

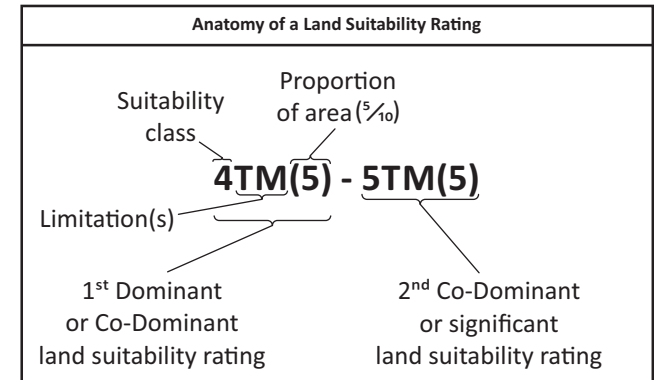
# Land Suitability Rating System (LSRS)<sup>†</sup>

Suitability Definitions	
Class	Limitation
1*	none to slight
2	slight
3	moderate
4	severe
5	very severe
6	extremely severe
7	unsuitable
NR	Not Rated**

\*LSRS is a national rating system and due to climate, Alberta has no Class 1 land

\*\*Not rated includes areas such as water bodies or disturbed land (eg. gravel pits)

Land Suitability Rating System Restrictions and Limitations			
General Restriction	Subclass	Code	Limitation
<b>C – CLIMATE</b>	Temperature	H	Inadequate heat units for the optimal growth.
	Moisture	A	Inadequate moisture for the optimal growth.
<b>S – SOIL</b>	Water holding capacity/texture	M	Crops are adversely affected by lack of water due to inherent soil characteristics.
	Soil structure	D	Crops are adversely affected either by soil structure that limits the depth of rooting, or by surface crusting that limits the emergence of shoots.
	Organic matter	F	Mineral soil with a low organic matter content in the Ap or Ah horizon.
	Depth of topsoil	E	Mineral soil with a thin Ap or Ah horizon.
	Soil reaction	V	Soils with a pH value either too high or too low for optimal growth.
	Salinity	N	Soils with amounts of soluble salts sufficient to have an adverse effect on growth.
	Sodicity	Y	Soils having amounts of exchangeable sodium sufficient to have an adverse effect on soil structure and/or growth.
	Organic surface	O	Mineral soils having a peaty surface layer up to 40 cm thick.
	Drainage	W	Soils in which excess water (not due to inundation) limits the production.
	Organic soil temperature	Z	Additional temperature limitation associated with organic soils.
	Rock	R	Soils having bedrock sufficiently close to the surface to have an adverse effect on production.
	Degree of decomposition or fibre content	B	Organic soils in which the degree of decomposition of the organic material is not optimum for production.
	Depth and substrate	G	Shallow organic soils with underlying material that is not optimum for production.
<b>L – LANDSCAPE</b>	Slope	T	Landscapes with slopes steep enough to incur a risk of water erosion or to limit production.
	Landscape pattern	K	Land areas with strongly contrasting soils and/or non-arable obstacles that limit production or substantially impact management practices.
	Stoniness and coarse fragments	P	Land that is sufficiently stony or gravelly so as to hinder tillage or limit production.
	Wood content	J	Organic soils with a content of wood or of <i>Eriophorum sp.</i> sufficient to limit production.
	Inundation	I	Land areas subject to inundation or flooding that limits production.



Examples of Land Suitability Ratings	
Rating	Explanation
<b>2MT(10)</b>	100% of the area is Class 2 land indicating slight limitations to growth. The limitations are caused by water-holding capacity of soils and slope conditions.
<b>4TM(5) - 5TM(5)</b>	50% of the area is Class 4 and 50% of the area is Class 5 indicating severe and very severe limitations to growth. The limitations are caused by slope conditions and water-holding capacity of soils.
<b>4M(8) - 7NW(2)</b>	80% of the area is Class 4 indicating a severe limitation to growth caused by water-holding capacity of soils. 20% of the area is unsuitable with limitations due to soil salinity and drainage.

<sup>†</sup>For a more detailed explanation of the LSRS, go to: <http://sis.agr.gc.ca/cansis/publications/manuals/1995-lsrs/lrs.pdf>