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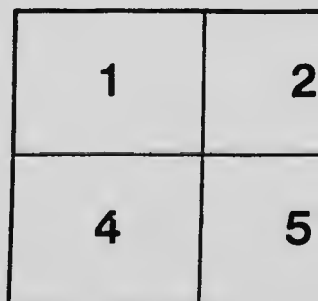
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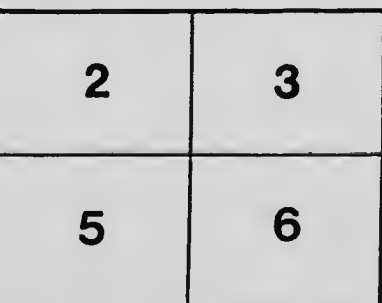
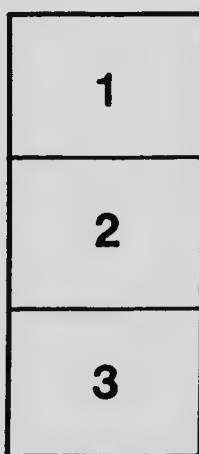
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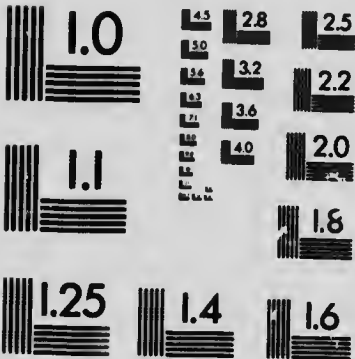
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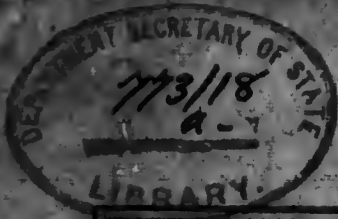
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The  
Canadian Seed Growers'  
Association  
and its Work

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Headquarters of the Association: Canadian Building, Ottawa.

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Jas. W. Robertson,  
*President.*

L. H. Newman,  
*Secretary-Treas.*

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# The Canadian Seed Growers' Association and its work.

**Origin and Chief Aim:** The C. S. G. A. is an outgrowth of what was known as the Macdonald Seed Grain Competition, a competition in seed growing which began in 1900 and continued for three years, extending over the entire Dominion and including in all about 1,500 boy and girl competitors. The primary object of the Association is to stimulate a greater interest in the selection and production of high-class seeds of known origin on the farms of Canada. This object is sought to be attained by enlisting as members farmers who desire to make a specialty of growing, on their own farms, high-class seed of one or more kinds of crops, under expert direction.

**Organization:** The officers of the Association consist of a President, three Vice-Presidents, a Secretary-Treasurer, an Executive Council and a Board of Directors. The Directors are chosen from the different Provinces in Canada, so that the Association is in reality an inter-provincial organization.

**Headquarters:** The Headquarters of the Association are located in the Canadian Building, Ottawa, Ont.

**Membership:** Any person of good repute, resident in Canada, is eligible for membership, providing he conforms to the by-laws and regulations of the Association. No membership fee is required at present, the only charge made by the Association being a small fee for inspecting and sealing in sacks seed offered for sale by members. Applications for admittance to membership should be addressed to the Secretary of the C. S. G. A., Canadian Building, Ottawa, Ont.

**The relation of the work of the C. S. G. A. to that of the Experimental Farms and Dominion Seed Branch:** The work of the Association may be said to be an extension of that of the Experimental Farms and of the Dominion Seed Branch. The Experimental Farms conduct work in original research with field crops, test different varieties obtained from various parts of the world, and endeavour to produce, through a process of breeding and selection, superior strains for use on Canadian farms. They are not, however, in a position to control the multiplication of these improved sorts in a large way to the best advantage. This phase of the work can best be done by a separate and independent organization. It will easily be understood that where seed is distributed among farmers in small quantities, it may very soon lose its identity unless some measure be adopted to avoid this. The conservation of all that is good and useful in improved stocks, together with their judicious multiplication and distribution on an extensive scale and under efficient control, is therefore an important function of the Association.

## SYSTEM OF SEED GROWING ADOPTED BY THE C. S. G. A.

**Choice of Variety:** The new beginner who aims to produce "Registered Seed" each year should first choose with special care the variety with which to operate. There are many different varieties and these often differ very widely in practical qualities. Fortunately varieties are being tested on a large scale and with great care at our various Experimental Stations, so that it becomes a relatively easy matter for the individual farmer to decide upon the variety he should grow. Sometimes, however, the variety which stands at the head of the list at an Experimental Station is not the most suitable for the conditions on a given farm. To be quite sure that a suitable variety is secured, the grower is advised to test

two or three of the most highly recommended sorts for a couple of years, after which time he may safely make his choice.

**Securing the Foundation Stock:** Having decided upon the variety, the grower should procure a quantity of Registered Seed of this variety as his foundation stock. This may sometimes be had directly from an Experimental Station and sometimes from another member of the Association.

**Production of Elite Stock Seed:** Having secured suitable foundation stock, the grower should plan to operate so that the succeeding crops may be entitled to registration. Since no seed can be accepted for registration which is more than three generations descended from what is called "Elite Stock seed" and since first generation Registered seed is most in demand, a supply of Elite Stock seed should be produced each year.

Elite Stock Seed is therefore the basis or starting point of Registered Seed. From it Registered Seed is produced. It represents the highest degree of perfection in seed and consequently special care is required in its production. It is defined as seed which is pure as to variety and which is suitable for multiplication and distribution. It is produced usually in limited quantities. When produced by a member of the Association, the area bearing it is known as a "Hand Selected Seed Plot." The seed which is used to sow this plot is obtained from heads, ears, pods, or tubers, as the case may be, which are selected by hand from a mature crop. This selection in the case of the new beginner, is made from his foundation field; in the case of the regular member, the selection should usually be made from a regular Hand-Selected seed plot.



"Hand-selected Seed Plot" of wheat in foreground, producing Elite Stock Seed; Multiplying Field in background sown with Elite Stock Seed and producing first generation; "Registered Seed."

The details of the methods of producing Elite Stock Seed differ somewhat according to the class of plant worked with. Thus four main classes of agricultural plants, as regards methods of reproduction, may be distinguished as follows:

(a) Those in which the seed is normally produced by the "self-fertilization" of the flower; e.g. wheat, oats, barley, peas and beans.



(b) Those in which "natural cross-fertilization" between individual plants is the common rule; e.g., corn, rye, and most grasses.

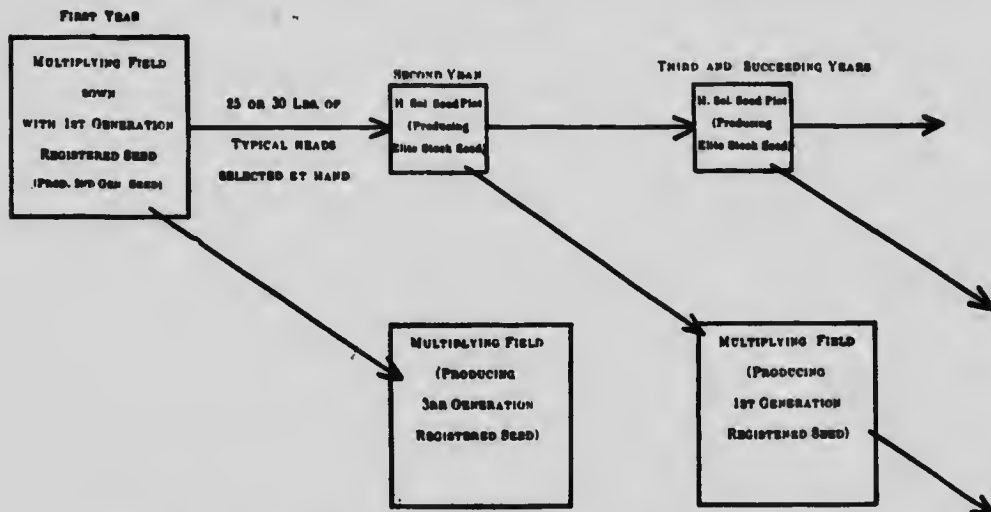
(c) Those in which "cross-fertilization between different individuals is obligatory"; e.g., Red Clover.

(d) Those which are reproduced in a "vegetative way"; e.g., the potato.

The process of producing "Elite Stock Seed" in the case of each of these classes of plant is outlined in detail in a special booklet entitled "The Canadian Seed Growers' Association and its work," large edition.\* In each case, a selection of heads, ears or tubers, as the case may be, is made each year, and the cleaned seed obtained as the result of this selection is sown the following year on a "Hand Selected Seed Plot" to produce seed of the above class.

**Multiplication of "Elite Stock Seed":** In the multiplication of "Elite Stock Seed," no work is required other than that which is done by any good farmer. The point of greatest importance is the maintaining of purity, and to ensure this, ordinary precautions must be observed. The progeny of "Elite Stock Seed," up to and including three generations descended therefrom, is known as "Registered Seed." Eligibility for registration as "Registered Seed" depends also upon the purity, quality and vitality of the sample. The standards of quality and purity for "Registered Seed" are given in the booklet above mentioned. Where seed is accepted for registration, certificates are issued to the grower, indicating that his seed has been officially accepted and may be offered for sale as "Registered Seed."

#### Diagram Showing System of Obtaining and Propagating "Elite Stock Seed."



#### The Inspection and Sealing of Sacks of Registered Seed.

Seed which has qualified for registration as Registered Seed and which is offered for sale by members, is inspected in the sack by an officer approved by the Association. This officer carefully examines the said seed, which, if found to correspond in all essential particulars with the official sample sent in for analysis, receives the Association's official stamp of approval in the shape of a metallic seal. This seal bears the name of the Association and is attached to the sack in

\* This booklet may be had free on application to the Association, Canadian Building, Ottawa, Ont.

such a position as to render it impossible to open the latter without first removing the seal. In addition to the above mentioned seal, a special Tag is attached to each sack which bears the name of the variety, the number of the certificate issued for the seed and the certificate of the grower. The information contained on this Tag is verified by the Inspector, who, in witness thereof, subscribes his signature.

The standards of quality and purity fixed for Registered Seed are indicated on pages 38-40 of the special booklet already mentioned. Briefly speaking, these standards require that the seed germinates high and that it be as nearly pure as it is possible to get it.

While certificates may be issued to growers for seed which has been grown according to regulations and which, judging from the official analysis of the sample complies with all the requirements of Registered Seed, yet the final examination of sacks may reveal defects which may cause the Inspector to reject either a part or all of a given lot and refuse to attach the seal of the Association to the sacks or in any way to give the seed contained therein any official recognition whatsoever. As explained in Section 8, under "Directions to Purchasers" (see below), no seed should be accepted as "Registered Seed" by purchasers unless each sack is sealed with the official seal of the Association. Exceptions to this rule should be made only on special advice from the Secretary.

### Directions to Purchasers.

1. Prospective purchasers should communicate direct with the growers, although if they prefer, orders may be forwarded through the office of the Association at Ottawa.
2. In ordering from French-speaking growers, complications may be avoided by ordering through the office of the Association.
3. Since most growers put up their seed in two-bushel sacks, the number of bushels ordered should be a multiple of 2.
4. In ordering, give your *name, post-office address and nearest railway station and express office* in full.
5. All orders should be accompanied by money orders, express orders or marked cheques. All cheques should be made payable at par. If postal notes or money orders are sent to headquarters for the purchase of seed, they should include exchange on new money orders.
6. Persons who, as new members of the Association, wish to take advantage of registered seed as foundation stock, should communicate as soon as convenient with the Secretary of the Association, specifying the certificate number given on the Tags.
7. All Tags attached to sacks purchased should be carefully preserved by the purchaser for reference in case of dispute as to the origin or identity of the seed in question.
8. No seed should be accepted as *Registered Seed* by purchasers unless each sack is sealed with the official seal of the Association.
9. The prices quoted in the annual "Price List" are retail. When selling wholesale or in large quantities, better terms may often be expected.

### Description of Some of the More Important Varieties Grown.

#### Wheat.

#### *MARQUIS.*

This variety is one of several selections made by Dr. C. E. Saunders in 1903, from an unfixed variety which was descended from a cross made by Dr. A. P. Saunders, between Hard Red Calcutta and Red Fife. The kernels of Marquis are rather dark red, hard, and of about medium size, but rather short. The

heads are of medium length, pointed and beardless, but often having a very few short awns at the tip. The grain is held tightly in the head. The chaff is yellowish and smooth. The straw is stiff and rather below medium length.

Marquis ripens usually from about 4 to 12 days before Red Fife, and is remarkably productive, especially in Saskatchewan, where it generally yields from 10 to 50 per cent. more than Red Fife. It has excellent milling qualities, and the flour produced from it is of very good colour and high baking strength. For five years in succession, the highest award in international competitions in America, for the best hard wheat, has been won by Marquis.

#### *RED FIFE.*

This variety was introduced into Canada about 1842 by David Fife, of the County of Peterborough, Ontario, who had procured a quantity of wheat from a cargo direct from Dantzic, Northern Germany. This wheat came to hand in the spring, when it was sown by Mr. Fife, who did not know whether it was a spring or an autumn wheat. It proved to be an autumn variety, as only three heads, which came apparently from one stalk, reached maturity. These were preserved and the seed sown in the following spring when it proved at harvest to be entirely free from rust although other varieties in the neighbourhood were badly rusted. The produce from this wheat was carefully preserved and propagated and the sort came to be known in Canada and the Northern United States by the names of Fife, Scotch and Glasgow. The kernels of this variety are slightly pale in color rather than dark red and are medium sized, but somewhat short. The variety is remarkable for its productiveness, high quality, uniformity, and for its power to adapt itself to a wide range of conditions of soil and climate. Some growers prefer Red Fife to Marquis for sowing on stubble land or in districts where the precipitation is specially low.

#### *WHITE FIFE.*

The exact origin of this sort is unknown, but it is generally believed to be a selection of an aberrant type of Red Fife. There is practically no difference between Red and White Fife, except in color, the latter having a pale yellow skin while the former has a red skin. The yield, date of maturity, milling and baking qualities of this wheat are practically the same as Red Fife.

#### *Oats.*

##### *BANNER.*

The panicle is of medium size but well supplied with upstanding productive branches. The spikelets are long with narrow glumes. The grain belongs to the long type with a somewhat drawn-out tip, but otherwise plump and well filled with a relatively thin hull. The degree of ripening is medium, while the straw is long and quite elastic. This sort ripens medium early or a few days later than six-rowed barley. As regards yield, this variety occupies a front place and is most in demand at present over Canada generally. It thrives in a great variety of soils.

##### *O. A. C. No. 72 OATS.*

It is believed that there is a great future for the O. A. C. No. 72 variety of oats in Ontario. The crop grows to a good height, the plants usually stand up well, and the straw is abundant and of good quality. The head is spreading in its habit of growth and both the straw and the grain are of a pinkish-white appearance. The pinkish color of the crop is usually quite noticeable in the ripening grain in the field and generally shows more or less distinctly after the grain has been threshed. The oats are of good quality, having only about 27 per cent. of

hull, which is less than that of the Banner, less than Tartar King by about 7 or 8 per cent., and also less than most other varieties. The yield of both straw and grain per acre has been large in the comparative trials, both at the Agricultural College and in the co-operative experimental work throughout the Province. This new variety of oats was distributed for co-operative experiments in 1911 when it surpassed the Siberian, the Regenerated Abundance and the Lincoln, producing an average of five bushels per acre more than the last named variety. The *O. A. C. No. 72* oats were not used in the co-operative experiments in 1912 but in 1913 they surpassed each of the other three varieties by at least 8.8 bushels, in the average of 187 experiments. This sort is a selection from Siberian made by Prof. C. A. Zavitz, O. A. C., Guelph.

#### LIGOWO.

This oat possesses a grain of fine quality, being exceptionally large and plump with a relatively thin hull. The awn is usually coarse but falls off easily. The spikelets are inclined to be three-kernelled. This sort ripens somewhat earlier than Banner and therefore can often be cultivated to greater advantage where earlier maturing sorts are desired. The straw is of medium length and of fine, firm quality, thus rendering the sort eminently suited for cultivation on rich, moist, vegetable soils. On drier soils, the stand is liable to become too thin and the yield of both straw and grain lower. Under proper conditions, the yield of this sort is good, but only in very few places has it been found superior to Banner as a general oat.

#### ABUNDANCE.

This sort enjoys a high reputation in certain parts of Canada, especially in those districts where a relatively early variety is desired. The grain is of fine quality, being large and plump with a relatively thin hull. The panicle is comparatively large and rich, pyramid-like in contour, with upright, spreading branches. The spikelets are inclined to be three-kernelled, and rather broad. This sort usually ripens from 4 to 6 days before Banner, hence its popularity in certain districts as above mentioned. The straw is of good length and strength and of fair quality.

#### Barley.

#### *O. A. C. No. 21 BARLEY*

The O.A.C. No. 21 barley originated from a single plant selected from about ten thousand plants of the Mandscheuri barley which was grown in a nursery plot at the Agricultural College, Guelph, Ont., in 1903. It has a particularly good straw, the heads are six-rowed, and the grain usually weighs two or three pounds per measured bushel over the standard. Of all the strains and varieties of barley grown at the Agricultural College, the O.A.C. No. 21, has made the best record. It has also given better results than the Mandscheuri variety in yield of grain, in freedom from rust, and in both length and strength of straw, in the co-operative tests throughout Ontario. The grain is quite easily distinguished from that of the Mandscheuri barley in that it possesses a distinct shade of blue which can be readily seen on removing the hull.

#### MANCHURIAN.

This is a bearded six-rowed variety—a selection from Mensury, made by Dr. C. E. Saunders, C. E. Farm, Ottawa. It is more productive than the parent sort and produces better straw. It is also much more uniform in character, but it is a trifle later in ripening. The kernels of Manchurian are of a yellowish color.

### Arthur Pease.

This variety is derived from a cross between *Mummy* and *Multiplier*, made by Dr. A. P. Saunders. The selected strain which is now grown under the name of "Arthur Selected" is not very materially different from the parent sort. The peas are of medium, or above medium size, round and yellowish in color. The pods are usually small but very numerous, and borne chiefly towards the tips of the stems.

It is early in ripening, appearing in fact to be the earliest yellow field pea available to the public at the present time. It is remarkably productive, although the official tests do not always show this, as these peas in the green state are very attractive to the public, and the early ripening habit of this variety causes greater loss in harvesting than occurs with other sorts when the harvest is postponed until the late varieties are ready.

For cooking in soup the Arthur pea is very good.



