

PUBLICATION 701

ISSUED APRIL, 1940

FARMERS' BULLETIN 96

FIRST PRINTING

DOMINION OF CANADA — DEPARTMENT OF AGRICULTURE

THE BEST VARIETIES OF GRAIN

BY

CEREAL DIVISION
CENTRAL EXPERIMENTAL FARM
OTTAWA, ONT.

L. H. NEWMAN
DOMINION CEREALIST



Agriculture
Canada

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Published by Direction of the Hon. Jas. G. Gardiner, Minister of Agriculture,
Ottawa, Canada, 1940.

15M—3777-4:40

630.4
c212
P.701 2

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THE BEST VARIETIES OF GRAIN

The varieties of grain which are most suitable for propagation in different sections of Canada have been determined by exacting comparative tests conducted at Experimental Stations and at outlying points throughout the Dominion. These tests have included varieties which have been produced both in Canada and in other countries. Some of these have found their way into cultivation prematurely and frequently to the farmers' disadvantage.

While it is admitted that conditions on a given farm may differ to some extent from those at the nearest testing point, experience has shown that the findings at these points usually can be adopted fairly safely.

DESCRIPTION OF VARIETIES

Common Spring Wheat*

I. Varieties susceptible to rust (not recommended in areas where rust is liable to occur).

CERES.—The result of a cross by Professor Waldron, North Dakota Experiment Station, Fargo, N.D., between Marquis and Kota. This variety is bearded, with white, smooth chaff; kernels red, rather long and hard; straw of medium length but only fair strength; matures with Marquis; susceptible to both loose and stinking smut.

CANUS.—From a cross made at the University of Minnesota in 1918 between Marquis and the winter wheat Kanred. The selection was made at the University of Alberta by Dr. O. S. Aamodt, formerly of Minnesota.

This is a bearded, strong strawed variety; susceptible to rust but resistant to covered smut and rootrot; matures about with Marquis but not quite equal to it in baking strength; is of interest chiefly in the drier sections of Saskatchewan and Alberta where rust has not been a factor to date.

GARNET OTTAWA 652.—The result of a cross made at the Central Experimental Farm, Ottawa, in 1906, between Preston A. and Riga M. The variety is beardless with short apical awns; chaff smooth and white; kernels red and hard; matures three to ten days ahead of Marquis; straw of medium length and strength; yields well both in the East and West. The kernel retains its red colour and hardness exceptionally well under conditions which tend to make Marquis "go starchy"; flour inferior to that of Marquis in baking strength and more creamy in colour. The more vitreous type of kernel of Garnet necessitates slightly different preparation for milling for best results.

HURON OTTAWA 3.—Originated from a cross made at the Central Experimental Farm, Ottawa, in 1888, between White Fife and Ladoga. This variety is bearded with brown, smooth chaff; kernels large and red; matures with Marquis at Ottawa; straw of good length and exceptional strength; rather susceptible to loose smut and bunt; produces flour of a slightly yellow colour and of inferior strength.

* Those interested in more detailed descriptions of spring wheat varieties should apply for a copy of Dominion Dept. of Agriculture publication 538, "Handbook of Canadian Spring Wheat Varieties".

MARQUIS OTTAWA 32.—Produced at the Central Experimental Farm, Ottawa, in 1892, from a cross between Red Fife and Hard Red Calcutta; has been the leading wheat in Canada for many years but now giving way to the new rust-resistant varieties; heads beardless but with short tip awns; chaff smooth and white; kernels dark red and hard; inclined to “piebald” where moisture is in excess; susceptible to stem rust but moderately resistant to loose smut and bunt; flour of excellent quality.

RED BOBS SELECTIONS.—The original Red Bobs as developed by Seager Wheeler, Rosthern, Saskatchewan, and reselected by him, yielded two outstanding forms to which he gave the names Early Triumph and Supreme. In general appearance these two forms are very much alike, both being absolutely bald and bearing the same compact type of head. In maturity Supreme ripens a day or two later than Early Triumph, which latter in turn matures as a rule from three to five days ahead of Marquis. Another selection, designated Red Bobs 222, by the University of Alberta, is almost identical with Early Triumph.

In milling and baking quality these wheats are very similar, but are not considered quite the equal of Marquis. Their grain is inclined to “go starchy” where moisture is abundant, being worse in this respect than Marquis.

RELIANCE.—Developed in the United States from a Marquis \times Kanred cross; very similar to Canus in all essential particulars and adapted to same areas.

REWARD OTTAWA 928.—Produced at the Central Experimental Farm, Ottawa, from a cross made in 1912 between Marquis and Prelude. The head of this variety presents a rather ragged appearance owing to the irregular arrangement of the spikelets. It is beardless except for a few irregular apical awns which are inclined to be dark in colour toward the base. Chaff is white and covered with fine hairs (pubescence); kernels are dark red and of unusual size and weight; straw is of medium length and above the average in strength. This variety ripens as a rule from one to three days later than Garnet but in yielding ability usually ranks appreciably lower.

In milling and baking quality, Reward is considered equal to Marquis, being usually higher in protein and capable of producing flour of good quality even when grown in areas which tend to produce flour of lower baking strength.

II. Spring wheat varieties resistant to rust.

APEX.—From a cross made at the University of Saskatchewan, Saskatoon, Sask., in 1927, between (H-44 \times Double Cross) \times Marquis, the Double Cross being a sister of Thatcher; highly resistant to stem rust, moderately resistant to bunt and loose smut but quite susceptible to leaf rust and glume blotch. It ripens about with Marquis, which variety it closely resembles in head and kernel characters as well as in baking quality. It yields as well as Marquis under normal conditions but decidedly better when stem rust is severe. Inclined to be rather weak in the straw. First distributed in the spring of 1937.

CORONATION.—From a cross between Pentad \times Marquis made by Cereal Division officials, Rust Research Laboratory, Winnipeg, Manitoba. Highly resistant to stem rust and leaf rust, moderately resistant to loose smut but moderately susceptible to bunt and glume blotch. It ripens with Marquis and has bearded heads with awns that are usually quite stiff and spreading. It is frequently somewhat hard to thresh. Straw of only fair length. It yields better than Marquis in Eastern Canada for which section it is recommended. Not admitted to the Manitoba Northern grades as milling and baking qualities not quite equal to those of Marquis. First distributed in the spring of 1938 in Ontario.

REGENT.—From a cross between H-44 × Reward made by Cereal Division officials at the Dominion Rust Research Laboratory, Winnipeg. Highly resistant to stem rust and leaf rust as well as covered smut. Moderately susceptible to loose smut but relatively resistant to black chaff. Ripens almost as early as Reward at most points. Heads beardless, kernels rather large with open crease which tends to affect weight per bushel adversely. A close competitor of Thatcher from the standpoint of yield and strength of straw. Baking quality equal if not superior to Marquis. First distributed to farmers in Western Canada in the spring of 1939.

RENOWN.—A sister of Regent produced at the Rust Research Laboratory, Winnipeg, and introduced to western farmers in the spring of 1937. Highly resistant to stem rust and covered smut; moderately resistant to loose smut, black chaff and leaf rust. A selection, designated 716.6 and distributed as foundation seed in the spring of 1939, is definitely superior to the original variety in resistance to leaf rust and in flour colour. Renown is more resistant than Regent to leaf rust, loose smut and black chaff. It usually ripens about the same time as Thatcher and therefore a little later than Regent. General shape and size of head fairly similar to that of Marquis but spikelets more inclined to be irregular in arrangement. Kernels of Reward type, weighing slightly more than Marquis. Straw strength essentially the same as Marquis but length slightly less. Yields as well as Marquis in most sections under normal conditions but much better when rust is bad. Usually yields less than Thatcher except where leaf rust is serious. Baking quality satisfactory.

THATCHER.—Produced from a cross made in 1921 at the Minnesota Agricultural Experiment Station between (Marquis × Iumillo) × (Marquis × Kanred). Resistant to most forms of black stem rust in the field but susceptible to covered smut and leaf rust. Highly resistant to loose smut and black chaff. Ripens with Renown and therefore a little earlier than Marquis. The head resembles Marquis fairly closely but is somewhat shorter and denser. It also has a tendency to be slightly crooked or “twisted.” Kernels are red and hard but smaller than Marquis and usually somewhat dull in colour; bleaches readily under adverse weather conditions. In yield, Thatcher occupies a foremost place among the rust-resistant varieties in Western Canada, except where leaf rust is prevalent. In the East, Thatcher is excelled in yield by Coronation and Regent. Susceptibility to leaf rust and bleaching are the chief defects of Thatcher. In baking quality, Thatcher is universally accepted. Distributed in Western Canada first in the spring of 1936.

Durum Wheats

GOOSE.—A trade name commonly applied to durum wheats in general, although the wheat grown under this name appears to be practically identical with the variety known as Arnautka. It resembles Kubanka fairly closely although the heads are rather longer and more open.

KUBANKA OTTAWA 37.—A pure line selection made at Ottawa from Kubanka (Washington No. 5639), a variety with smooth chaff having a slightly reddish tinge. Kernels amber coloured, very large and very hard; straw long and generally below average in strength. Good yields are often obtained in some years. The semolina from this variety is valued highly for the manufacture of macaroni.

MINDUM.—A selection from a common wheat known as Hedgerow, made at University Farm, St. Paul, Minnesota, almost 40 years ago. It is very similar to Goose except that it is slightly earlier and is more resistant to stem rust. This variety is now the leading durum variety in Western Canada.

Winter Wheat

DAWSON'S GOLDEN CHAFF.—Originating from a single plant selected by Robert Dawson of Paris, Ontario, in 1881, in a field of Clawson wheat. Head bald and slightly tapering; chaff smooth and red; tip awns few; grain white and usually soft or starchy in appearance; straw yellow and very strong. Most widely adapted and most highly recommended for practically all sections of Ontario where winter wheat is grown.

EGYPTIAN AMBER.—An old variety originating in the United States and classified under the general variety name "Fulcaster." Head bearded, chaff white and smooth; straw of medium strength and of purplish tinge; grain red and usually soft or starchy; winter hardy and a good yielder. Similar to the type growing under various names or mixed with a somewhat similar variety called Nigger, in Kent and other bordering counties in southwestern Ontario. Considered by some farmers to be more suitable in this area than Dawson's Golden Chaff because of its greater resistance to sprouting, rust and winter killing.

JUNIOR #6.—Head bald and inclined to be broad at tip; chaff red and smooth; straw strong and purple; grain white and soft in texture. This variety came from New York State where it is grown extensively. It is a good yielder and favoured by some growers who cater to mills producing a special soft wheat flour.

JONES' FIFE.—Head bald and slightly tapering; chaff white and hairy or pubescent; straw strong and yellow; grain red and soft in texture. It is highly productive and grown to some extent in British Columbia.

KHARKOV 22 M.C.—A selection from the old variety Kharkov made at Macdonald College in 1912. Head bearded and tapering; chaff white and smooth; straw medium strong and yellow; grain red and usually hard. It is very winter hardy. Grown at present in southern Alberta.

O.A.C. 104.—Head bald; chaff white and smooth; tip awns of medium length; grain white and usually soft but inclined to be more vitreous in appearance than Dawson's; straw yellow, long and medium strong to strong. This variety is the result of a cross between Dawson's Golden Chaff and Bulgarian made by the Ontario Agricultural College.

RIDIT.—A cross between Turkey Red and Florence made at the Agricultural Experimental Station, Pullman, Washington. Head bald and slightly tapering; chaff white and smooth; straw medium strong and yellow; grain red and usually hard in texture. Owing to its smut (bunt) resistance it has found favour in some parts of British Columbia.

TURKEY RED.—Similar to Kharkov 22 M.C. in appearance but not quite as winter hardy. Grown to some extent in Alberta.

SUN.—Originated at Plant Breeding Station at Svalöf, Sweden. Head bald, dense and inclined to be square at the tip; chaff white and smooth; straw very strong and yellow; grain red and soft in texture. Owing to its exceptionally strong straw and high yield, it finds favour in parts of British Columbia, especially on Vancouver Island. Not sufficiently winter hardy for other sections of Canada.

Oats

I. Varieties of recent introduction

VANGUARD.—Developed at the Dominion Rust Research Laboratory, Winnipeg, Man., from a cross between the varieties Hajira and Banner. Vanguard is highly resistant to stem rust but is susceptible to leaf rust and

moderately so to both loose and covered smut. The grain is white and moderately low in percentage hull; ripens 3 to 4 days earlier than Banner; straw of medium length and quite strong; kernel size similar to that of Banner. This variety is high yielding and is recommended for the stem rust areas of Manitoba and Saskatchewan, as well as those areas of Eastern Canada subject to stem rust damage.

ERBAN.—Produced at the Ontario Agricultural College from a cross between Early Ripe and Banner. Erban resists the forms of leaf rust prevalent in Eastern Canada but not those commonly found in the Prairie Provinces. It is highly resistant to the two oat smuts but is susceptible to stem rust. The grain is white and moderately low in percentage hull; ripens, as a rule, a little earlier than Vanguard; straw of medium length and strength; kernel is relatively large. Erban is a high yielding variety and is recommended in those areas of Eastern Canada where leaf rust is prevalent.

MABEL.—Developed at Macdonald College, Que., from a cross between O.A.C. 72 (M.C. 214) and Early Ripe (M.C. 213). Mabel is moderately resistant to leaf rust in Eastern Canada, carries some resistance to covered smut but is susceptible to stem rust. The grain is of good size and is slightly tinged with brown; compares closely with Alaska and Cartier in per cent hull and in days required to ripen; straw is of medium length and strength. Mabel has proved high yielding in comparison with Alaska and Cartier, particularly in those districts where earliness and leaf rust are important factors.

EAGLE.—The result of a cross between Victory and Von Lochow's Yellow made at the Swedish Plant Breeding Station, Svalöf. Introduced by the Cereal Division for trial in Canada in 1932. Grain very much of the Victory type, but straw is shorter and stronger; maturity and yielding ability much the same as Victory although somewhat superior to the latter in some districts, notably central Alberta and British Columbia. Eagle is susceptible to both of the oat rusts and to the smuts.

LASALLE.—Selected from a cross between Siberian 2107 and Joannette 1207 at Macdonald College, Que. This variety is similar to Banner in maturity and length of straw, but considerably lower in hull percentage. The latter gives Lasalle an advantage over Banner under Quebec conditions from the standpoint of kernel yield per acre. Lasalle is susceptible to the oat rusts but is somewhat resistant to the smuts. This variety is recommended in the Province of Quebec as being superior to Banner in the districts where the latter variety has become widely grown.

II. Old established varieties

The following varieties include the best of the older sorts grown in certain parts of Canada. Because of their susceptibility to the rusts, however, they are rapidly losing popularity in favour of more recently introduced, rust-resistant varieties.

ALASKA.—Introduced into Canada in 1900 from the United States. An excellent early variety of particularly high quality, carrying only about 20 per cent hull; has relatively long, strong straw, tillering rather sparsely.

BANNER.—A medium late variety introduced from the United States by the Ontario Agricultural College in 1890. Since that time many strains of this variety have been developed, of which "Banner Ottawa 49" and Banner M.C. 44 have proved among the best.

This variety produces straw of good length and fair strength. It is also a good yielder, and being widely adapted to Canadian conditions, has been one of the most popular varieties in this country for many years.

CARTIER.—A production of Macdonald College, Quebec, the result of a cross between Alaska and Early Triumph. This variety is similar to Alaska in maturity but has a plumper kernel as a rule. It has been widely distributed in the Province of Quebec, and since it yields slightly better than Alaska at many points, has replaced the latter variety as the standard early oat for Eastern Canada to a considerable extent.

GOPHER.—Obtained as a selection from the variety Sixty Day at the Minnesota Experiment Station. It is early maturing with short, stiff straw. In Western Canada, it has yielded exceptionally well and has become the standard early variety for that section of the country; not recommended for poor soils or dry areas on account of its short straw.

LEGACY.—A variety produced by the Cereal Division, Central Experimental Farm, Ottawa, from a cross between Banner and Eighty Day. It is about one week earlier ripening and a little shorter and stronger in the straw than Banner.

LAUREL (HULLESS).—A cross made by the Cereal Division between Banner × Chinese Hulless. Laurel is medium early maturing, has strong straw of good length and produces a fair yield. Highly regarded as a feed for young animals on account of low fibre content.

O.A.C. 72.—A selection from Siberian made by the Ontario Agricultural College. On the average, it is a few days later than Banner and has slightly longer and weaker straw, especially when grown on the heavier soils. On the lighter soils of Ontario, however, and where the season is long, this variety has been one of the best yielding sorts.

O.A.C. 144.—A selection out of O.A.C. 72 made by the Ontario Agricultural College. This variety is tall, medium late maturing, has good strength of straw, and has done well on the heavier soils of southwestern Ontario; highly resistant to covered smut.

O.A.C. 3.—A selection out of Daubeney made at the Ontario Agricultural College in 1903. This variety is in the Alaska maturity class and an excellent quality oat. It is a little shorter in the straw than Alaska and quite strong; not resistant to the rusts or smuts.

VICTORY.—A medium late maturing variety of Swedish origin, producing straw of good length and strength. This variety is widely adapted to the soils and climate of Canada, occupying, in fact, a foremost place from the standpoint of yield. The grain is medium short and has proved an excellent exhibition variety.

Barley

I. Varieties acceptable for malting

O.A.C. 21.—A six-rowed, rough-awned variety selected from barley of Asiatic origin by the Ontario Agricultural College. This variety is medium early and has straw of fair length but inclined to be somewhat weak and brittle. It gives fair yields under diverse conditions and is commonly regarded at present as the standard malting barley of Canada.

MENSURY OTTAWA 60.—A six-rowed, rough-awned variety selected by the Cereal Division from the same Asiatic barley as was O.A.C. 21. Very similar to O.A.C. 21 but is somewhat stronger in straw and has a better neck strength.

GARTON'S.—A six-rowed rough-awned variety that has been giving a good account of itself in parts of Manitoba, notably on the Portage Plains. The variety is very weak in the straw but is fairly resistant to stem rust, yields well and usually produces a relatively plump berry.

OLLI.—A very early, rough-awned, six-rowed variety introduced into Canada from Finland. The straw is usually short and the berry small, for which reasons it is not recommended for dry areas. It gives best satisfaction in the more northern districts, especially in northern Alberta and the Peace River district.

II. Varieties acceptable for pearling or malting

CHARLOTTETOWN 80.—A selection made from Old Island Two Row at the Dominion Experimental Station at Charlottetown, P.E.I. It is a Chevalier type of medium to late maturity with a long, fairly strong straw for a barley of this type. The heads are medium in length, the awns having a tendency to drop off at harvest time. Under Maritime conditions for which this variety seems particularly adapted, the yields are relatively high.

HANNCHEN.—A medium early, two-rowed, Chevalier type of barley of Swedish origin, producing straw of only fair length and strength. It has given relatively high yields in certain parts of Western Canada, but more especially in Saskatchewan.

III. Varieties not acceptable for malting

BYNG.—A high yielding, six-rowed, smooth-awned variety produced from a cross, (Michigan 31604 \times Common six-rowed 4307 M.C.) \times Mensury 32 M.C., made at Macdonald College, Quebec. This variety has a tendency to be weak in the straw and is not as smooth awned as the other smooth-awned varieties. It matures a day or so later than O.A.C. 21.

NEWAL.—A medium early, six-rowed, smooth-awned barley produced from a cross, (Manchuria \times Lion) \times O.A.C. 21, made by the University of Alberta. This variety yields well in many districts, but especially in Alberta. It usually matures 2 or 3 days ahead of O.A.C. 21. It has fair strength of straw, but seems more susceptible to loose smut than most other varieties commonly grown.

NOBARB.—One of the smoothest of the six-rowed, smooth-awned varieties of barley; originated from a cross of O.A.C. 21 \times Lion made at the Ontario Agricultural College. Nobarb is high yielding, matures somewhat later than O.A.C. 21, has shorter straw but of about the same strength.

PEATLAND.—A strong strawed, rough-awned, six-rowed variety, moderately resistant to rust, but a rather disappointing yielder except under conditions to which it is especially adapted. The kernels are small but the bushel weight is high. This variety was accepted for malting but with the close of the 1940 season, it will be debarred from the malting grades.

PLUSH.—A new, smooth-awned, six-rowed variety obtained from a cross of Velvet \times Mensury Ottawa 60 made at the Dominion Experimental Farm, Brandon, Man. This variety has proved a high yielder of grain of good size and plumpness. The straw is of good length and fair strength. First distributed in Manitoba and Saskatchewan in 1940. Will probably displace such varieties as Wisconsin Pedigree 38.

PONTIAC.—A selection from Mensury made at Macdonald College. A six-rowed, rough-awned variety having many of the characteristics of Mensury but is not considered the equal of the latter variety or of O.A.C. 21 in malting quality. It, therefore, is not eligible for the malting grades.

PROSPECT.—A new smooth-awned, six-rowed barley originating from a natural cross at the Dominion Experimental Station, Swift Current, Sask. This variety is being distributed for the first time in 1940 but is recommended chiefly for southwestern Saskatchewan. It has fair length and strength of straw and matures 4 or 5 days ahead of O.A.C. 21 in this area.

REGAL.—Produced at the University of Minnesota and introduced by the University of Saskatchewan. It is a high yielding, six-rowed, smooth-awned barley with good length and strength of straw. Recommended for all barley zones in Saskatchewan.

REX.—A two-rowed, smooth-awned variety obtained from a cross of Velvet \times Hannchen made at the University of Saskatchewan. About the equal of Regal in maturity, neck strength and straw length. Rex is recommended for all variety zones in Saskatchewan except 3 D, 4 A and 4 B.

TREBI.—A six-rowed, rough-awned variety, of Asiatic origin. A high yielding variety, but the grain is usually rather coarse, and the straw short and inclined to be weak. Unexcelled for fall seeding on Vancouver Island.

VELVET.—A smooth-awned, six-rowed barley introduced from the Minnesota Experiment Station. This variety has given good yields in Eastern Ontario and other sections of Eastern Canada but has not done so well in the Prairie Provinces.

WISCONSIN PEDIGREE 38.—Introduced from Wisconsin. A tall but rather weak strawed, six-rowed, smooth-awned barley which has become rather popular in Manitoba as a feed barley. Its long lax head is subject to shattering before harvesting. This variety will probably be replaced in Manitoba by Plush.

Field Peas

ARTHUR OTTAWA 18.—Produced from a cross of Mummy \times Multiplier made at Ottawa. A variety with medium early maturity, vines coarse and of medium length; flowers borne at the end of the vine. This is the most commonly grown variety for the pea soup trade. The yields are above the average under varying conditions which accounts for the popularity of this variety over a wide range of conditions. The seeds are of medium size and creamy white in colour.

CANADIAN BEAUTY.—A late maturing variety; grain creamy white in colour and very large, necessitating care in handling and threshing; vine of good length; yield very similar to that of Arthur. The demand for this variety is limited.

CHANCELLOR OTTAWA 26.—A selection from an old English commercial variety called Chancellor. Is an early variety with long, slender vines, the flowers being borne in the axils of the leaves. The seeds are small and creamy in colour; yield usually higher than that of Arthur.

EARLY BLUE OTTAWA 21.—A selection from Rough English Marrowfat. A very early maturing, high yielding variety; vines normally very short; seeds blue and of medium size, slightly wrinkled.

MACKAY OTTAWA 25.—A high yielding variety producing very long vines. The seeds are distinguished by a black "eye" or hilum and are, therefore, not wanted by the soup trade. The maturity is late. This variety was produced at Ottawa from a cross of Mummy \times Black-eyed Marrowfat.

O.A.C. 181.—Produced at the Ontario Agricultural College from a cross between Prussian Blue \times White Wonder. It ripens with Chancellor and produces medium to small white seeds. The flowers are white and the vines are medium to short.

STIRLING.—Very similar in most respects to Canadian Beauty. The yields usually are not high. Popular in parts of British Columbia.

Flax (Seed Types)

BISON.—A wilt-resistant production of the North Dakota Agricultural Experiment Station and now widely grown in Western Canada. Produces plants of good height with dark blue, medium-sized flowers and brown, fairly large and uniform seeds. The latter have a high oil content but the quality of oil is only fair. In maturity it is medium to late.

BUDA.—Another introduction from North Dakota which has been grown to some extent in Canada. This is a blue flowering variety, resistant to wilt, about the same height as Bison, but maturing a few days earlier. The seed is brown, very small and plump.

REDWING.—This wilt-resistant variety introduced from the Minnesota Agricultural Experiment Station, has a light blue blossom and small brown seeds. Compared with Bison and Royal, it matures several days earlier and produces a shorter and stiffer straw. It is quite productive, producing seed with a lower oil yield than Bison but higher in quality. Where early maturity is important, this variety is recommended.

ROYAL.—A selection from Crown made by the University of Saskatchewan. It resembles the latter variety in plant characters but is resistant to wilt. It is characterized by a blue blossom, medium sized, brown seed with a yellow patch over the large end. It is recommended for those districts where an earlier variety is not required.

Field Beans

BURBANK.—An early maturing white pea bean, recommended for trial in districts where early maturity is essential. It is somewhat susceptible to mosaic and anthracnose.

GOHN'S RAINY RIVER.—An early maturing white pea bean resembling Burbank in plant characters and productivity. It produces a very uniform attractive sample.

NAVY OTTAWA 711.—A pure line selection of medium sized white beans obtained from the commercial Navy bean. This variety ripens early but is somewhat susceptible to mosaic and anthracnose.

NORWEGIAN OTTAWA 710.—A yellowish-brown bean of medium size and elongated shape selected from a variety received from Norway. It is a very early maturing variety, and considering its earliness, is very productive. The plants are short and generally free from disease. It is recommended for districts where the summer season is very short.

ROBUST.—A pure line selection developed by the Michigan Experiment Station. This variety is quite resistant to mosaic and anthracnose, and is a consistently good yielder. Being one of the later maturing varieties, it cannot be recommended, however, for districts where early autumn frosts are a hazard. It is a small, white pea type.

YELLOW EYE.—A variety of the marrowfat type, preferred by many for its quality but in general not as productive as the other types.

Buckwheat

JAPANESE.—Produces on the average better than Silverhull. The seed is large, smooth, and dark in colour.

RYE OR ROUGH BUCKWHEAT.—A very productive type maturing a few days earlier than Silverhull or Japanese. The hull of the seed is rough and grey in colour and the seed quite small.

SILVERHULL.—Popular with some on account of the bright grey colour of the seed.

VARIETIES RECOMMENDED

The names are arranged in alphabetical order. A careful study of the descriptions given should be made before deciding what varieties to sow. For further information it is suggested that the Superintendent of the nearest Experimental Station or Agricultural College be communicated with.

Maritime Provinces

Spring Wheat	—Coronation, Garnet, Regent
Oats	—Alaska, Banner, Erban, Victory
Barley	—Charlottetown 80, O.A.C. 21, Olli
Field Peas	—Arthur, Chancellor, Early Blue
Field Beans	—Burbank, Navy, Norwegian

Quebec

Spring Wheat	—Coronation, Garnet
Oats	—Banner, Cartier, Mabel, Lasalle, Vanguard
Barley	—Charlottetown 80, O.A.C. 21
Field Peas	—Arthur, Chancellor, Early Blue, O.A.C. 181
Field Beans	—Navy, Norwegian, Robust, Yellow Eye

Ontario

Spring Wheat	—Coronation, Goose (durum), Mindum (durum)
Winter Wheat	—Dawson's Golden Chaff, Junior #6, O.A.C. 104, Egyptian Amber
Oats	—Alaska, Banner, Cartier, Erban, O.A.C. 72, O.A.C. 144, O.A.C. 3, Vanguard, Victory
Barley	—Nobarb, O.A.C. 21, Peatland, Velvet, Byng
Field Peas	—Arthur, Chancellor, O.A.C. 181
Field Beans	—Navy, Norwegian, Robust, Yellow Eye

Manitoba

Spring Wheat	—Mindum (durum), Regent, Renown, Thatcher
Oats	—Gopher, Laurel (hulless), Vanguard
Barley	—Mensury, O.A.C. 21, Plush, Wisconsin Pedigree 38
Field Peas	—Chancellor
Field Beans	—Burbank, Norwegian
Flax for seed	—Bison, Redwing, Royal

Saskatchewan*

Spring Wheat	—Apex, Canus, Regent, Reliance, Renown, Reward, Thatcher
Oats	—Banner, Gopher, Laurel (hulless), Vanguard, Victory
Barley	—Newal, Olli, O.A.C. 21, Plush, Prospect, Regal, Rex
Field Peas	—Chancellor
Field Beans	—Burbank, Navy, Norwegian
Flax for seed	—Bison, Redwing, Royal

Alberta†

Spring Wheat‡	—Canus, Garnet, Marquis, Red Bobs Selections (Early Triumph, Supreme, Red Bobs 222), Reward, Thatcher
Winter Wheat	—Kharkov 22 M.C., Turkey Red
Oats	—Banner, Eagle, Legacy, Victory
Barley	—Newal, Olli, O.A.C. 21, Trebi
Field Peas	—Chancellor, Early Blue
Field Beans	—Burbank, Norwegian
Flax for seed	—Bison, Redwing, Royal

British Columbia

In this province the climatic variations are extreme—greater than in any other province of the Dominion. Every variety in the following list is desirable for some localities, but may be quite unsuited to others:—

Spring Wheat	—Garnet Ottawa 652, Marquis Ottawa 15, Red Bobs Selections (Early Triumph, Supreme, Red Bobs 222), Reward Ottawa 928
Winter Wheat	—Jones' Fife, Kharkov 22 M.C., Redit, Sun
Oats	—Eagle, Erban, Gopher, Vanguard, Victory
Barley	—O.A.C. 21, Trebi (especially for fall sowing on Vancouver Island)
Field Peas	—Arthur Ottawa 18, Chancellor Ottawa 26, Golden Vine, Mackay Ottawa 25, O.A.C. 181
Field Beans	—Burbank, Navy Ottawa 711, Norwegian Ottawa 710

* In Saskatchewan, a Dominion-Provincial Variety Committee has defined certain cereal variety zones on the basis of soil and climatic environment and has recommended certain varieties for each zone. Saskatchewan farmers are strongly advised to secure a copy of these recommendations annually. The Chairman of the Committee is the Professor of Field Husbandry, University of Saskatchewan, Saskatoon.

† As in Saskatchewan, a Dominion-Provincial Committee for Alberta meets annually and revises the list of varieties recommended for each of a number of variety zones. Alberta farmers are advised to obtain the latest recommendations of this Committee for their particular zone. They may be had from the Dominion Experimental Stations at Lacombe and Lethbridge, or from the Field Husbandry Dept., University of Alberta, Edmonton.

‡ Regent wheat has done well in Alberta but has not been tested sufficiently long to make definite recommendations.

