

## Canadian Certified Bent Seed

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The bent seed industry in Prince Edward Island and New Brunswick had its origin in the decline of German mixed bent imports during the World War and in the insistent demand to supply the new golf courses which were rapidly established on the return of peace. Production was increased from 200 pounds in 1923 to 88,000 pounds in 1926, when prices to the growers dropped from 84 cents to 40 cents a pound for No. 1 quality seed. Only 28,000 pounds were harvested in 1927, but with the higher prices which have prevailed since that year the production has gradually increased to about 50,000 pounds in 1930.

The Prince Edward Island and New Brunswick Grass Seed Growers' associations are organized on a cooperative basis for central cleaning and marketing, and are not subsidized by Provincial or Dominion Governments. Field inspection of seed crops, sampling, testing, and sealing of seed in sacks are done by the Dominion Seed Branch on the basis of service at cost. Experiments have been conducted on production and cleaning problems.



Inspecting a field of creeping bent grass at Memramcook, New Brunswick, where over 2,000 acres of dyke land are available for multiplication of this grass.

Purity of variety is essential to the development of turf with uniformity in color and texture. The official Canadian standards are over 95 per cent for Prince Edward Island colonial bent and New Brunswick creeping bent, and 85 per cent for velvet bent seed. Inspection practice limits redtop as an impurity to 2 per cent, the remaining 3 per cent being other fine bents. The lower standard for velvet bent was adopted because Prince Edward Island colonial bent persists in old velvet bent meadows or is a volunteer growth in new seeding. Only the larger seed of the former named variety can be separated from velvet bent in cleaning.

Every field from which seed is harvested must pass a rigid inspection. The seed crop must show good vigor of growth, and must be relatively free from bad turf weeds, the seeds of which are difficult of separation. Bent seed of high germination which will produce strong seedlings can not be expected from a crop weakened by disease or soil poverty. Redtop was introduced into a few localities with United States grown timothy seed, and is avoided as a grass which produces a coarse, open turf. All the redtop seed can not be separated from the fine bents and can be distinguished from them by a seed expert only with the microscope. Fields which contain an appreciable quantity of common plantain or mouse-ear chickweed are disqualified.

Certified Canadian bent seed is cleaned to about 95 per cent pure seed with an average germination of 85 to 90 per cent. Weed seed impurities rarely exceed 1/5 of 1 per cent. The cleaning process is slow and tedious and varies with the condition of the farmer's lot which is shipped to the plant in the chaff. Big power machines with four screen decks are connected in series, and fine-mesh screens are used to run off coarse material and separate very fine weed seeds and soil dust.

Although our bents run about 6,000,000 seeds to the pound, they have remarkable longevity with proper methods of curing and storage. Several samples of well-ripened Prince Edward Island colonial bent from the 1924 crop still germinate from 80 to 88 per cent.

A good start has been made on the production of velvet bent on Prince Edward Island. Here it requires a moister and more fertile soil than does our colonial bent. "The Island" strain of velvet bent is of very fine quality and is being multiplied for commerce. As yet only a few hundred pounds of seed are available to the trade. Seed lots running below 85 per cent of velvet bent will be offered as a mixture, and the label will show the percentage content of each variety.

The New Brunswick strain of creeping bent is fine in texture, dark in color, and from results of tests already made in Canada and the United States it is felt that it will be suitable for putting greens and moist soils of fairways and lawns. The purity of variety can readily be noted in the illustration. About 4,000 pounds of seed are available from the 1929 and 1930 crops.

Seed yields run from 30 to 60 pounds of cleaned seed to the acre. Threshing, cleaning, advertising, shipping, and distribution costs are high. There is only a limited market in Canada, and the United States has increased the tariff on bent seed from 2 cents to 40 cents a pound. The demand for certified seed will increase in both countries with the development of a wider appreciation for fine turf, but growers will not harvest seed crops unless they feel assured of receiving profitable prices for the product. The Canadian crop might easily be increased to 500,000 pounds.

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Eighty-five thousand new kinds of plants have been brought into the United States from foreign countries since 1898, when the office of foreign plant introduction of the United States Department of Agriculture was established. Many of these introductions have been of extreme economic importance. It is estimated that the wealth of the country has been increased by millions of dollars in this manner. Golf courses themselves have profited from some of the new grasses introduced.