

# Agriculture Report

Fractional SW  $\frac{1}{4}$ , Section 4, Township 4, Range 5, Coast District



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Site visit June 5, 2009 confirmed the map data gathered from the BC Land Inventory and Soils Capability Maps over the fractional SW ¼ Section 4, Township 4, Range 5, Coast District.

**CLI Summary:** The land inventory labels the area as  $5^7_{MP} - 4^3_{M}$ .

- This correlates to 70% of the land base as category 5 which is defined by very severe limitations that restrict the capability to producing perennial forage crops and improvement practices are feasible (usually considered arable for forage production only).
- The remaining 30% is category 4 that is defined with severe limitations that restrict the range of crops or require special conservation practices or both. Soils are low to fair in productivity for specially adapted crops.
- The M depicts moisture; low moisture holding capacity
- The P depicts stoniness; stone interfere with tillage, planting and harvesting.

#### **Soils Capability Summary: Alix Association**

Alix soils are orthic dystic brunisols and degraded dystic brunisols. They have rapid drainage, flat terraces and steep edges. They produce an array of vegetation including lodgepole pine, aspen and dry mosses.

With respect to agriculture production the frost free period is conducive to production, but the droughty nature of the soil and stoniness limit the range of crops possible for forages without irrigation. The severity of the stoniness limits production as well.

Alix Association makes an excellent aggregate source (Runka 1972).

Attached are photos which show soil attributes, terrain and surrounding vegetation. (Pages 2-8)

Attached is an ortho photo (appendix 4) of the area which shows development of an existing pit which covers half the land base. More development has occurred in the area as well, pages 9 show the existing pit.

Agriculture production is occurring in the area as seen by the clearing on the bottom SW portion of the property however not extensive.



Soil Pit #1:

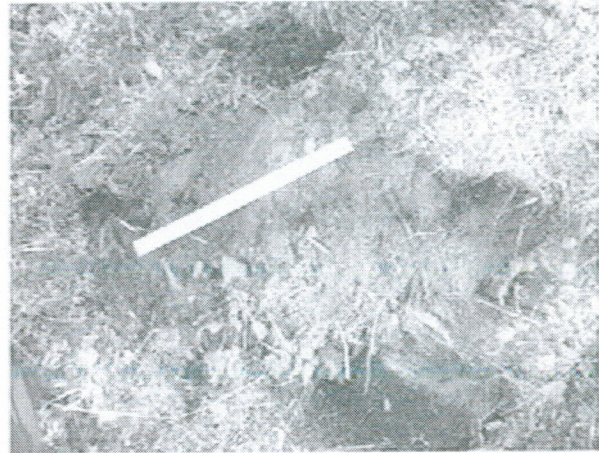
Within a standing pine block, with visible effects of Mountain Pine Beetle, a soil pit was dug 16" deep that shows the typical soil matter found in the area. Aggregate was also present in the sample plot as shown in bottom right photo.



Alix Association soils parent material are water sorted, stratified gravels which are coarse to moderately coarse textured, often stony, highly permeable and loose. They are of variable thickness, but always exceeding 5 feet in depth and with stratified gravels and sands common at depth (Runka 1972)



Soil Pit #2: In a deciduous area soil pit 2 was dug finding very little coarse material. This deciduous area runs along an edge that drops off with slope limiting the arable portion. The top areas of the ridge and the bottom have production capabilities as seen in soil pit #3 photos.



Where stoniness is not a problem crops can be grown that are suitable for our climate. The production of the area is moisture dependent and in these areas production is increased by irrigation. Irrigation is not always a viable option.



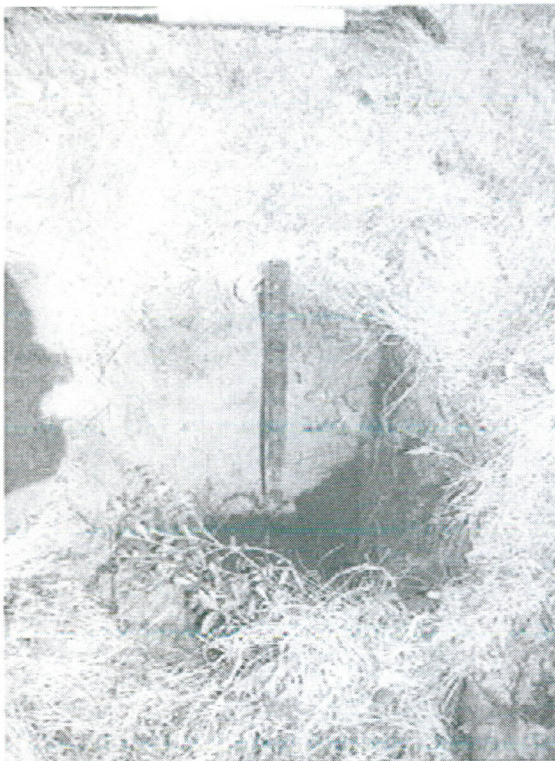
Soil pit #3: Dug in an area west of a sloped area. High soil producing capabilities in this narrow band of land. Currently small pine trees, a grass mix and a hawkweed infestation are found in the area.



Soil depth >18 found negligible aggregate in the area.



Soil Pit #4: Dug in the NW corner of lot. Similar soil attributes were noted in the area as pit 2 and pit 3. Very little aggregate in area with steep terrain to the north.





Soil pit #5: Along the north edge of the lot on a higher bench than pit 3 and 4, pit 5 was attempted. Digging equipment in this area was not adequate to get through the surface material. Stoniness is definitely a factor in this area.



Area to the south with appreciable slope.



Area to the northwest with no slope.



Soil pit #6: The area around soil pit #6 was relatively flat and open. No undergrowth which supports the findings of a lower producing soil material that has moisture holding deficiencies.



The soil pit in these photos has visible layers. There is a strong sand layer present.