

Road map *to the* Future



2005 PRRCG Report

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Inside:

- Launching a new era
- Spotlight on key issues
- First look at new crop lines

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Road map *to the* future

Registration system changes and innovative crop lines blaze a new trail for Canada's crops industry.

The curtain began to lift on a new era for Canada's multi-billion crops industry at the 2005 meeting of the Prairie Registration Recommending Committee for Grain (PRRCG) in Winnipeg.

Following years of dramatic changes in agriculture, crop science, intellectual property rights, international protocols and a range of associated issues, the key players in Canada's crop variety registration system responded with updated visions for overhauling the system and setting the stage for a new generation of progress.

Also providing a crystal ball were new crop lines recommended for registration, which promise to fill Prairie fields over the next several years. The PRRCG's four subcommittees – the Wheat, Rye and Triticale Subcommittee, the Barley and Oat Subcommittee, the Pulse and Special Crops Subcommittee and the Oilseeds Subcommittee – all recommended the registration of innovative crop lines with valuable production and end use benefits.

This Meristem Land and Science *2005 PRRCG Report: Road Map to the Future* is a guide to all the changes and new crop lines to come. Collectively, they chart a new course for Canada's crop industry, a powerful economic force with widespread bearing on thousands of livelihoods, vast areas of land, the food system and public health.

Top minds, crops, issues

Though the PRRCG wields tremendous influence on the crops industry in Western Canada, it has traditionally operated with a low profile in the context of more dramatic industry news and discussions. However, this has changed greatly in recent years as the power and importance of crop development has expanded, and as variety registration has become a focal point for discussion and decisions on some of the most pressing issues of the day.

At heart, the PRRCG is people – a committee of agricultural professionals with interest in prairie agriculture, including producers, seed growers, scientists, and a large representation of individuals in the grain handling and processing industries.

It was formed to advise the Variety Registration Office (VRO) of the Canadian Food Inspection Agency (CFIA) on matters pertaining to proposing new grain varieties for registration in Western Canada, and related efforts.

In stark contrast to the clinical, often dry components of the regulatory machinery, the PRRCG is forum for often-lively discussion and debate.

Crop developers, who typically invest many years developing a new variety, present their candidate lines before peers representing broad areas of expertise. Subcommittee members scrutinize the candidates using a mix of data interpretation and judgement, and decide whether those lines are worthy of being grown and sold commercially. At the broad PRRCG level, a host of ideas and issues are presented and explored, with direct bearing on this question: How can Canada best produce agricultural products that are successful domestically and internationally?

Changes on the way

This year, more than ever, that question was at the forefront of PRRCG business, as years of consultation and review on several key fronts began to gel into concrete action.

The PRRCG itself, after more than a decade of operation, took steps to dissolve and shift power for recommendation of new varieties to its current subcommittees, setting the stage for greater crop-by-crop control and a new collective forum under the Western Expert Committee on Grains.

The CFIA, which for more than five years has conducted a landmark review of the variety registration system, unprecedented in its scale, presented the principles shaping an updated regulatory change proposal expected to be tabled in spring 2005.

Canada's seed sector, which has participated in a major self-assessment over the past two years, presented recommendations from the first phase of this review, outlining how its findings will feed into the variety registration change process and an ongoing National Seed Sector Consultative process. The assessment, called the Seed

Sector Review, in an industry-led effort that has emerged as a major player to facilitate co-operation between the seed sector and government on matters of regulatory change.

The details and implications of these changes, along with descriptions of the new crop lines recommended for variety registration, are all featured in this PRRCG Report, which is developed as a service to western Canadian farmers, industry and the broad stakeholders in Canadian crop development. The report also includes a backgrounder on PRRCG processes and procedures.

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Inside the variety development process

The key steps and the role of PRRCG.

The steps toward variety registration constitute a long process for the many crop lines developed every year at breeding programs across Western Canada. The breeding work itself can take from seven to 15 years, depending on the crop and the approach. This is followed by several years of Prairie-wide testing, as well as a thorough evaluation by the region's top crop experts of the PRRCG. The best performers are recommended for federal variety registration to the Canadian Food Inspection Agency (CFIA), which makes final decisions. This journey can be broken down into five key stages.

1. Developing a breeding strategy

The first stage begins at the crop breeding level. Plant breeding institutions, with broad input from a variety of stakeholders, develop breeding strategies based on a wide range of production and market factors. Whether the goal is to find a niche and fill it, boost the performance of tried and true variety types, or come up with an innovative groundbreaker, the strategy ultimately settles on targeting a complex mix of traits. These include everything from agronomic, yield and quality characteristics, to resistance against important diseases and pests.

2. Gathering key traits

Searching for this cocktail of traits and pulling them together involves years of breeding and selection. Breeders begin by gathering a large pool of seed for crop lines - known as the germplasm pool - that contain the targeted traits. Lines are screened for these traits, and the desirable ones are bred with one another, generation after generation, until the breeder develops a single line that has all the targeted traits "fixed" in its genetics.

New cereal lines put forward for registration, such as wheat and barley, are typically the product of seven to 10 years of breeding. The time requirement is usually shorter for special crops and oilseeds because the genetics are less complex and easier to work with. Breeders can slash years off the process for all crops by using winter nurseries in other countries to

grow two generations per year, or by using new molecular techniques as a shortcut to identify true breeding lines.

3. Prairie-wide testing of top prospects

Once breeders are satisfied they've developed a good crop line, it is put forward for testing across the region. These Prairie-wide tests - known as the "co-op" trials - are a co-operative effort among breeding institutions and others to facilitate testing under a broad range of soil and climatic conditions. These trials are administered by the PRRCG, which includes nearly all the major Prairie crop development researchers, along with industry, producers and various end-user representatives.

4. PRRCG evaluates and makes recommendations

The crop lines that survive this rigorous testing can be put forward by the plant breeder for registration support at the PRRCG meeting held every February. The PRRCG's mandate is to act as a recommending body to the CFIA, which makes all final decisions on which crop lines are approved for federal variety registration. PRRCG members critically examine the performance data on co-op lines and decide which to recommend to CFIA. Depending on the crop, lines must have demonstrated equal-to-or-better-than performance over standard or "check" varieties to gain registration support.

5. CFIA Variety Registration Office grants final approval

Crop lines that fall under the PRRCG mandate must go through the PRRCG system before they can advance for consideration by the CFIA. The PRRCG recommendations are forwarded to the CFIA's Variety Registration Office, which uses them as a basis to determine if the crop lines will be granted final approval as new registered varieties for Canada. A decision on most lines is made within a year of the PRRCG recommendation, and the large majority of these are accepted, barring unforeseen plant safety or market concerns.

Launching *a new era*

Decision to dissolve PRRCG paves way for greater crop-by-crop control.

If all goes as planned, the 2005 PRRCG meeting will be the last for the organization.

In 2004, the roughly 300 PRRCG members in attendance voted by the required greater than two-thirds majority to dissolve the committee, effective April 1, 2005, and shift full powers to its four crop-specific subcommittees, allowing them to become independent recommending committees. In 2005, the subcommittees worked through a range of administrative issues to prepare for that transition, leaving everything in place for implementation in 2006.

Dealing directly on key issues

While the shift was undertaken largely to provide the crop subcommittees with greater power to handle appeals and deal directly with the VRO on important issues, in practice the general spirit of the PRRCG will live on, says Dr. Scott Duguid, PRRCG Chair.

"Under our resolution, the PRRCG name would no longer be used and the subcommittees would become independent recommending committees," he says. "However, as formalized in a new motion in 2005, we would preserve a component of the PRRCG umbrella to conduct meetings and facilitate discussions on common issues. The meeting itself would be conducted in largely the same way."

Specifically, the newly created recommending committees would have the option of using their existing membership in the Western Expert Committee on Grain (WECG) as a basis to meet in a common forum and conduct business of mutual

concern. "What's known today as the PRRCG meeting would become known as the WECG meeting," says Duguid.

The move would also open the door to bringing the canola and rapeseed recommending committee under the new umbrella. Members of the current Western Canada Canola/Rapeseed Recommending Committee were at one time members of the WECG, but broke away several years ago to form an independent committee. "There has been strong interest in re-uniting under the new umbrella," says Duguid.

New appeals process

A major issue surrounding the changes has been the appeals process under PRRCG. For the most part, the subcommittees have operated independently, with the PRRCG executive typically providing a rubber stamp to subcommittee decisions. However, until changes were made in 2004, the appeals process and some governance issues remained handled by the executive.

A strong argument for dissolving the executive as it existed was to shift these powers to the current subcommittees, which the majority felt were better equipped to make decisions in the best interests of the crop areas they represent.

Those representing smaller crops have cited a need to preserve the strength and efficiency of working with other crop groups within PRRCG, but the new WECG umbrella would address that need.

"Overall, it's a good balance that should address the concerns of everyone," says Duguid.

Goodbye PRRCG, hello WECG

Q&A with PRRCG Chair Scott Duguid.

Q: Why the name change?

The Western Expert Committee on Grain (WECG) was around before the PRRCG was. In addition to the current commodity representatives under PRRCG, its membership also includes commodity representatives for other areas such as canola.

The WECG is where the PRRCG gets its mandate to present views on issues related to crop development and present them to the policy makers and regulators. Since there's strong support for retaining this function, the approach we're pursuing is to dissolve the PRRCG but retain the WECG part of the mandate and continue the meeting function under the WECG banner.

Q: What issues are likely to be discussed under the WECG banner?

There are many possibilities. As we've recognized in our motions, the WECG could serve as a forum for broad discussion regarding, policy, science, trade or other issues concerning grain crops produced in Western Canada. Based on those discussions, we can deliver any recommendations approved by the majority membership to the appropriate organization or governing body. It's a good tool for discussing and speaking out on issues of collective importance.

One immediate example that often comes up is the issue of "plants with novel traits" (PNTs), and there are many other issues where a collective voice can have advantages.

Q: What will the WECG structure look like?

Under the resolution approved at our 2005 meeting, we're proposing an executive consisting of an overall chair, vice chair, secretary and/or treasurer elected from the membership, together with elected chairs and secretaries of the individual recommending committees. All of these positions would be based on staggered three-year terms.

Q: How will the transition process move forward?

We've agreed that each of the subcommittees appoint or nominate a person to serve on an ad hoc committee to advise on the transition from the PRRCG to the WECG over the next year. We also plan to invite the WCC/RRC to participate.

We're going to ask this committee to work under a fairly short time period, and potentially report back to us around September, so that our executive as it exists now can act upon their recommendations. There will be some other background work needed to set everything up, but this gets us to the next step.

CFIA review update: Breaking the gridlock

Broader seed sector review spurs new ideas for improved variety registration system.

Hitting a moving target is never easy, particularly when that target is as complex and elusive as a prescription for the future of variety registration in Canada.

Case in point is the Canadian Food Inspection Agency's (CFIA) effort to review and restructure the country's variety registration system. This process was started more than five years ago, and has required numerous changes and additional consultations to respond to shifting stakeholder and system concerns in a rapidly changing environment.

Most recently, the CFIA has delayed its review process to allow time for a broader needs assessment – the separate but parallel Seed Sector Assessment – to be completed, reported Stan Kirkland, National Manager, Seed Section, CFIA. Under the new timeline, the CFIA expects to table an updated regulatory change proposal in spring 2005.

"From a CFIA perspective, the benefit of the Seed Sector Assessment has been obvious," says Kirkland. "It contributed to an improvement in the policy discussion among stakeholders and it built consensus on the need for a stricter consultative mechanism for the seed sector.

"Perhaps more importantly, it reinforced the need for a timely and effective regulatory change process that is sensitive to the differences among crop sectors and regions of the country. This process will allow change to take place according to specific crop type and regional needs."

Initial recommendations

Central to the initial review recommendations and CFIA proposals has been a loosening of the merit requirements for registration of a number of crops.

Under the 2002 CFIA draft proposal, crops would fall under one of three schedules.

Schedule A crops. These would retain some form of merit as a requirement. This would include major crops such as wheat, canola, barley, rye, triticale, oat, mustard, flax, pea and sunflower.

Schedule B crops. These would not require any merit assessment, but they would require a minimum of one year of performance information to be available at the time of registration.

Schedule C crops. These would require neither merit assessment nor performance testing information.

Various crop stakeholders, including PRRCG, have been asked to recommend which crops should fall under which schedules. While there is general agreement on requirements for most major crops, different points of view have emerged on others.

"In 2002-03, discussions focused on the placement of crops within these schedules," says Kirkland. "There appeared to be general support for the tiered approach, but consensus on the placement of the crops remains contentious and continues to be an issue today."

Seeking consensus

Faced with this situation, the CFIA's efforts focused on identifying and dealing with the obstacles to consensus.

"Our conclusion was that the nature of the regulatory system itself – including the very detailed nature of regulations, the differences among the crop kinds and the absence of a comprehensive consultative framework – works against finding an effective regulatory change."

Then, in 2003, the variety registration review was suspended to allow for the broader Seed Sector Assessment, designed to be industry led, with support from CFIA and Agriculture and Agri-Food Canada (AAFC).

Advocating a permanent roundtable

In part due to findings of the Seed Sector Assessment, the CFIA is now advocating an inclusive and comprehensive approach to stakeholder involvement regarding variety registration issues. "We see the proposal for a national seed sector roundtable as a good start in this direction," says Kirkland.

A Seed Sector Variety Registration Workshop has already made an important contribution, he says. "It has broadened

the discussion on variety registration issues and promoted an improved understanding of issues and options. This has been of valuable assistance to the Advisory Committee on Variety Registration and the CFIA's efforts to develop a variety registration proposal for broad-based support."

Updating the proposal

Based on this feedback and additional input over the past two years, consensus is emerging on moving an updated variety registration proposal forward, says Kirkland. "It now

appears that plans for Schedule A and C may be sufficient, particularly if there's additional flexibility within A to address different crop sector needs."

Schedule C requirements will need to be more clearly stated and understood before they are likely to gain any wide acceptance, he says. "This will require a more detailed variety registration proposal that includes an explanation of how the variety registration office will process applications, what certain standards will be, and the future role for variety registration recommending committees."

Harvest time nearing for Seed Sector Review

A preview of the key changes expected.

Canada's seed sector has undergone a major review and strategic planning process called the Seed Sector Review, which is resulting in an ongoing consultative process to help the sector manage change to improve its competitiveness.

The review began as a project to conduct an industry wide assessment of the Canadian seed sector and the Canadian seed regulatory environment, says Monty Doyle, Project Manager of the Seed Sector Review.

"The project was designed to do several things. First, to generate consensus on challenges facing the sector and on options for facilitating constructive change. Second, to develop recommendations for CFIA on regulatory change. And third, to develop recommendations for a permanent consultative process."

Key result areas

The Seed Sector Review began in early 2003, as a collaborative effort led by the Canadian Seed Growers Association (CSGA), the Canadian Seed Trade Association (CSTA), the Canadian Seed Institute (CSI) and the Grain Growers of Canada (GGC), with funding awarded by Agriculture and Agri-Food Canada. The effort was based in part on the CFIA's request for direction from the sector, as part of its variety registration review, and the CFIA has since provided expertise and other in-kind support.

Core direction for the assessment has been handled by an 18 member Advisory Committee, representing various components of the sector. Through phase I of the Seed

Sector Review consultative process, the Advisory Committee identified four key result areas as essential to the future of the seed industry:

- Regulatory flexibility and timeliness.
- Supportive environment for science and innovation.
- Profitability of the sector.
- Consumer acceptance and confidence.

Ongoing round table for consultation

Overall, a major recommendation was to implement an ongoing, industry-wide consultative body, known as the National Seed Sector Round Table to carry forward and continually build on the progress of phase I. This body, modeled on the Seed Sector Review Advisory Committee, would provide an ongoing forum to facilitate co-operation between the seed sector and government on matters of regulatory change that impact the seed sector.

"At this stage, we've developed a discussion document on the National Seed Sector Consultative Process," says Doyle. "We're using the term consultative process because it includes specific efforts such as the round table and includes process elements to deal with specific issues such as variety registration."

This document was distributed to a broad range of stakeholders and is available on the Seed Sector Review Web site, www.seedsectorreview.com, he says. "We're in the process now of getting feedback and advice. The target to start up the new round table is April 2005."

Tackling pressing issues

Through the roundtable and other process elements, the effort is already preparing for or beginning to address a number of important issues. Some examples include:

Variety registration working group. This group was formed to provide specific consultation and recommendations to CFIA on proposed changes to the variety registration system. "To date, it has expanded discussion on key issues and spawned a number of innovative options on moving forward," says Doyle.

Streamlining standards and delivery mechanisms. "This includes revising regulations and procedures for pedigreed seed production," says Doyle. "There has been about six months of work on this and it's nearly completed."

Investigation of analysis-based verification standards. "This effort deals with innovation broadly but a specific focus now is the question around PNTs," says Doyle.

PNTs are "plants with novel traits" as defined in new federal legislation. Rather than focus on the method used to introduce traits, which is how genetically modified organisms (GMOs) are defined, Canada has chosen to focus on the actual traits expressed in new crop lines. Under the legislation, new crop lines deemed to have novel traits that warrant further scrutiny could be labeled PNTs and thereby become subject to more intensive testing - such as health, food safety or environmental testing - before they are approved for registration.

Protection of farm saved seed. "This is clearly a major issue in the seed sector," says Doyle. "What the review came out squarely on was that it urges the government of Canada to enshrine in new plant breeders rights legislation the rights of farmers to re-use seed."

Increased use of certified seed. At the same time, among the Advisory Committee, there was consensus support for the goal of increased use of Certified seed, he says. "However, the Committee stated that the use of Certified seed should be market driven and thus encourage competition and additional value. The Advisory Committee does not support making use of Certified seed mandatory, except in IP system that are claiming a particular variety be bought and sold."

Consultation and inclusion. Overall, improving communications in all Seed Sector Review activities remains a central goal of the ongoing process, says Doyle. "I don't think you can ever communicate enough or consult enough. We have appreciated the value of what we've heard throughout this process, but we know going forward that the whole issue of communication and consultation has to be a relentless pursuit, particularly as we proceed with phase II of the Seed Sector Review and open a new round of consultation."

Wheat, Rye and Triticale Subcommittee

The Wheat, Rye and Triticale Subcommittee evaluates lines based on agronomic performance, disease resistance and end-use quality. Here are activity highlights from the 2005 meeting.

Key action

Launch of independent committee. The Wheat, Rye and Triticale Subcommittee revised its procedures to become the Prairie Recommending Committee for Wheat (Despite the name change, Rye and Triticale would continue to be handled under the new committee). Subject to approval by the Canadian Food Inspection Agency (CFIA), it is expected the new Committee will operate under these revised procedures for the February 2006 meeting.

The major impact of the new procedures would be that the current subcommittee will become a recognized independent recommending committee, dealing directly with the CFIA.

New appeals process. The Wheat, Rye and Triticale Subcommittee was a leader in spurring the PRRCG's shift toward breaking up into independent committees. One of the specific issues that fueled this decision was the desire to handle the appeals process at the subcommittee level, rather than at a broader level overseen by the PRRCG executive.

At this year's meeting, the Subcommittee supported a motion outlining a new appeals process. Key stipulations include that:

- Appeals must be based on the argument that the committee did not follow prescribed procedures or the recommendation was the result of erroneous or incomplete data.
- The Committee Chair will select and work with an appeal board consisting of five to seven regular committee members to hear and decide on the appeal. The appellant may propose alternate members.

- Appeals must be received no later than March 31 and decided upon no later than April 30.

Recommended lines

PT211. CWRS wheat. Features high grain yield combined with reduced FHB susceptibility and early maturity. Particularly well suited to the Peace River Region and Parkland Region, where it respectively yielded 14.8 percent and 8.4 percent higher than AC Splendor. AAFC Swift Current

PT425. CWRS wheat. Very early maturing wheat – half a day earlier than AC Splendor. Good leaf rust and loose smut resistance. Improved grade protection compared to top varieties grown in the Peace River Region and Parkland Region. AAFC Winnipeg

T181. Triticale. Features a reduction in awn expression that promises to diversify the use of spring triticale as a conserved forage. Resistance to FHB similar to Pronghorn, the most resistant check variety. Compared to checks has similar early maturity and good leaf and stem rust resistance, along with improved test mass and higher silage yields. AAFRD Lacombe.

T182. Sister line to T181 also features a reduction in awn expression. Grain yield similar to the highest yielding triticales check cultivar, AC Ultima, combined with good leaf and stem rust resistance, test weight, early maturity, good lodging resistance and high forage yields. AAFRD Lacombe.

Barley and Oat Subcommittee

The Barley and Oat Subcommittee evaluates lines based on agronomic, disease and quality performance.

Key action

Launch of independent committee. The Barley and Oat Subcommittee revised its procedures to become the Prairie Recommending Committee for Oat and Barley. Subject to approval by the Canadian Food Inspection Agency (CFIA), it is expected the new Committee will operate under these revised procedures for the February 2006 meeting.

The major impact of the new procedures would be that the current subcommittee will become a recognized independent recommending committee, dealing directly with the CFIA.

New appeals process. The Barley and Oat Subcommittee came to consensus on a new appeals process. Key stipulations include that:

- Appeals must be based on the argument that the committee did not follow prescribed procedures or the recommendation was the result of erroneous or incomplete data.
- The Committee Executive plus one member from the WECG from outside the Committee for Oat and Barley will hear and decide on the appeal. The member from outside the Committee will be selected by the appellant.

New oat quality guidelines. The Subcommittee reached consensus on new general targets with greater flexibility for oat quality.

Recommended lines

TR03361. Two-row feed barley. Yields well in the Black and Grey-black soil zones of Alberta and under high yielding conditions. Slightly shorter with slightly better lodging resistance than AC Metcalfe, with similar percent plump and test weight to all the checks. AAFRD Lacombe.

TR03373. Two-row feed barley. Exceptional straw strength – stronger than CDC Bold and would be strongest variety registered. Yield potential equal to Zena. Reasonable spot blotch resistance. U of S CDC.

TR03903. Two-row malting barley. This line was put forward one year early because of strong interest and evaluation by a major potential customer. As a result, Interim Registration was recommended, allowing for commercial plant-scale testing. Good straw strength and similar yield potential to AC Metcalfe. U of S CDC.

TR706 (Conrad). Two-row malting barley. This U.S.-bred line features consistently plump grain and wide production potential. Yields comparably to Harrington and AC Metcalfe. Malting quality profile has good levels of diastatic power and alpha amylase. Busch Agricultural Resources Inc.

BT566. Six-row feed barley. This line shows benefits as a multi-purpose variety for the livestock industry, with high grain and silage yields in central Alberta. Overall yields similar to AC Rosser, while exceeding that variety by up to seven percent in western black soils. Also features multiple gene resistance to scald and resistance to covered smut and false loose smut. AAFRD Lacombe.

BT493. Six-row white aleurone malting barley. Good agronomic strength and outyields the checks in all soil zones. Good kernel weight and plumpness. Resistant to net blotch. Lower protein and lower beta-glucan levels than Excel. U of S CDC.

BT970. Six-row white aleurone malting barley. Earlier than CDC Sisler and Excel, by one and two days respectively, with promising malting quality. Shorter than the checks. Agricore United.

OT580. Oat. This line was put forward after only one year of co-operative testing because of its unique combination of high levels of oat beta-glucan, which have drawn interest from a major customer. Also features good rust resistance, which gives producers a high beta glucan variety option for rust prone areas. AAFC Winnipeg.

OT2027. Oat. Strong yield potential – outperformed all other lines. Good disease resistance profile and good sized kernels. AAFC Winnipeg.

OT571 (SW Betania). Oat. This Swedish line offers elevated beta-glucan, with a yield index of 108 percent. As early as CDC Dancer, with lodging resistance similar to Morgan. Svalof Weibull.

Pulse & Special Crops Subcommittee

The Pulse and Special Crops Subcommittee evaluates lentils, beans, field peas and other special crops grown on the Prairies.

Key activity

Shifting to independence. The Pulse and Special Crops (P&SC) Subcommittee revised its procedures to become the Prairie Recommending Committee Pulse & Special Crops (PRCPSC). Subject to approval by the Canadian Food Inspection Agency (CFIA), it is expected the PRCPSC will operate under these revised procedures for the February 2006 meeting. As a result, the PRCPSC will become a recognized recommending committee dealing directly with the CFIA.

Recommended lines

BR03. Buckwheat. A high yielding line with increased seed density and seed weight compared to Koto. Kade Research.

Earlibird. Faba Bean. A high yielding, medium-large seeded variety. Cebeco Seeds

Snowbird. Faba Bean. A high yielding, medium-large seeded, low-tannin variety. Cebeco Seeds

Taboar. Faba Bean. A high yielding, medium-large seeded, variety. Globe Seed

VM 214. Faba Bean. A high yielding, medium-large seeded, low tannin line. Globe Seed

1269S-20. Lentil. A high yielding, small red line, with anthracnose and aschochyta disease reaction similar to CDC Robin. Crop Development Centre.

1302M-16. Lentil. A high yielding, small green line, with a similar level of resistance to anthracnose as CDC Robin. Crop Development Centre.

1308M-7. Lentil. A high yielding, small red line, with anthracnose and aschochyta disease reaction similar to CDC Robin. Crop Development Centre.

1309M-29. Lentil. A high yielding small red line. Crop Development Centre.

1309M-39. Lentil. A high yielding, small red line, with anthracnose and aschochyta disease reaction similar to CDC Robin. Crop Development Centre.

2462. Lentil. A small red Clearfield (imidazalinone tolerant) line similar to CDC Blaze. Crop Development Centre.

2464. Lentil. A small red Clearfield (imidazalinone tolerant) line similar to CDC Robin. Crop Development Centre.

1283D-10. Lentil. A high yielding small red line. Crop Development Centre.

1038L-18. Lentil. A high yielding, medium green line with resistance to ascochyta. This line was previously supported in February 2002. Crop Development Centre.

CDC 728-8. Field pea. A high yielding, medium-large sized yellow pea line, resistant to powdery mildew. Crop Development Centre.

CDC 985-36. Field pea. A high yielding, medium sized yellow pea line, resistant to powdery mildew. Crop Development Centre.

MP 1824. Field pea. A high yielding, medium-large sized yellow pea line, resistant to powdery mildew. Agriculture & Agri-Food Canada.

MP 1826. Field pea. A high yielding, medium sized yellow pea line, resistant to powdery mildew. Agriculture & Agri-Food Canada.

Ceb 4133. Field pea. A high yielding, medium-large sized yellow pea line, resistant to powdery mildew. Cebeco Seeds.

Ceb 1090. Field pea. A high yielding, medium-large sized green pea line, resistant to powdery mildew. Cebeco Seeds.

Ceb 4132. Field pea. A high yielding, medium-large sized yellow pea line, resistant to powdery mildew. Cebeco Seeds.

SW A 5122 (SW Marquee). Field pea. A high yielding, medium sized yellow pea line, resistant to powdery mildew. Svalof Weibull.

SW A 5130. Field pea. A high yielding, medium-large sized yellow pea line, resistant to powdery mildew. Svalof Weibull.

SW A 6145. Field pea. A high yielding, medium sized green pea line, resistant to powdery mildew. Svalof Weibull.

SW A 6154. Field pea. A high yielding, medium sized green pea line, resistant to powdery mildew. Svalof Weibull.

Oilseeds Subcommittee

The Oilseeds Subcommittee is responsible for the testing, evaluation and recommendation of flax, mustard, sunflower and soybean. Categories for merit currently include agronomy, quality and disease.

Key activity

Creating a new recommending committee. The Oilseeds Subcommittee revised its procedures to become the Prairie Oilseeds Recommending Committee. Subject to approval by the Canadian Food Inspection Agency (CFIA), it is expected that the new committee will be operating under these revised procedures for the February 2006 meeting. The major impact of the new procedures would be that the new committee will become a recognized recommending committee dealing directly with the CFIA.

Recommended lines

SP 2149. Linseed flax. Lighter yellow seed coat colour than the check 1084, and the seed size and meal protein content are both increased. Seed oil content is increased and the oil has lower linolenic and higher linoleic acid content than the check. Yield, maturity, lodging and disease reaction are similar to the checks, with SP 2149 having immunity to rust and moderate resistance to fusarium wilt. SP 2149 will be offered as a new Solin flax line that has substantial improvements in seed quality compared to 1084. Agricore United and AAFC Morden.

FP 2141. Linseed flax. Brown-seeded line best suited for production in Saskatchewan and adapted to production throughout western Canada as shown by its increased yield over the check cultivars. It has increased seed size, good

maturity and resistance to lodging. It has 100 percent immunity to rust disease, and disease reaction to fusarium wilt is not different than the checks. U of S CDC.

FP 2137. Linseed flax. Brown-seeded line with increased yield, larger sized seeds and earlier maturity than the checks when grown in the Black Soil Zone. It is adapted to conditions of late seeding and has lodging resistance similar to the checks. FP 2137 is similar to the check, Flanders, in oil and protein content, but has a higher and very stable iodine number when grown in various locations throughout western Canada. It has significantly better resistance to fusarium wilt than the checks and has immunity to rust disease. AAFC Morden.

J97-149. Mustard. Brown mustard line with significant improvements in seed quality and good yield. Fixed oil content is reduced. Seed protein content, seed weight and the hot principle (allyl isothiocyanate) are increased compared to the check, Commercial Brown. Disease reactions are similar to the check, with resistance to blackleg and susceptibility to white rust disease. J97-149 will be the second pedigreed seed variety available in Brown mustard registered in Canada. This will provide producers and the mustard industry an opportunity for increasing the use of certified seed and improving the quality of the Canadian Brown mustard commodity. AAFC Saskatoon.

PRRCG *in profile*

An overview of the PRRCG and how it works.

Note: The following information outlines PRRCG mandate and procedures as they stood in 2004, prior to the PRRCG's current transition phase. The PRRCG Subcommittees are currently developing updated approaches for implementation in 2006.

Mandate

The CFIA's Variety Registration Office makes all final decisions on which crop lines are approved for federal variety registration. It is the PRRCG's job to assess candidate crop lines before registration and advise the CFIA on which ones it believes should obtain approval. Part of this includes administering pre-registration tests across the region.

The CFIA relies on many recommending bodies across the country. The PRRCG's specific mandate includes crops targeted for Prairie production in four major areas: wheat, rye and triticale; barley and oat; pulse and special crops; and oilseeds. Crop lines that fall under this mandate are required to go through the PRRCG system before they can advance for consideration by the CFIA.

The PRRCG mandate is not permanent. The Variety Registration Office reviews the committee's work every five years before deciding whether or not to grant another five-year mandate. The PRRCG mandate was most recently reviewed in 1999.

Structure and membership

The PRRCG consists of an executive committee, main committee and four subcommittees: the Wheat, Rye and Triticale Subcommittee; Barley and Oat Subcommittee; Pulse and Special Crops Subcommittee; and Oilseeds Subcommittee. (Canola is covered by a separate Western Canada Canola/Rapeseed Recommending Committee, which operates independently outside the PRRCG.) Each subcommittee has three evaluation teams responsible for assessing merit in one of three areas: 1) breeding and agronomy, 2) disease, and 3) quality.

The PRRCG includes full voting members and non-voting associate members. Voting members are those with the expertise to properly assess crop varieties, such as plant breeders and quality experts. Non-voting members typically

include farmers, research centre administrators, extension specialists and others with a legitimate interest in committee activities.

The decision-making process

The PRRCG's annual meeting includes several steps:

Evaluation teams assess the candidates. The process begins with each evaluation team assessing the candidate crop lines for performance in its particular area of expertise - breeding and agronomy, disease, or quality.

The evaluation teams judge the candidates and assign one of four possible votes.

Support - the candidate's performance is considered superior to current registered varieties.

Do not object - the candidate's performance is considered similar to check varieties and meets the minimum performance criteria.

Object - the entry is considered inferior to the check varieties and does not meet the minimum guidelines established.

Abstain - expected only in the case of an openly declared conflict of interest or in the absence of information on which to base a decision.

Subcommittees vote to recommend. Evaluation team assessments are then discussed at a meeting of the full subcommittee, as a basis for the subcommittee's formal vote to recommend the candidates for registration or turn them down. Abstentions are expected only in the case of an openly declared conflict of interest. At this level, the voting is based on an overall assessment of the candidate, and is typically performed by a show of hands. However, each subcommittee can decide on an appropriate voting method. For instance, the Wheat, Rye and Triticale Subcommittee used a secret ballot in 2002 and 2003.

Option to appeal. If a sponsor objects to the decision of the subcommittee, an appeal can be made to the PRRCG executive committee, whereby the executive votes and majority rules. A further appeal is also available, by which a three-person appeal panel is selected; one panel member is

selected by the subcommittee chair, another by the sponsor and a third by the registrar of the Variety Registration Office. In both scenarios, the sponsor must pay a fee for the appeal.

Recommendations approved by the PRRCG are forwarded to CFIA. Once the subcommittee has made its recommendations for registration and the general membership has approved the subcommittee's actions, the secretary of each subcommittee sends the registration recommendations to the CFIA's Variety Registration Office.

Special cases

These alternatives to full registration are also available.

Contract registration. Contract registration is an alternative to the usual variety registration process. Five-year contract registrations are available for crops that fall outside the normal traits of a particular crop class, but have a specific end-use. The sponsor must show that 1) an end-user exists for the crop and 2) that a closed production system is achievable, to prevent the crop from negatively affecting other crops in the system.

Interim registration. Not all lines are put forward for full registration. Another option is "interim" or temporary registration, which is typically requested to allow enough seed production for additional testing of quality traits. For example, a malt barley line may require seed for commercial plant scale testing, or a wheat line may require seed for milling quality testing.

Interim registration is typically granted for an initial two years, with potential for an additional two years following further review by the relevant subcommittee and CFIA.

Deregistration. The PRRCG also provides a forum to recommend the deregistration of varieties. This is often requested by the developers of a variety, in cases where a reduction in market demand or susceptibility to a new problem have lowered the variety's potential below a threshold of viability.

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Dr. Scott Duguid, PRRCG Chair

Dr. Michael Edney, Barley and Oat Subcommittee Chair

Dr. Stephen Fox, Wheat, Rye and Triticale

Subcommittee Chair

Eric Klassen, Pulse and Special Crops

Subcommittee Chair

Dr. Roger Rimmer, Oilseeds Subcommittee Chair

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Meristem Information Resources Ltd.

12 - 3109 Palliser Drive SW

Calgary, Alberta, Canada T2V 4W5

Phone: (403) 543-7420

Email: info@meristem.com