landuse Survey Organization (I.A.R.I.)
New Delhi.