

History of Creeping Red Fescue Production in the Peace River Region of Canada

Background:

Creeping red fescue (*Festuca rubra*) is a major crop grown for seed in the Peace River region of Alberta and British Columbia. Annually, 1000 to 1200 growers will harvest between 80,000 and 120,000 acres of creeping red fescue for seed. Annual production varies between 35 and 40 millions lbs of seed. Annual export sales of creeping red fescue are between \$28 to \$30 million CDN.

Creeping red fescue is primarily grown for use in the turf grass industry, going into lawn mixes with other turf grass species such as perennial ryegrass and Kentucky bluegrass. Due to its creeping ability, creeping red fescue tends to sod in quickly. It is used in grass mixtures for seeding lawns, golf fairways, pastures, and for soil conservation purposes. The majority of creeping red fescue seed produced is exported out of the country. The Peace River region continues to be the world's largest producing area of creeping red fescue seed.



Creeping red fescue seed field outside of Clairmont, Alberta

Introduction:

Creeping red fescue is originally native to the slopes of the Eastern Alps (Balkans region). However, it is thought that the first seed to arrive in Canada originated in Czechoslovakia. Two growers in the Central Alberta area, Andrew Anderson and John Olson, began growing the crop in 1932. Subsequently, James Murray, an instructor at the Alberta School of Agriculture and Home Economics at Olds, developed a variety "Olds". "Olds" was developed from mass selection from the original Czechoslovakian stock. It exhibited strong creeping roots, drought tolerance, good hardiness, and was disease free.

In 1935, the first creeping red fescue seed arrived in the Peace country. Spence Morrison, an advisory officer with Alberta's department of Agriculture, brought two two lb bags of creeping red fescue seed, along with some timothy seed, to the area. In June of 1935, Morrison left one 2 lb bag at the Agriculture Canada Research Station at Beaverlodge. The other bag was left at Bainard Lake, where the crop failed.

The seed left at Beaverlodge immediately fell into the watchful eye of Dr. Earl Stacey, superintendent of the research station. Dr. Stacey convinced local farmers, Rowe and Les Harris (Harris Brothers farms), to seed the crop. In July of 1935, the first

commercial crop of creeping red fescue was seeded on the old “McCarter place”, two miles south of Beaverlodge.



Dr. Earl Stacey (left), with Les and Rowe Harris, in the first commercial field of Creeping Red Fescue grown in the Peace River Region. Field is now 250 acres, photo taken in 1942.

Over the next few years, the combined efforts of the Harris brothers, along with the experimental skills and supervision of Dr. Stacey, saw the potential of creeping red fescue as a seed crop develop. It was found that the Peace country’s long sunshine days and cool evenings were good for seed development. The crop was originally considered a valuable dual-purpose crop. It’s herbage remained green well into the fall, extending the grazing season for cattlemen. It’s ability to set seed enabled farmers to harvest the seed for cash purposes. As well, the sod making abilities of the crops would greatly improved the Peace’s grey-wooded soils.

1940’s

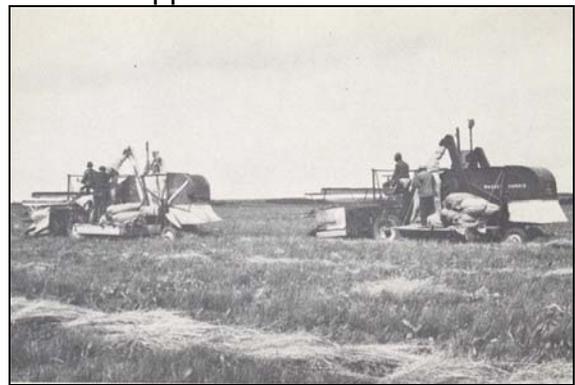
It was one thing to grow a crop, but it had to have a market. And with World War Two, came the Market! During the Second World War, it was discovered that creeping red fescue made a durable turf field, able to withstand heavy traffic and establish quickly. With airfields and army bases being constructed throughout the world to help with the war effort, a lot of seed was required. Exports of Canadian creeping red fescue seed increased dramatically as World World War two continued. From less than 100,000 lbs exported in 1942, exports jumped to over 3 million 2 years later, and peaked at over 5 million lbs in 1945. As the war ended, exports of creeping red fescue started to decline again. However, the performance of this grass during this period showed the world what fescue was capable of.



| Table 1: Canadian Creeping Red Fescue Seed Exports | | |
|---|---------------------|---------------------|
| Year | Value ('000) | lbs exported |
| 1940 | 35,165 | 33,705 |
| 1941 | 42,043 | 47,044 |
| 1942 | 88,949 | 98,123 |

| | | |
|--|---------|-----------|
| 1943 | 117,870 | 129,875 |
| 1944 | 191,521 | 3,594,527 |
| 1945 | 306,581 | 5,280,887 |
| 1946 | 233,670 | 1,701,390 |
| 1947 | 119,715 | 730,835 |
| 1948 | 287,541 | 2,260,970 |
| 1949 | 347,432 | 2,218,125 |
| Note: prior to 1960, creeping red fescue did not have it's own export code. Figures above have been extrapolated from existing data. | | |

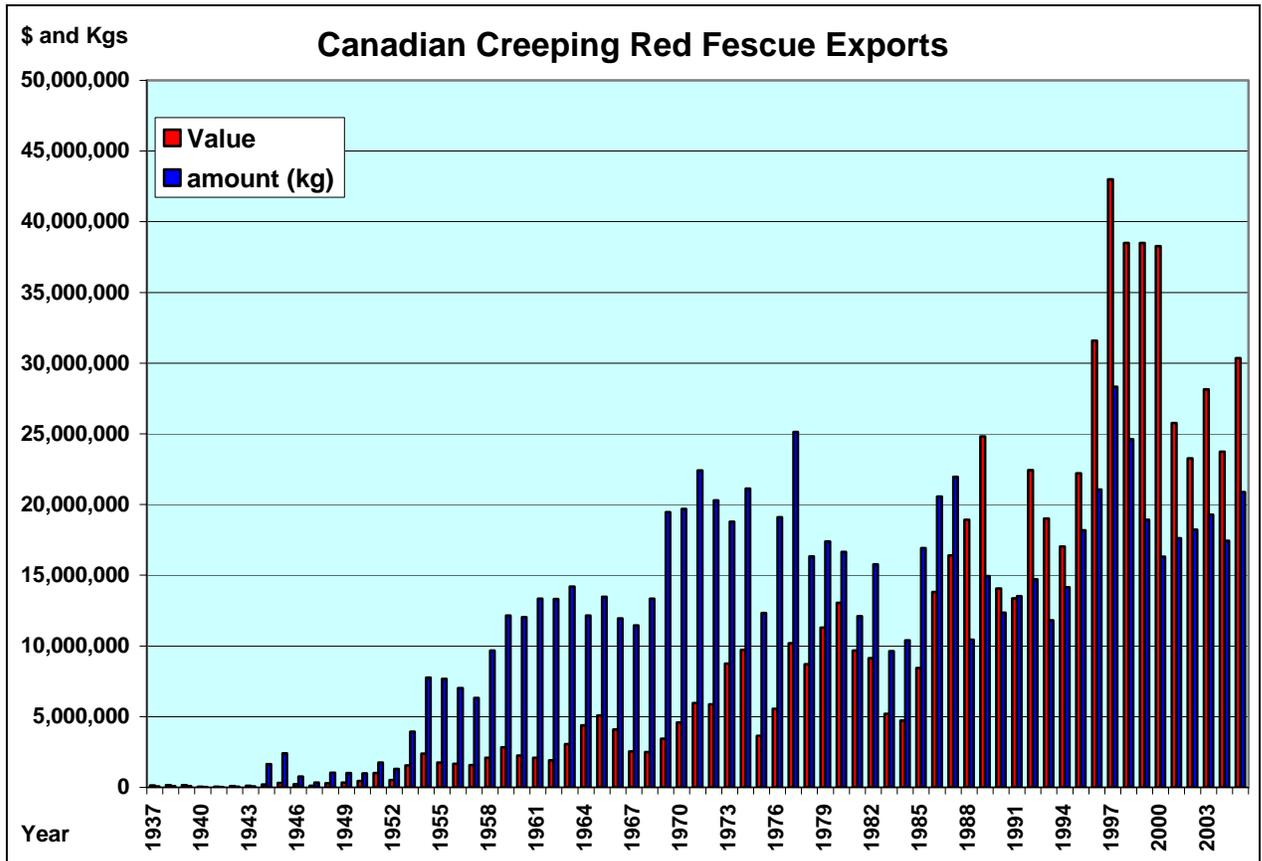
Back in Canada, the opportunity to support the war effort through the production of creeping red fescue seed allowed many new growers to appear on the scene. With these new growers, came the need for continued research and improvement in managing this new and fragile crop. Growers soon learned that row seeded fescue crops were not as successful as broadcast crops. The nature of the crop required it to be straight cut, and the subsequent seed harvested tough. To accomplish this, growers began to bag the seed, tough, on the combine. Bags were then left in the field to air dry the seed down to an acceptable moisture level. Fescue fields continued to be straight combined well into the 1960's.



Two combines (Harris Brothers) harvesting creeping red fescue for seed. Note: straight cut headers and bagging platforms attached to the combines

1950's

With the Second World War now in the past, the boom of the 1950's began. With North America advancing as a dominant continent world wide, it's wealth began to grow, and along with it, the need for more "luxuries". Homes that were being built now required "lawns" to complete the visual effect, "parks" were needed for people to enjoy, "sporting facilities" and "golf courses" had to be built to accommodate leisure time. This shift in needs required more grass seed to help beautify the nation. The 1950's saw Canadian production of creeping red fescue explode, with exports reaching 8 million lbs annually (1953), then over 10 million lbs (1954), and by 1958, exports had exceeded 20 million lbs. The role of creeping red fescue in the Peace River growers' rotation was here to stay. Although prices remained constant between 10 and 20 cents/lb during this period, it remained a viable cash crop for growers.



Historical Creeping Red Fescue exports, Value and Amounts

1960's to present

Production of creeping red fescue seed continued to increase throughout the 1960's and 70's, first peaking in 1977, when over 55 million lbs of creeping red fescue seed was exported. The driving force behind creeping red fescue demand continues to be the expanding turf seed market, especially in the USA, where it is estimated the turf seed industry is a \$40 billion market. Since the 1970's, 1997 saw the largest amount of creeping red fescue exported (over 62 million lbs). Fescue seed exports over the past 20 years is averaging 39 million lbs/year. Major production changes included: bulk handling of seed, swathing of seed, improved herbicide availability to growers, and the building of a grass seed infrastructure within the region.

The production of creeping red fescue continues to focus on common seed. Annual acres of certified creeping red fescue (primarily the variety "Boreal") over the past 20 years averages 17,000/year. This would constitute, on average, less than 20% of total creeping red fescue acres. The USA remains the primary market place for creeping red fescue seed, and the fact that American buyers are not required to use certified seed in their turf grass mixtures, results in the majority of Canadian growers growing common seed. Most certified Boreal seed is exported to Europe.

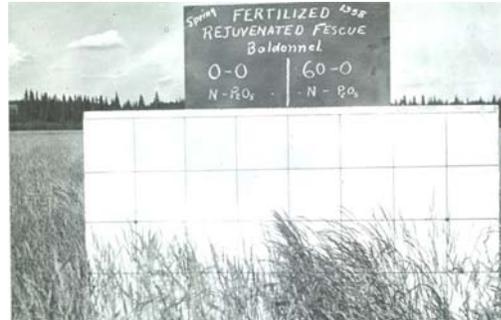
Research

The majority of research associated with creeping red fescue has come out of the Agriculture Research Station at Beaverlodge, Alberta. Following in the footsteps of Dr. Earl Stacey came Dr. Bob Elliott, who came on the scene in Beaverlodge in 1952. Following Dr. Elliott's retirement in the early 80's, Dr. Nigel Fairey continued the

research on creeping red fescue. Dr. Elliott is the breeder responsible for the commonly grown certified variety "Boreal". Early work included:

- rejuvenation of fescue stands through plowing
- floral induction
- fertilization trials, amounts and timing
- herbicide trials

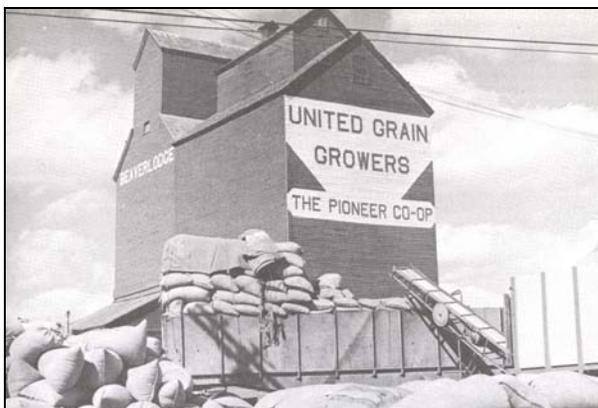
Throughout the years, sub-stations located throughout the Peace region have conducted research on creeping red fescue. The assistance of local producers helped these research projects get conducted and completed. Valuable data and practical management techniques were passed onto local growers.



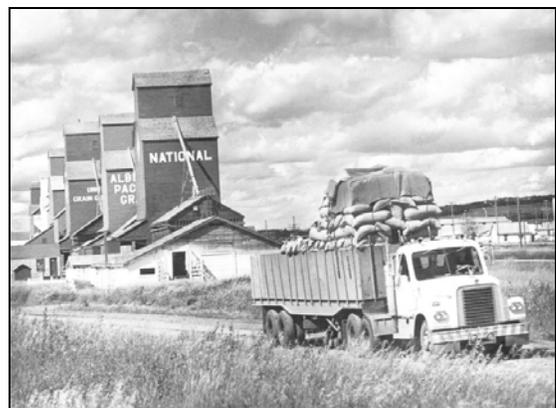
Fertilizer research on rejuvenated creeping red fescue, Baldonnel B.C. sub-station, 1957. Year following plowdown for rejuvenation, crop yielded 1200 lbs/ac.

Buyers and Processors

Along with the growth of the fescue industry in the Peace region came the buyers and processors of creeping red fescue. Although many buyers were present in the region, most seed was transported out of the region for cleaning and processing. In the past, creeping red fescue was harvested and stored rough in 120-150 lb jute bags. Buyers would congregate in the Peace region following fescue seed harvest and purchase seed, sampling bags for dockage and moisture. Many lots were bought at delivery points throughout the Peace region, and subsequently, transported out of the region for processing.



The UGG was a major buyer of rough creeping red fescue seed. (Beaverlodge buying station)



Truck loaded with jute bags of creeping red fescue seed headed for UGG's processing plant in Edmonton.

The first local processing plant was built in 1952, in Beaverlodge, by John Foster, (Foster's Seed and Feed). John Foster was not only a processor, but was a large grower of creeping red fescue seed. Foster's Seed and Feed would give local growers another marketing outlet, as well as allow John Foster to clean and market his own seed.



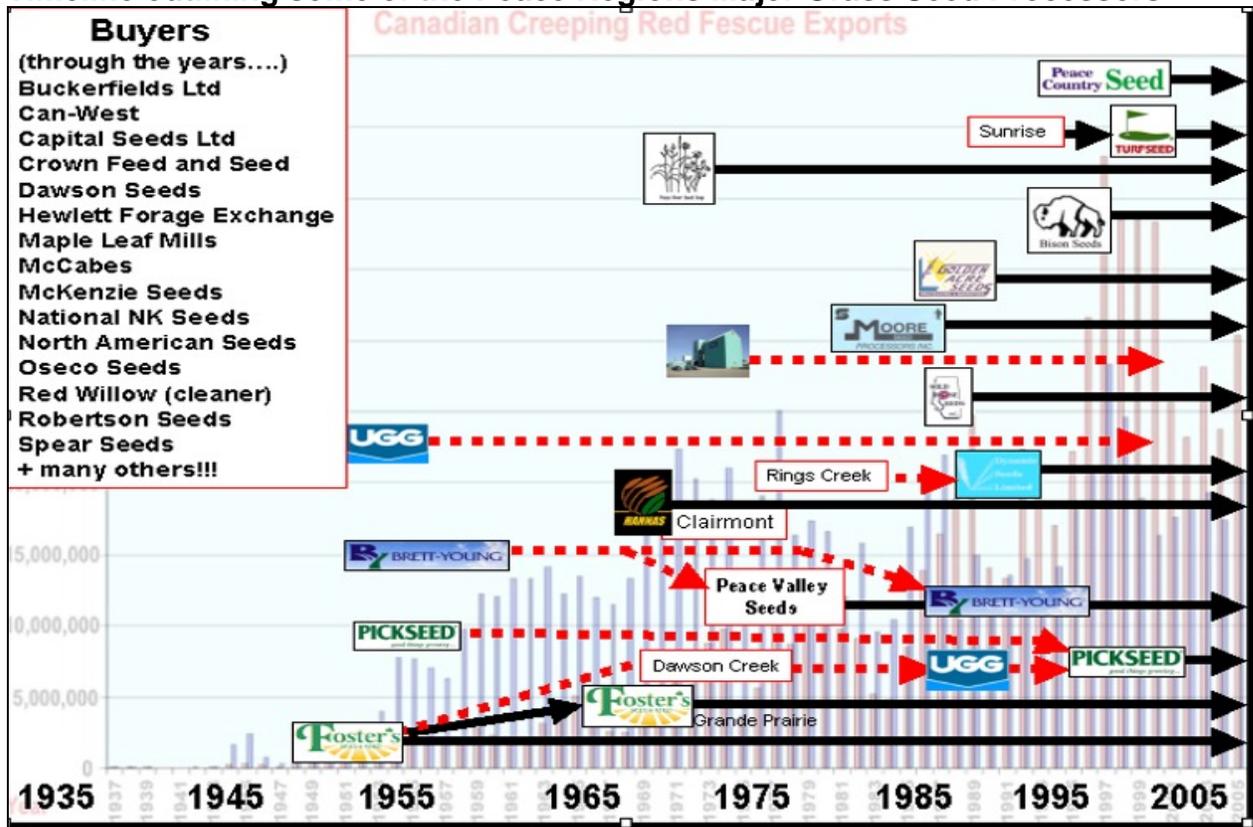
Sacks of creeping red fescue on the farm of John Foster. Each seed pile contained 45,000 lbs of seed.



Trucks hauling fescue from John Foster's farm to his cleaning facility in Beavelodge.

The expansion of grass seed processing facilities did not take place though, until the early 1970's. Although buyers were plentiful, prices remained relatively low for quite a long time period. In 1970, the National Farmers' Union (NFU) organized many growers to picket buying facilities, and not to deliver their fescue. This attempt to try and get higher prices resulted in injunctions against picketing farmers. However, the main after shock from this action was many more companies getting involved in the grass seed business by setting up facilities in the Peace country. Many local processors, including Peace River Seed Coop, Brett Young Seeds, and Alberta Wheat Pool, entered the grass seed processing picture in the early 1970's.

Timeline outlining some of the Peace Regions Major Grass Seed Processors



A list of grass seed processors presenting operating in the Peace River region can be found at: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sis10048](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sis10048)

Summary

The Peace River region will continue to be the major producer of creeping red fescue seed in the world. With a climate suitable for good seed production, a well established infrastructure, and growers willing and able to grow seed crops successfully, creeping red fescue will continue to be visible in the Peace River region's country side.

David Wong
Market Specialist
Alberta Agriculture, Food and Rural Development
Grande Prairie, AB
E-Mail: david.k.wong@gov.ab.ca