

# NORTHERN AGRICULTURE

## The Peace River Area

by Bob Elliott

*An Inland Empire* and *The Mighty Peace* are two of the names given to that portion of northwest Canada spanning British Columbia and Alberta between 50° and 60° latitude, bordered on the west by the Rocky Mountains, on the east by the height of land running north of Lesser Slave Lake, and drained by the Peace River.

This area covers over 40 million acres and contains about 20 million arable acres, of which less than 5 million are cultivated. In addition, it is claimed, that about 13 million acres could be used for livestock grazing.

By most standards the area is only sparsely populated. Less than 120,000 people live here which is hardly enough to support the abundant amenities common in larger centers. But we can still enjoy a morning goose shoot before starting our day's work.

The vegetation of the area is predominantly Boreal Forest with mix-

tures of Parkland. Of the total area, only 1 million acres can be considered Black to Degraded Black with the balance grouped as Grey Wooded. But soil classification is difficult and complex. Much of the area had been glaciated both from the east and the west. Consequently, over 140 different soils have been classified to date. The job continues.

Recent studies have shown that over 31 percent of our soils have a pH below 6, and we are suspicious there are more. Nitrogen is the major soil deficiency with phosphorus a close second in many areas. Zinc and copper are possibly low for certain forage legumes.

Even though we are north of the rest of the agriculture in Canada our climate is not severe. It may be different, but not severe. Daily summer temperatures at Fort Vermilion in the north Peace and at Beaverlodge in the south Peace are remarkably similar to Edmonton.

The climate, however, shows great variation from season to season. At Beaverlodge the average May-September precipitation is

10.53 inches while at Fort Vermilion it is 6.73 inches. Much of this comes in June and July, but there is always some left over to come in the autumn to antagonize the harvester. The average killing frost-free period (28°F) for Beaverlodge is 134 days which may vary from 22 to 166 days. At Fort Vermilion it is 116 days varying from 29 to 147 days.

Day length increases rapidly from south to north, the more so the farther north one travels. At Beaverlodge in June we have 19.4 hours of daylight for plant growth during our longest days. Fort Vermilion has 21.3 hours. These long days have a marked effect on promoting plant growth and destroy the prediction potential of the 'degree days' concept of crop geography.

The agricultural economy of the area is based on field crops (Table 1). The major source of income is from annual cereals with barley proving most popular. One quarter of the cultivated area is in perennial forages at all times and a similar portion is in fallow, primarily as

part of the rotation to break up the forage stands in preparation for annual cereals and oilseeds.

**Table 1 — Peace River Region Cultivated Acreages in 1973 (Basis Wheat Board Permits)**

Fallow	1,088,000
Perennial Forages	
— Hay and Pasture	921,000
— Seed	206,000
Barley (Olli, Gateway)	814,000
Rapeseed (Torch)	611,000
Wheat (Thatcher, Neepawa, Park)	391,000
Oats (Grizzly, Rodney, Random)	190,000

Rapeseed has truly been a Cinderella crop for 'the Peace'. Acreages have expanded rapidly in recent years. And so they should because both yield and quality are higher here than any other part of Canada.

The Peace River has long been noted for forage seed production, a specialized program which is usually in tune with the weather. Short days in the cool, moist autumn coupled with long, cool days in the prolonged spring breakup period favor grass seed production. The profitable crop is ready for harvest during the warm, dry periods of late July and early August. With Canada's participation in the Organization for Economic Cooperation and Development (O.E.C.D.), over 400 varieties representing 21 grass species and 12 legume species are either under contract, or available for contract production for export to the originating countries.

Beekeeping has also expanded. In 1973 Canada produced 51.8 million pounds of honey. Over 25 percent of this production came from the 70,000 colonies of honeybees used to pollinate Peace River legume seed crops.

The Peace River area is not heavily populated with cattle. Currently there are only about 136,000. We have a large potential for forage production and consequently a large potential for beef production. The area is well suited to growing forages and could support many thousands of cattle, both on cultivated pastures and partially improved native range if required.

Consumption of beef in Canada has risen from 72 pounds per person in 1957 to 92.5 pounds in 1974. This is still far below the U.S.A. consumption of 116 pounds per person per year. With increasing human population and a growing taste for

beef, we visualize a phenomenal expansion in the local cattle industry.

But not all things come up "Peaches and Cream" in the land of "Milk and Honey". The area has never experienced a crop failure but it has certainly suffered losses (Table 2). A highly diversified climate-soil complex means a diversification of agriculture production programs, each with their own problems. The area is suited to many kinds of livestock and crops; refinements in production and management techniques and new crop cultivars must be developed locally.

**Table 2 — Average and Potential Yields of Common Peace River Crops**

	(Units)	1973	
		Average	Potential
Barley (bu/ac)		30	80
Wheat (bu/ac)		25	60
Oats (bu/ac)		40	110
Rapeseed (bu/ac)		20	45
Fescue seed (lbs/ac)	500		1800
Red Clover seed (lbs/ac)	300		500
Alsike Clover seed (lbs/ac)	350		500
Alfalfa seed (lbs/ac)	100		500
Alfalfa Hay (tons/ac)	2.5		6

For example, too frequently crops, though swathed, have been caught in the cool, damp, short days of autumn and left for spring threshing. This practice is costly in loss of grades, yields, and subsequently delayed seedings.

A close analysis of climate-crop interactions shows that more research is required into the engineering of crops which will mature earlier and of machinery to harvest crops safely. Some now feel all crops should be threshed at the highest moisture content which will permit separation, and dried. Carried to maximum use this practice could force the swather back to some point south of Edmonton, where, perhaps, it should have stayed.

The degree and direction of agricultural development are indicated by recent press announcements. Plans have been confirmed for alfalfa dehydrating plants at Grimshaw, Rycroft and Beaverlodge in Alberta, and at Dawson Creek, B.C. These plants are to supply both domestic and foreign markets and represent a new industry in this area.

A \$12 million rapeseed plant for Sexsmith, Alberta is a first for the Peace River area and only the second in Alberta. This plant will have the capacity to process all of the eight million bushels of rapeseed produced annually in 'the Peace'.

A government sponsored veterinary clinic was built at Fairview only three years ago. A second is now planned for High Prairie and a third in the Grande Prairie area. The growth and development of the livestock industry is also reflected in the relatively recent establishment of meat packing plants at Grande Prairie and Dawson Creek. The Dawson Creek plant has just completed an expansion program to accommodate Alaskan contracts stimulated by the designation of Dawson Creek as a port of entry for shipments to Alaska, U.S.A.

A promotion program by Peace River sheep producers to provide Peace River lamb to western Canadian consumers caused the Western Canada Sheepmen's Association to construct a plant specifically for processing lamb. While the location is not confirmed it is anticipated the plant will be in Innisfail, Alta. This will provide Peace River lamb producers with a firm outlet for the first time.

Historically the Peace River area has been a producer for world markets of seeds of grasses, legumes, cereals and oilseed crops. The area is well endowed with cleaning and processing plants, both privately and government sponsored, yet a farmer-owned plant at Rycroft, catering specifically to herbage seeds, is to be expanded, and a new plant constructed at Wembley to process farm lots of commercial seeds of cereals and oilseeds for on-farm use.

While we have seen a marked expansion of our agricultural industry during the 1960's, we are told that the real thrust will come with the opening of the northern energy corridor. New and larger markets will emerge, new and bigger industries will develop locally, and many more people will call 'the Peace' their home. The near future looks exciting and challenging, but it may cost us that morning goose shoot on the way to work. ■

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