

GRADING OF CANADIAN RAPESEED

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First of all I think I should tell you something about the practical side of our rapeseed handling system and our grade standards which provide for export quality control.

When rapeseed was a new and, in fact, a very minor crop in western Canada about 20 years ago, we had only two grades to segregate differences in seed quality. They were Canada Rapeseed and Sample Canada Rapeseed. At that time the handling of the crop was more closely related to a specialty seed than it is today and the cleaning and dockage assessment were in fact quite unrelated to the actual cleaning capabilities of large terminal elevators. As the size and the importance of the crop grew, so also did demands from our farmers and from the grain trade, for changes in our system, and as a result in 1962 new grade standards were established through an amendment to the Canada Grain Act. These standards are still in effect and I think it might be useful to review their specifications to ensure an understanding of the factors included in these written definitions.

Although we have three statutory grades, No. 1, No. 2 and No. 3 Canada Rapeseed, virtually all rapeseed exported is shipped over certificate for No. 1 Canada Rapeseed grade and my comments with respect to the specifications of this grade apply equally to No. 2 and No. 3.

No. 1 grade has a minimum test weight requirement of 52 lbs. and all shipments must be equal or better than this minimum. Notwithstanding this fact, there is some indication now, through the introduction of newer varieties with improved oil content that an inverse relationship exists between test weight per bushel and oil content; that is to say that as oil content increases in otherwise sound rapeseed, the test weight tends to drop. In addition, there is some indication of an inverse relationship between test weight and seed size, with the larger seeded varieties tending to yield lower test weight results.

Under the heading of "Degree of soundness" the definition for No. 1 Canada Rapeseed states, "reasonably sound and of good

GRADES OF RAPESEED (Schedule I, Canada Grain Act)

Grade Name	Standard of Quality		Standard of Cleanness (see note)
	Minimum weight per measured bushel in lbs.	Degree of Soundness	
No. 1 Canada Rapeseed	52	Reasonably sound; cool and sweet; may contain not over 3% damaged seeds, including not over 0.1% heated. Of good natural colour.	May contain not more than 1% of other seeds that are conspicuous and that are not readily separable from Rapeseed, to be assessed as dockage.
No. 2 Canada Rapeseed	50	Cool and sweet; may contain not over 10% damaged seeds, including not over 0.2% heated.	May contain not more than 1.5% of other seeds that are conspicuous and that are not readily separable from Rapeseed, to be assessed as dockage.
No. 3 Canada Rapeseed	48	May contain not over 20% damaged seeds, including not over 0.5% heated. May have the natural odour associated with low quality seed, but shall not be distinctly sour, musty, rancid, not have any odour that would indicate serious deterioration or contamination.	May contain not more than 2% of other seeds that are conspicuous and that are not readily separable from Rapeseed, to be assessed as dockage.

NOTE: Assignment of rapeseed to any of the above grades shall not imply any guarantee with respect to content of other seeds that blend with rapeseed.

The percentage of "other seeds that are conspicuous and that are not readily separable" shall include weed seeds that do not blend with rapeseed and whole or broken kernels of other grains when these are not removable by means of appropriate sieves and other cleaning devices.

Dockage shall be assessed on rapeseed for foreign material that is readily separated from the mass by ordinary mechanical cleaning methods, including any small whole or broken rapeseed that is removed along with such foreign material, plus any other seeds, up to the limits established in the respective grades, that are conspicuous and that remain in samples after ordinary mechanical cleaning methods have been applied, these to be added together and expressed as a percentage of weight of the whole, except that a reasonable allowance may be made for broken rapeseed not to be assessed as dockage in commercially clean rapeseed when this can be attributed to attrition in the normal handling after cleaning.

natural colour." These factors, of course, apply strictly to the general quality appearance of a sample or a shipment, and the minimum level for these factors is established by a physical standard sample which is authorized each year for use as a guide by the Western Committee on Grain Standards. This grade may contain not more than 3% of damaged seeds which includes seeds that are distinctly damaged from any cause, such as distinctly shrunken or shrivelled as from frost, discoloured as from mould, rime or excessive weathering, and any seeds that have distinctly green endosperms. Within the 3% is included a maximum tolerance of 0.1% heat damaged. The determination for percentage of damaged seeds in a sample is based on a representative 10-gram portion from which visually damaged seeds are handpicked and weighed, and to which is added the percentage of distinctly green and/or heat damaged seeds counted and calculated on the basis of crushing 500 or 1000 seeds from the balance of the hand separation.

I should like to mention here that crushing 500 or 1000 seeds from a representative portion of the sample was adopted as a grading practice about four years ago because of the extreme difficulty there was in visually recognizing heat damaged seed and distinctly green seeds in the natural sample, and it was recognized that these two factors had a very important effect on oil quality. Our grain inspectors use an indented plastic seed counter, common masking tape and a small hand roller to facilitate the counting and crushing of the seed for examination.

As with other crops in western Canada, most rapeseed is purchased from producers at the country elevator by trucklot and settled for by the grain firm receiving it at the time of delivery. Where the farmer and the elevator manager cannot agree on grade and dockage, representative samples are submitted to our inspection service for official grading as a basis of settlement or adjustment. In most years only about 5% of rapeseed that is forwarded from country elevators to terminals does not qualify for No. 1 grade. Some of the rapeseed received into terminal elevators as No. 2, No. 3, or Rejected, or Sample grade, because of excessive content of inseparable weed seeds is specially cleaned and processed in the terminal elevators to the point where it can be blended into the average run of outward shipments. This practice has been good for our producers, our terminals, and our rapeseed customers, because through such special cleaning and treatment, more rapeseed qualifying for No. 1 grade has been marketed than would have been possible otherwise.

Dockage in rapeseed which is purchased by domestic crushers or shipped for export includes all foreign material that can be removed by use of approved sieves and controlled aspiration, plus all conspicuous foreign material that is handpicked from a representative sub-portion of the sample after appropriate screening. Dockage is expressed as a percentage by weight of the whole sample inspected and is intended to be calculated as a percentage deduction from the gross weight of each lot or consignment that is covered by our domestic or export certificate of grade. The fact that seed size varies considerably with the type and variety of rapeseed grown in western Canada, tends to complicate the assessment of dockage, and the commercial cleaning process, because it has not been possible to maintain a completely satisfactory segregation of the Polish and Argentine types through handling at country and terminal grain elevators.

Board regulations for all grains require shipments out of terminal elevators, and hence for export, to be commercially clean. Commercially clean in the case of rapeseed means containing not over 2.5% of dockage material. This level of freedom from foreign material was established by our Board to provide a reliable basis for trading in the marketplace, and at the same time not to impose too stringent a cleaning process upon our elevators. Shipments may only contain over 2.5% of dockage by special permit from our Board, which is predicated upon a guarantee of the exporter that the higher content of foreign material is acceptable to the buyer.

Here I would like also to draw your attention to the fact that a note appears at the bottom of the grade specification as follows: "Assignment of rapeseed to any of the above grades shall not imply any guarantee with respect to content of other seeds that blend with rapeseed." I mention this because it is important for any purchaser of Canadian rapeseed to know that wild mustard, for example is considered to be inconspicuous. In our system of grading rapeseed we disregard it, when wild mustard seed constitutes less than 5% by weight of a shipment, and when in excess of 5%, any lot or consignment would be assigned to Sample grade. As these limits are applied on the grading of all primary shipments moving from country elevator to terminal elevator, and only occasionally do primary shipments contain the maximum wild mustard seed permitted, we find the average content of wild mustard seed after cleaning and blending prior to export, to be in the range of 0.5% to 1%. A purchaser of Canadian rapeseed who is concerned with wild mustard seed content at these low levels should be advised to request a supplementary seed analysis certificate showing wild mustard seed content, which can be obtained and supplied by the

exporter subsequent to completion of export loading. In this connection all of our Canadian grain inspectors are required to be qualified as seed analysts for the purpose of identification of wild mustard and other inconspicuous seeds in rapeseed.

SAMPLING OF CARLOTS

I think it is worthwhile to point out the reasons why our grading and certification of rapeseed has been, despite some shortcomings an almost complete success. The success of any grading system established for quality control in bulk product marketing is mainly dependent on two factors:

1. Thorough and reliable sampling methods and controls;
2. Practical and consistent application of the grading standards.

These factors have been dominant in our inspection system where we have:

1. Thorough sampling by approved automatic mechanical equipment of all primary carlot shipments during intake, and of all outward shipments to cars or vessels during loading at all terminal elevator premises in Canada;
2. Centralized, single agency control over the judgements and methods employed in the day-to-day application of our standards.

CERTIFICATION

Our certificate finally covering the outward terminal, or any export shipment of rapeseed, states the grade and dockage assigned on the basis of a review and analysis of many partial lot samples taken during delivery to the carrier, and finally on the actual weighted composite sample representative of the total shipment. Throughout the loading process every possible control is exercised to ensure that all consequential portions of the cargo qualify for the grade assigned to the final composite and shown on the face of the covering certificate. Canadian grain inspectors will not permit lots of subgrade rapeseed or any other grain to be passed as satisfactory simply because the average quality of the total cargo can be brought within the specifications of the grade ordered. I can assure you it is not unusual for an over-zealous terminal operator to have to assume the costs of removing a subgrade lot from vessel stowage.

Gentlemen, our grade standards as presently defined, or as they may subsequently be re-defined, may not contain all the specifications our customers and domestic users would like to see in them, but we are intent on maintaining the quality of all shipments either domestic or export, within the requirements for the grades certified. We are determined to retain our reputation for reliability and consistency in the application of our standards, and thereby to continue to be free of any customer complaints in this regard.

Although oil content is a predominant factor to the buyer in determining the value of rapeseed, I can tell you frankly, that at this point in time with our rapidly expanding production of this crop in western Canada, and the multitude of attendant problems in areas of handling, storage, and transportation, that no serious need has been indicated, or consideration been given, to working out a system to relate the oil content of producers' deliveries to price or grade. It appears to me unlikely that anything will be done in this area in the immediate future, so that guarantees with respect to minimum oil content of shipments will continue to be a responsibility of the Canadian exporter.