

ALFALFA PRODUCTION IN THE CARIBOO AND CENTRAL B.C.

by

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Alfalfa as forage is adapted to the silts and sandy loams throughout the Cariboo and Central B.C. on both dryland and irrigated sites.

Prevailing Cropping Practices

The standard hay mixture is an alfalfa, timothy and brome grass mixture sown at a rate of 10 - 12 lbs./acre. Alfalfa is also sown at 1½ to 2 lb./acre in pasture mixtures. Seeding is accomplished in early May on dryland, early June under irrigation, and in some instances in August in the Vanderhoof region. Cover crops are sown at 50 lb./acre under good moisture conditions. When a cover crop is not used, weeds are generally controlled by mowing or grazing. There is limited use of sprayers.

On dryland a single cut of hay or silage is harvested in July. Under irrigation two cuts are harvested in June and August. Average dry matter (DM) yields range from 1.5 to 5.0 tons/acre throughout the region to 4 - 6 tons under irrigation in the Cariboo. Varieties presently grown throughout the region are Rambler and Roamer with Vernal also grown under irrigation, and Beaver used extensively on dryland.

Production Problems

A. Soil Fertility and Nodulation.

The major factors affecting longevity and productivity are soil fertility and lack of nodulation.

The Experimental Farm at Prince George conducted a Phenotype x Environment Study at seven locations in central B.C. during the period 1969 to 1975. Four legume species, including alfalfa, produced few DM yield responses to added P_2O_5 , K_2O and S.

Sites which have difficulty growing alfalfa often have P_2O_5 , K_2O , S and B deficiencies. For example at Alexis Creek alfalfa has started to die after two years production. Soil analysis indicated extreme P_2O_5 , K_2O , S and B deficiencies under irrigation. Alfalfa is well adapted in the Smithers area but on some sites it may die out the first winter, after establishing well. On some lower benches of the Nechako River at Ft. Fraser alfalfa survives but only yields 1.5 tons DM on a site that should yield 4 tons. Soil analysis indicated P_2O_5 , K_2O , S and B deficiency. In a greenhouse experiment at U.B.C. Mr. Ted Moore grew alfalfa on the Ft. Fraser soil which exhibited a yield response to P_2O_5 and S. He found no evidence of nodulation on alfalfa grown on the lower bench soil although there was nodulation in a higher elevation Ft. Fraser soil. Generally summer surveys have shown very little nodulation on alfalfa throughout central B.C.

B. Other Factors

Fall stand management has been known to limit stand longevity. The critical period for food reserve storage is believed to be August 21 to freezedown. Late harvest or severe grazing quite frequently weakens alfalfa stands. Cattle losses due to bloat often occur in early fall when alfalfa regrowth is being grazed.

Ice sheeting or freeze-thaw cycles often cause winter kill. Disease problems are few but blackstem or witches broom sometimes cause yield reductions.