Canadian Grain Commission | Commission canadienne des grains

Canadian Grain Commission

Canadian wheat class modernization
Consultation document

February 20, 2015

Canada

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1. Objective of proposal

Canada's wheat classes are a critical part of the grain quality assurance system. As a result of changes made to the marketing of western Canadian wheat in 2012 and in response to increasing stakeholder and customer demands for more flexibility, the Canadian Grain Commission proposes to modernize the wheat class system. A modernized wheat class system will continue to meet Canada's wheat production, handling, marketing, processing and export needs and provide the appropriate marketing framework for maximizing returns throughout the entire value chain into the future.

The proposal will:

- Review the current Canadian wheat classes
- Enhance the consistency of Canadian wheat classes to ensure marketability
- Add a new wheat class to address emerging requests from producers and markets

We are seeking feedback from wheat industry stakeholders including grain handlers, processors, marketers, developers, producers, and customers.

2. Purpose of consultation document

This document explains:

- Why amendments are being proposed for Canadian wheat classes
- How the Canadian Grain Commission proposes to modernize the wheat class system
- How to submit input and how your input will be used
- What happens after the consultation is concluded

3. Issue

Canada's grain quality assurance system consistently provides domestic and international customers with the quality of grain they require year after year. The grain quality assurance system allows grain to be segregated according to class, type and grade, thus enabling end-users to purchase shipments of grain with predictable processing qualities. It allows marketers of Canadian grain to access domestic and international markets and provide them with a product of consistent and reliable quality. It reduces transaction costs by providing defined quality characteristics by class. The grain quality assurance system facilitates profitability for all parts of the value chain by matching end-use functional demands of international and domestic end-use customers to the production of Canadian producers.

Canada's wheat classes are regularly reviewed and are modified to address sector and market needs. Given a number of events that have taken place in recent years, it is an opportune time to review the wheat class system. Catalyzing events include, but are not limited to, the following:

- In 2008, kernel visual distinguishability was removed as a requirement for variety registration. Prior to 2008, varieties designated to each wheat class were required to look

distinctly different from varieties in other classes so that grain inspectors could visually distinguish between different wheat classes. Without KVD as a registration requirement, new varieties can be registered regardless of kernel appearance. The removal of KVD made it possible to develop varieties that are intended for designation to a specific class based on end-use functionality, but that appear similar to varieties in another class.

- In 2008, to address growing demand for feed wheat and ethanol, the Canada Western General Purpose (CWGP) wheat class was developed to allow the registration of high-yielding, non-milling wheat varieties with low protein and high starch. However, since its introduction, wheat varieties with milling qualities that do not fit in other milling classes have been assigned to the CWGP class. This class has developed into a catch-all class for registered varieties that do not fit into other wheat classes.
- In 2012, the single-desk marketing authorities of the Canadian Wheat Board (CWB) were removed. The move to an open market for wheat was implemented to increase opportunities for developing new markets for Canadian wheat and new market entrants, increase choice for producers, stimulate investment in wheat breeding, and attract value-added processors.
- In 2012, the gluten strength of varieties in the Canada Western Red Spring (CWRS) wheat class was below levels normally expected by end-use customers. An investigation determined that unusual weather conditions highlighted poor wheat flour characteristics, such as low gluten strength. It was also determined that three varieties of CWRS, representing 33% of the western Canadian wheat crop, exhibited low gluten strength. These results led to broad concerns from many end-use customers, potentially affecting their confidence in the quality of Canada's CWRS class.
- The number of seeded acres of unregistered wheat varieties in western Canada has increased in recent years. These unregistered varieties include U.S. varieties that do not meet the current quality characteristics of Canadian wheat classes and are therefore not eligible for class designation by the Canadian Grain Commission. The growth in unregistered variety production has led some companies to implement special producer contracts and may indicate a demand for alternative varieties. Producers are increasingly willing to grow these high-yielding varieties. This raises questions about balancing emerging demands with the need to protect existing markets and customer needs.
- As Canada looks to grow existing markets and expand into new ones, there is potential for different classes of wheat to be marketed. For example, the opportunity to market Canada Prairie Spring Red (CPSR) wheat into South America and Asia will continue to grow if there is a consistent range for gluten strength in the CPSR class. Also, certain U.S. varieties are being grown under Identity Preserved contracts to supply specific end-use customer demands.

4. Overview of Canada's wheat class system

The Canadian Grain Commission administers the *Canada Grain Act* and is mandated to establish and maintain standards of quality for Canadian grains, as well as regulate grain handling in Canada, and to ensure dependable commodities are delivered to domestic and

export markets. This includes responsibility for the grain quality assurance system, as well as certifying the quality, quantity and safety of grain exports.

Wheat classes are established by the Canadian Grain Commission through extensive consultation with end-users, breeders, marketers and other stakeholders within the value chain. Each class has its own set of performance characteristics that are primarily based on functional, or end-use, characteristics. For each class, quality and performance parameters are set by a group of industry experts who represent all aspects of the wheat value chain through the Wheat, Rye and Triticale (WRT) Quality Evaluation Team and the Ontario Cereal Crop Committee. New varieties being considered for registration are assessed against specific benchmarks to determine each new variety's appropriateness for a particular class. The wheat classification system is a critical part of Canada's grain quality assurance system and works to support the Canada Brand internationally. (Annexes 1 and 2 provide a list and description of the current western and eastern Canadian wheat classes.)

As Canada's grain quality assurance agency, the Canadian Grain Commission links wheat classification to the Canadian Food Inspection Agency's variety registration process. When a variety of wheat is registered by the Canadian Food Inspection Agency, the Canadian Grain Commission has the authority under the *Canada Grain Act* to assign or designate the new variety to a specific wheat class. Wheat classes and their corresponding specifications are outlined in Schedule 3 of the *Canada Grain Regulations.*

For each Canadian wheat class, the Canadian Grain Commission maintains a variety designation list. These lists:

- Identify which varieties are eligible for each class
- Keep ineligible varieties from undermining the quality of grain shipments, thus avoiding potential issues with end-users
- Reduce transaction costs and facilitate the efficient trade and handling of bulk commodities

The Canadian Grain Commission updates the designation lists as new varieties are registered in Canada or as the registration status of existing varieties is changed.

5. Timeline of past changes to Canada's wheat classes

Canada's wheat classes have gone through several modifications to meet the changing needs of the Canadian industry and its domestic and international customers. In each case, the Canadian Grain Commission consulted extensively with stakeholders to ensure classes would continue to bring value to the entire wheat sector.

- 1971 – Introduction of the Canada Eastern/Western wheat class system and a major reclassification of Canadian wheat
- 1985 – Introduction of the Canada Prairie Spring Red (CPSR) and Canada Prairie Spring White (CPSW) wheat classes
- 2006 – Introduction of the Canada Western Hard White Spring (CWHWS) wheat class

- 2008 – Introduction of the Canada Western General Purpose (CWGP) wheat class to allow registration of high-yielding feed and ethanol varieties
- 2011 – Changes to the grade structure of the Canada Western Red Winter (CWRW) wheat class to help ensure consistently high milling quality within the class and also to enhance marketability. Varieties that no longer met the quality characteristics for the CWRW class were phased out in a three-year notification period, clearing these varieties out of the handling system.

6. Wheat classes in other exporting countries

Canada's major competitors have their own wheat classification systems to serve their industries' interests and their customers' requirements for specific processing qualities. For example:

- The United States has eight classes for wheat: Durum, Hard Red Spring, Hard Red Winter, Soft Red Winter, Hard White, Soft White, Unclassed, and Mixed.
- Australia has nine classes for wheat: Prime Hard, Hard, Premium White, Standard White, Premium Durum, Soft, Standard Noodle, Premium Noodle, and Feed.

7. Proposal for stakeholder input

The Canadian Grain Commission is proposing the following:

1. **Resolve parameters of the CWRS class to protect its quality and consistency and ensure new varieties meet requirements for milling performance, dough strength, protein quantity, and end product quality**.

   a. Change current check varieties used by the Prairie Grain Development Committee (PGDC) in order to reflect a consistent quality profile across all three CWRS Bread Wheat trials – Central, Western, and Parkland.

   - Implement Glenn, Carberry, Teal, and BW971 as CWRS check varieties for the Central and Western Trials. Remove Unity and Lillian as quality checks.
   - Glenn will serve as the upper limit of gluten strength, Carberry as the minimum value, Teal as the moderate-high, and BW971 as the moderate-low check variety for gluten strength. Candidate cultivars exhibiting gluten strength below Carberry will be removed from the CWRS class and assigned to another wheat class. Candidate cultivars exhibiting gluten strength above Glenn will also be assigned to another wheat class.
   - Using these check varieties in all trials will address the need for greater predictability and uniformity in the variety registration process and, at the same time, guarantee greater consistency within the CWRS class. These varieties also have good-to-excellent water absorption for baking.
   - Retain Splendor and Teal as mid-level check varieties for the Parkland Trials, recognizing distinctive environmental conditions. Implement the third-year cultivar candidate line PT772 as the minimum gluten strength check. Add candidate variety PT472 to address higher gluten strength, but excellent extensibility, as desired for the CWRS wheat class.

b. Upon recommendation of the Wheat, Rye and Triticale Recommending Committee, and prior to designating varieties to a specific class, the Canadian Grain Commission will continue to thoroughly examine the quality data of cultivars recommended for registration.

c. Review all wheat varieties presently classified as CWRS to ensure they still meet the end-use functionality demands of the class. Transition any existing varieties into a different class as appropriate.

2. Resolve parameters of the CPSR class to strengthen its quality and consistency and ensure new varieties meet requirements for milling performance, dough strength, protein quantity, and end product quality.

a. Change current check varieties in order to reflect a consistent quality profile across the CPSR class.

- Remove Glenn as a check variety and replace it with HY1902 (3rd year) as the high-end of gluten strength. HY1902 has high gluten strength, good extensibility and more appropriate protein for the CPSR class.
- Implement AC Foray (HY1610) as the only medium-high gluten strength check and HY537 as the medium-low gluten check. Addition of these two new varieties will also improve water absorption characteristics of the CPSR class.
- Maintain the variety 5700PR as the minimum gluten strength check. Candidate lines below this check will be removed from the CPSR class and considered for placement in another wheat class.

b. Upon recommendation of the Wheat, Rye and Triticale Recommending Committee, and prior to designating varieties to a specific class, the Canadian Grain Commission will continue to thoroughly examine the quality data of cultivars recommended for registration.

c. Review all wheat varieties presently classified as CPSR to ensure they still meet the end-use functionality demands of the class. The goal is to achieve a class with lower protein than CWRS, but allow higher gluten strength than the upper limit of the CWRS class, improve water absorption, and maintain good extensibility. Transition poor milling quality CPSR varieties into a different class as appropriate.

3. Develop a new western Canada milling wheat class to address changing customer requirements.

a. Implement Faller (a U.S. variety), Unity (current CWRS variety), and AC Foremost (current CPSR variety) as the initial check varieties. As this class becomes populated with varieties and new market feedback is acquired, these checks could be augmented or changed.

- This class will target candidate cultivars which have good milling quality and good water absorption, but lower gluten strength than both the CWRS and CPSR classes. Protein content of this class will span the protein content of both CWRS and CPSR. The goal is to capture new Canadian varieties with weaker gluten strength than what

will be required for the revised CWRS or CPSR classes, as well as new or existing U.S. varieties being sought by producers in western Canada that do not meet the end-use requirements of the existing milling wheat classes.

(Annex 3 provides a pictorial comparison of Canadian versus U.S. hard red spring wheat classes in terms of protein and gluten strength – current and proposed situations.)

4. **Review all wheat varieties presently classified as Canada Western General Purpose (CWGP) to ensure they are appropriate for the class.**

   a. Transition existing varieties to a different class as appropriate.

      - The purpose of the CWGP wheat class is to facilitate marketing feed, ethanol and special niche varieties. The new western Canada milling wheat class will assist in clarifying the purpose of CWGP.

5. **Review the current Canadian wheat classes, e.g. Canada Extra Strong (CWES) and Canada Prairie Spring White (CPSW).**

   a. Variety development and commercial production is diminishing for the CWES wheat class. No new candidate lines have been entered in the CWES variety registration trials in the last few years. The proposed CPSR quality model overlays the current CWES wheat class allowing for higher gluten strength than the upper limit of the CWRS class and lower protein content for improved yield.

   b. No new variety development for the CPSW wheat class has occurred for many years. Demand for CPSW for milling purposes can be better served by the Canada Western Hard White Spring (CWHWS) wheat class.

6. **Add a Canada Eastern General Purpose (CEGP) class similar to the CWGP class.**

   a. CWGP wheat varieties are currently being registered for use in eastern Canada, but do not meet the requirements for existing eastern Canadian wheat classes. Development of a CEGP class would ensure all registered varieties can be assigned a grade by regulation within the industry. Development of criteria for movement to a CEGP class will follow consultation with eastern stakeholders.

7. **Implement transition processes for managing and improving wheat class consistency to facilitate stakeholder understanding and preparation for implementation.**

   The transition of varieties that could potentially move from one class to another class needs to be carefully managed. Based on the existing Canadian Grain Commission protocol following the cancellation of variety registration, the following will be implemented:

   a. The Canadian Grain Commission will review current varieties in each class to ensure appropriate placement on Canadian Grain Commission Variety Designation Lists.

      - If it is suspected that a variety no longer meets current class quality objectives, a letter will be sent to the variety's owner indicating that the Canadian Grain Commission intends to move the variety into another class.

      - Before movement can occur, the variety owner will have the option, at their expense,

to grow their variety for two years at six sites across western Canada against the new class check varieties. This will allow the owner to reassess the business plan for that variety.

- The Canadian Grain Commission will conduct analysis, at its own expense, of a composite of the variety and the appropriate checks from these sites and provide the data to the variety owner after each year. This will allow the owner to evaluate their position given the first year data and will provide the owner the option to forego a second year of testing.
- Following the completion of two data years against the new check varieties, the Canadian Grain Commission will determine if movement is still warranted.
- Owners of registered varieties currently assigned to the CWGP wheat class may appeal their placement and request consideration for placement in the new western Canada milling wheat class. The Canadian Grain Commission will consider each request and, if deemed appropriate, will consider designation into the new milling class based on the process outlined above.

b. Lines currently in variety trials which do not meet the quality of the current or new check varieties will also be assessed.

- Candidate varieties (second year lines) in the 2014 trials – The two years of available extensograph data will be considered. If the Wheat, Rye and Triticale Quality Evaluation team concludes candidate varieties demonstrate acceptable sprout resistance, good milling characteristics, appropriate water absorption and stability, but do not meet gluten strength requirements for the applicable class, the varieties will be considered for the new western Canada milling class. Variety owners can submit existing data alongside their third-year entry data within the new milling class trials.
- Candidate varieties with one year of trial data - Lines eliminated due to one year's worth of poor extensograph data, but with acceptable sprout resistance, good milling characteristics, appropriate water absorption and stability will be eligible to enter the next new western Canada milling class trial using the existing year of extensograph data.
- In the future, candidate varieties in the first or second year of trials that meet all required trial class parameters except gluten strength will be able to use this data to supplement subsequent new western Canada milling class trials and thus, reduce the number of data years required prior to applying for recommendation for registration.

(Annex 4 provides a pictorial representation of the transition processes described above.)

8. How to submit your input

Your organization is invited to submit input in writing by midnight on April 20, 2015. You can submit input in English or French:

By email to: discussions@grainscanada.gc.ca
By fax: 204-983-2751
Or by mail to:
Wheat Class Modernization
Canadian Grain Commission
600-303 Main Street
Winnipeg, Manitoba R3C 3G8

Please include your full name, organization, phone number and complete mailing or email address.

This document is available on our website at www.grainscanada.gc.ca. If you have any questions, please contact the Canadian Grain Commission at 1-800-853-6705 or discussions@grainscanada.gc.ca.

The Canadian Grain Commission values your input. Thank you in advance.

9. How your input is used

The Canadian Grain Commission will study your input while considering:

- Input received by other stakeholders
- Legal, regulatory or policy implications of your proposals
- Consistency with broader Government of Canada policies and priorities

You will receive acknowledgement of your written submission. Please be aware your input cannot be considered confidential. Names of individuals, however, will be protected pursuant to the *Access to Information Act* and the *Privacy Act*.

10. Steps after the consultation

Based on stakeholder feedback, the Canadian Grain Commission will consider all input and make necessary amendments to this proposal. Implementation of a modernized wheat class system is targeted for August 1, 2016. However, given the scope of this initiative and the number of organizations involved, timelines may change if major constraints are encountered. Stakeholders will be kept apprised of developments.

The transition period and implementation of changes will be carefully managed as the wheat sector will need time to adjust. Time will be required to modify the *Canada Grain Regulations,* the Official Grain Grading Guide, procedures of the Wheat, Rye and Triticale Recommending Committee, producer seeding plans, marketing plans and sales contracts of grain companies, breeding programs, and commercial seed developers' strategies.

Annex 1: Western Canadian wheat classes

There are 10 classes of western Canadian wheat, each with its own quality and processing characteristics. Of all wheat classes, the major classes – CWRS and CWAD – account for more than 85% of the wheat grown in western Canada. These two classes are valued for their uniform and consistent quality and are responsible for the majority of export sales.

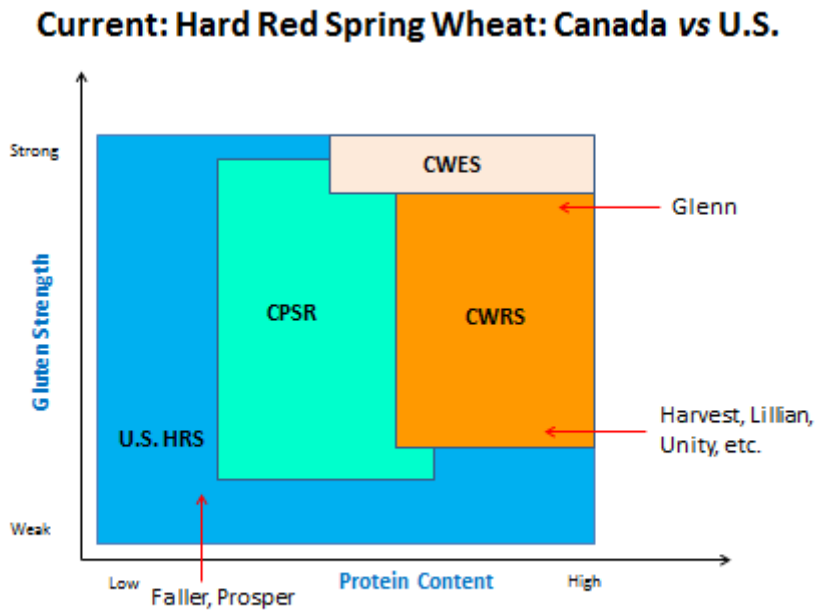
Class	Characteristics
Canada Prairie Spring Red (CPSR)	Medium to strong gluten-strength wheat suitable for bread making, noodles and related products. There are two milling grades in the CPSR class.
Canada Prairie Spring White (CPSW)	Medium-strength wheat suitable for the production of various types of flat breads, noodles, chapatis and related products. There are two milling grades in the CPSW class.
Canada Western Amber Durum (CWAD)	Durum wheat producing a high yield of semolina with excellent pasta and couscous quality. There are four milling grades in the CWAD class.
Canada Western Extra Strong (CWES)	Hard red spring wheat with extra-strong gluten suitable for blending purposes and for special bread products. There are two milling grades in the CWES class.
Canada Western Hard White Spring (CWHWS)	Hard white wheat with superior milling quality producing flour with excellent colour suitable for bread and noodle production. There are three milling grades in the CWHWS class
Canada Western Red Spring (CWRS)	Hard wheat with superior milling and baking quality offered at various guaranteed protein levels. There are three milling grades in the CWRS class.
Canada Western Red Winter (CWRW)	Hard red wheat suitable for the production of a wide variety of products including French breads, flat breads, steamed breads, noodles and related products. There are three milling grades in the CWRW class.
Canada Western Soft White Spring (CWSWS)	Soft wheat of low protein content for production of cookies, cakes and pastry, as well as various types of flat breads, noodles, steamed breads and chapatis. There are three milling grades in the CWSWS class.
Canada Western General Purpose (CWGP)	High-yielding wheat varieties not typically appropriate for milling due to high starch and low protein content, but most suitable for ethanol product or animal feed use.
Canada Western Feed (CWF)	Wheat which does not qualify for a milling grade in any of the other classes. This includes low quality wheat and wheat varieties which are not registered for production in Canada.

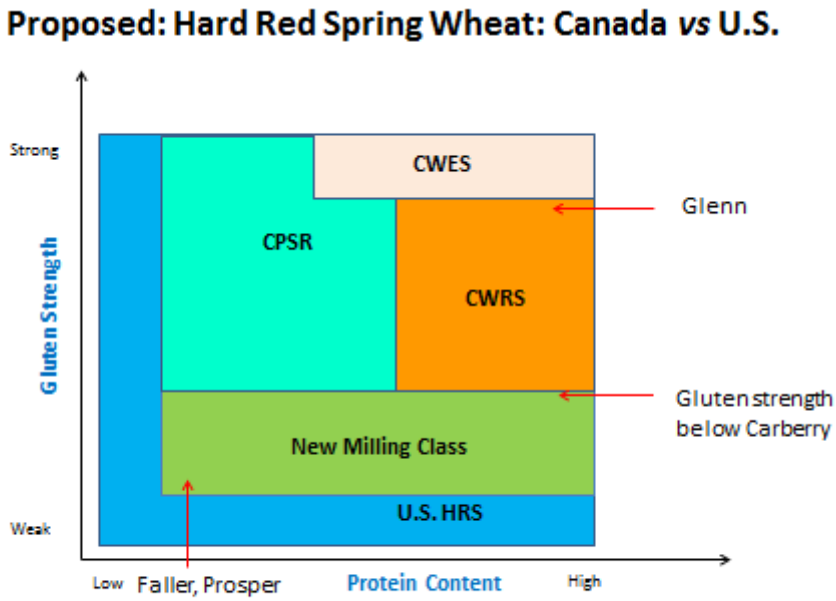
Annex 2: Eastern Canadian wheat classes

There are 7 classes of eastern Canadian wheat:

Class	Characteristics
Canada Eastern Amber Durum (CEAD)	Durum wheat producing a high yield of semolina with excellent pasta and couscous quality. There are three milling grades in the CEAD class.
Canada Eastern Hard Red Winter (CEHRW)	Hard red wheat suitable for the production of a wide variety of products including French breads, flat breads, steamed breads, and noodles. There are three milling grades in the CEHRW class.
Canada Eastern Hard White Spring (CEHWS)	Hard white wheat with superior milling quality producing flour with excellent colour suitable for bread and noodle production. There are three milling grades in the CEHWS class.
Canada Eastern Red Spring (CERS)	Hard wheat with superior milling and baking quality used alone or in blends with other wheat for hearth bread, steamed bread, noodles, flat bread, and common wheat pasta. There are three milling grades in the CERS class.
Canada Eastern Soft Red Winter (CESRW)	Soft, low-protein wheat used for the production of cakes, pastry, cereal, crackers, biscuits and filling.
Canada Eastern Soft White Spring (CESWS)	Soft wheat of low protein content for production of cookies, cakes and pastry, as well as various types of flat breads, noodles, steamed breads and chapatis. There are three milling grades in the CESWS class.
Canada Eastern White Winter (CEWW)	Soft, low-protein wheat used for the production of cakes, pastry, cereal, crackers, biscuits and filling.

Annex 3: Canadian wheat classes in comparison to U.S. hard red spring wheat

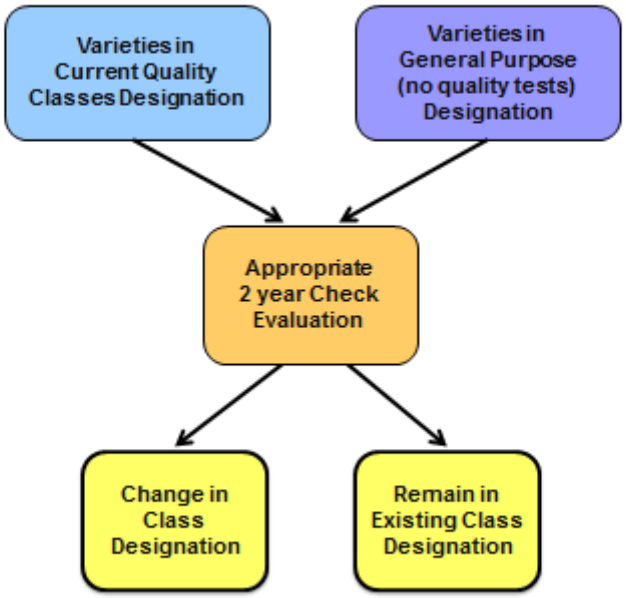




Note: Charts are for illustration purposes only.

Annex 4: Variety transition processes for class reallocation

Proposed Mechanism for Evaluation of Registered Varieties



Proposed Mechanism for Candidate Varieties Currently in Trials