SASKATCHEWAN pulse Growers

pulsepoint

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Dean Corbett
Chairman of the Board

Protecting Our Investment

Recently, many growers have been expressing concern regarding the consequences of the loss of producer control of seed. SPG recognizes that continued producer investment in and control of plant breeding is a critical element to our global competitiveness.

For the past ten years, we have provided significant long-term support to the pulse breeding program at the Crop Development Centre (CDC) in exchange for the rights to exclusively distribute new varieties. During that time, 44 new pulse varieties have been released. A third party review of our Variety Release Program (VRP) by Mr. Terry Scott concluded that the VRP has been successful by ensuring rapid adoption of new pulse varieties. This is because our policy of making royalty-free Breeder status seed available to all Select status seed growers on a non-exclusive basis results in a very competitive environment for pedigreed seed sales.

PHOTO: D. WILLIAMS PHOTOGRAPHY

Assessing pea samples at the Crop Development Centre.

We are committed to enhancing our support of the CDC pulse breeding program in order to remain competitive in pea and lentil markets, and to provide growers with new opportunities in chickpeas, dry beans and other pulses. We expect to announce a new long-term agreement with the CDC within the next few months.

The Pea Genetic Improvement Program (PGIP) is a new tool that we have launched in order to expand our investment to all pea breeding programs targeting Saskatchewan. Our goal is to encourage a competitive environment in the development of new pea varieties for Saskatchewan growers. In its second year, we now fund six private and two public pea breeding programs. We will evaluate the program after three years.

Seed increase of CLEARFIELD® lentils is continuing this summer. Our partnership with the CDC and BASF will result in CLEARFIELD® lentils being made available to growers through our VRP. This means that CLEARFIELD® lentils will be very competitively priced because they will be royalty-free and widely available on a non-exclusive basis. A formal announcement of the details will be forthcoming.

In summary, your Board will continue to make investment in pulse breeding a top priority, in order to fulfill our Vision that: *"Saskatchewan will be a world leader in the production, processing and marketing of high quality and high value pulse products for a viable and profitable pulse industry."*

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Protecting Your Investment

This issue of *PulsePoint* focuses on crop protection and weeds and diseases pulse growers need to watch for this season. We feature tips on disease scouting, fungicide application and controlling kochia, as well as harvesting a quality crop. We also look to the future with a discussion of pesticide legislation in our export markets and round things off with a pea market outlook.

in this issue

departments

by Clark Brenzil

Kochia's Achilles Heel: Managing the Herbicide Resistant Tumbleweed

in brief

Tactics for battling kochia, an increasing weed concern for pulse growers.

Pulse crops by their very nature are low on the relative scale of competitiveness with weeds and as such rely more heavily on herbicides to maintain yields and quality. The weed that could cause the biggest concern for producers of pulse crops now and in the future is kochia. Other weeds are also large problems in pulse crops, but kochia presents some special challenges as well as management opportunities.

Group 2 resistant kochia is suspected to be widespread in the Canadian prairie landscape. Weed specialists across the prairies refer to kochia as the poster-child of herbicide resistance. Kochia has several factors that make it an ideal candidate for resistance development and spread. It is an annual plant relying on a new crop of seed every single year to carry on the population. Annuals typically produce lots of seed and kochia, at 40,000 per plant, is no exception. Kochia populations are made up of very diverse individuals as a result of an inability to self-pollinate. Ongoing out-crossing means that a single individual within a population may carry the genetics for resistance and spread it rapidly to the offspring of other plants as well as its own.

Not only are kochia's genetics very mobile, but so is the plant itself. With its bushy growth habit and a tap root that rots off when mature, kochia is a tumbleweed that scatters seed as it rolls across the landscape in the fall. This natural mobility allows the resistant biotype to spread rapidly from field to field, in addition to the multitude of other ways that humans spread weeds from place to place.

Bruce Murray, Weed Specialist with Manitoba Agriculture and Food (MAF) is currently working on the second year of an informal survey of kochia populations in Manitoba. Kochia is a relatively new weed in Manitoba, but the 2004 MAF survey found that about 80% of kochia populations collected from across Manitoba were resistant to Group 2 herbicides.

There is a silver lining in this doom and gloom story. Kochia has an Achilles heel that can be used to prevent its spread and possibly even clean up resistant populations.

While it is possible that those resistant populations developed independently in Manitoba, the high proportion of resistance in the population strongly suggests that some of the original invaders were resistant as well.

Records of testing for herbicide resistance in kochia at the Crop Protection Lab, operated by Saskatchewan Agriculture and Food in Regina, found that none of the viable kochia seed samples sent in for testing were susceptible to Group 2 herbicides. Seed was either from resistant plants or was unable to germinate.

Group 2 resistant kochia will become an increasingly important issue for those in the traditional pea growing areas of the province as kochia populations move further north and east. Heavy reliance on Odyssey® and Pursuit® for weed control will leave pea producers vulnerable to Group 2 resistant kochia.

However, there is a silver lining in this doom and gloom story. Kochia has an Achilles heel that can be used to prevent its spread and possibly even clean up resistant populations. But we shouldn't wait until all herbicide options have disappeared before adopting these management tools.

Seed dormancy and longevity in kochia is minimal. Seed shed in any one year must produce a plant within three years or perish. Most seed, in the neighbourhood of 70 to 80%, will germinate the year after it is produced, with only about 5% emerging in the second year and less than 0.1% in the third year. Therefore, the key to eliminating kochia is to completely prevent seed production for two or three years. Accomplishing this, while remaining economically viable is the key. The other challenge is convincing all of the neighbours, who also have kochia that may repopulate your field, to participate in a united plan to combat the problem.

The key to eliminating kochia is to completely prevent seed production for two to three years.

One of the most obvious ways to prevent an annual plant like kochia from going to seed is to treat it with a herbicide. But as we have already seen, kochia is our poster-child for resistance and could develop resistance to the limited herbicide options that currently remain. As a result, we need to be careful about overusing our remaining options.

In pulse crops, Edge® (ethalfluralin) is the only remaining option for kochia control, but it conflicts with direct seeding in that incorporation is required. Work has been done to investigate late fall surface applications to adapt the product to low disturbance seeding, but aside from the fact that the Pest Management Regulatory Agency (PMRA) has steadfastly refused Dow AgroScience's applications to register the fall surface application of Edge®, research at the University of Saskatchewan has shown that fall surface application is less effective on certain weeds including kochia.

PHOTO: SASKATCHEWAN AGRICULTURE AND FOOD

Kochia seedling.

Research is currently being done to investigate some additional options for pea and chickpea that have good activity on kochia. Sulfentrazone, which goes under the trade names of Authority® or Spartan® in the USA, is registered in the USA on sunflower, field pea, chickpea and field bean and is applied as a pre-emergent surface treatment to control a broad spectrum of weeds including kochia. Sulfentrazone is a Group 14 herbicide, the same group as Reflex® for dry beans in Manitoba, that is being looked at in chickpea. Isoxaflutole, which goes by the trade name Converge® in Ontario and Balance® in the USA, is being investigated in chickpea as a pre-emergent surface treatment with broad spectrum weed control including kochia. Isoxaflutole is a Group 28 herbicide unique to the prairies. Carfentrazone goes by the name of Aim® in the USA and is related to sulfentrazone. It is used as an early post-emergent product for broad spectrum weed control on lentil, chickpea and dry bean in the USA. No research

PHOTO: SASKATCHEWAN AGRICULTURE AND FOOD

Mature kochia plant.

is yet underway on this product, but may be one to consider in the future. One of the difficulties with sulfentrazone and carfentrazone for development in Canada is that the manufacturer, FMC Corporation, does not have a Canadian business unit. PMRA requires that there be a Canadian "product steward" that will be able to deal with potential spill issues before accepting a product not registered in Canada for minor use registration.

Because the seed life in the soil is so short, concentration on control measures in the crop or crops preceding the pulse year is a viable option for ensuring that little kochia is present in the pulse crop. The challenge is that because kochia is such a prolific seed producer, a small number of escapes can result in enough seed to cause a problem the following year.

The hairy leaves of kochia are features that allow the plant to prevent moisture loss under dry conditions, but they can also act as a barrier to herbicide entry to the plant, making the herbicides less effective. Maintain spray water volumes at the high end of the recommended range to ensure penetration of the barrier provided by these hairs.

There are several herbicide options for cereals that can be found in the SAF publication *Guide to Crop Protection* that control kochia using non-Group 2 chemistry and do not leave a residue to affect the pulse crop that follows. Remember that resistance to other herbicide groups can develop quickly with over-use. Montana has reported Group 4 resistant kochia as well. A large portion of the alternatives to Group 2 herbicides are in Group 4.

Pre-harvest glyphosate is effective at stopping any further development of the kochia plant, and killing the kochia plant so that it may dry down some prior to harvest, but it will not reduce the viability of seeds that have already filled and reached physical maturity. Because of this, it is not a reliable way to eliminate seed production.

While summer fallow is a non-chemical means to manage kochia populations, it does not provide a return to the farm and can open the land up to erosion. Another cultural management alternative is a forage crop, where top-growth of kochia is removed with the forage and prevented from producing seed. Kochia has feed value similar to alfalfa, but should only be fed to a maximum of 30% of the ration because of high oxalate content. Oxalate removes calcium from the body and the result is the formation of kidney stones of calcium oxalate, which can interfere with kidney function. Annual forage will grow rapidly and compete with the kochia as it develops, but provides only one year of competition. A short-term perennial forage may be more difficult to establish, but will be more competitive over the long-term against kochia.

Since kochia grows well in saline soils, it is important to take care of kochia patches growing outside of the field as well as inside the field to ensure that its spread is contained.

If you have a kochia population that does not seem to be responding to Group 2 herbicides any longer, you likely have a resistant biotype in your field. This is going to limit the herbicide choices available for use in pulses, particularly in reduced tillage systems, but additional options are being researched. Check the *Guide to Crop Protection* for a list of Group 2 herbicides that should be avoided in the future. Focus on trying to manage Group 2 resistant kochia in years other than the pulse year and integrate some cultural management techniques to prevent seed production. Kochia does not have to be a lifelong problem like many other weeds and can be managed even if it is resistant.

Clark Brenzil is the Weed Specialist at Saskatchewan Agriculture and Food in Regina. For more information, contact Clark at cbrenzil@agr.gov.sk.ca.

More Info

2005 Guide to Crop Protection is located at www.agr.gov.sk.ca/Docs/crops/cropguide00.asp

SAF Factsheet, *Control of Tumbleweeds – Kochia and Russian Thistle*, can be found at www.agr.gov.sk.ca by searching for "kochia."

by Penny Pearse

Scouting For Diseases in Pulse Crops

in brief

How to scout for disease and what to look for.

Spring weather conditions have been mostly ideal and pulse crops are off to a good start, but so might be the diseases that attack them. Although farmers are busy with various tasks around the farm, this is also the time of year to start scouting for early disease symptoms and to plan a fungicide spray program for the season.

The foliar diseases of primary concern in 2005 are ascochyta blight in chickpea, ascochyta blight and anthracnose in lentil, and ascochyta (mycosphaerella) blight in field pea. Sclerotinia, or white mould, may also be a risk in those regions where canola is commonly produced (but will not be discussed in this article).

What is the risk of disease in 2005?

To answer this question, we must first look at last season. The 2004 season was cool and moist, delaying crop maturity and favouring abundant foliage, which by harvest time also resulted in increased levels of fungi growing on pulse straw and seed. Hence, there is abundant disease inoculum present on most pulse crop residues left in the field and also in the seed planted this spring. Commercial seed testing labs reported higher than normal percentages of ascochyta infection in pea and lentil seed, and anthracnose was isolated from a greater proportion of lentil samples tested.

PHOTO: C. CHO, CROP DEVELOPMENT CENTRE

Ascochyta on chickpea.

There is no exact science when it comes to forecasting diseases, since risk can change daily depending on rainfall. As the 2005 growing season continues, farmers need to keep their ears on the weather forecast and their eyes on their crop.

Table 1: Summary of Disease Scouting Practices for Pulses

	CHICKPEA	LENTIL	FIELD PEA
When to begin scouting?	Begin scouting at the seedling stage and scout every 3 to 7 days depending on disease risk.	Begin scouting at the vegetative stage (8 to to 10 node stage) and scout every 7 days.	Begin scouting at the early bloom stage and scout every 7 to 10 days.
How to scout?	Scout first in those fields or areas that are at greatest risk, including: • Fields planted with infected seed; • Fields that had the same pulse crop in the previous two years; • Field margins adjacent to last year's infected pulse stubble; • Areas where the plants have been stressed or have a dense plant canopy; • Fields planted to the most disease-susceptible cultivars. If time allows, scout additional parts of the field: • In a field < 100 acres, check a minimum of 5 sites. In a field > 100 acres, check a minimum of 10 sites. • Walk an "M" pattern throughout the crop to cover a large area. • Early symptoms are usually first noticed in the lower canopy; look closely at the lower leaves and stems (a magnifying glass will help). • Use flags to mark specific areas in the field for regular monitoring to watch for disease spread to new tissues and/or to determine the effectiveness of previous fungicide applications.		
What to look for? For accurate identification of symptoms: 1. Use field guides with photos. 2. Acquire the assistance of a qualified agronomist. 3. Send a sample to the provincial Crop Protection Lab (306-787-8130).	**Ascochyta blight:** In both lentil and chickpea, symptoms begin as small light brown to dark brown spots, often the size of a pinhead. Spots are first visible at the bottom of the plant. Under humid conditions, these spots expand quickly into lesions, which are often surrounded by a darker brown border. Small dark pycnidia, which are the fruiting bodies that produce spores, may be observed in the centre of the lesion. Severe infection leads to browning of leaves and stem breakage. Disease development in chickpea is very rapid under wet conditions and yield loss can be high.		**Ascochyta (Mycosphaerella) blight:** In pea, early symptoms show up as numerous black flecks on leaves and stems in the lower canopy. Without rain, these flecks will not expand and will not adversely affect yield. But, if moist conditions and heavy plant canopies prevail, lesions on leaves and lower stems could expand and lead to yellowing of leaves, lodging of plants and yield loss.
		Anthracnose: Usually shows up during the 10-12 node stage (about one week before flowering). Early symptoms are very similar to ascochyta. Anthracnose lesions are more commonly observed on the stems and do not develop pycnidia, but another type of spore structure that is black and irregular in shape.	

Table 1: Summary of Disease Scouting Practices for Pulses (continued from previous page)

	CHICKPEA	LENTIL	FIELD PEA
What factors favour disease risk?	**Rainfall:** Increase scouting frequency if moist conditions prevail. Foliar diseases such as ascochyta and anthracnose thrive and spread during warm weather with frequent rain showers. **Crop susceptibility:** Those crops rated as having 'poor' or 'very poor' resistance to a disease should be monitored carefully. Overall, pea crops are more tolerant to the ascochyta blights than are lentil and chickpea.		
Fungicide application timing * Always refer to the product label for specific information on diseases controlled, rates and application timing.	In chickpea, yields can be reduced by almost half if ascochyta control does not begin at the vegetative stage. Begin fungicide application at the onset of disease, i.e. when ascochyta blight symptoms are first observed while diligently scouting. Repeat fungicide application every 7 to 14 days if disease risk continues. Fungicide application should be made prior to rainfall events to be most effective.	The optimal time for control of anthracnose and ascochyta is from the 10-12 node stage to the mid-flowering stage. Usually, one well-timed application of fungicide is sufficient for controlling lentil diseases. In lentil, fungicide application is not cost-effective if the crop remains almost disease free until after flowering. An application at early pod set may protect seed quality but will not improve yield.	The optimal time for ascochyta control in field pea is at the early flowering stage. There is rarely an economic return from applying a foliar fungicide to control ascochyta in field pea. The 2004 season was an exception as some fields in northern farming regions suffered yield loss due to ascochyta.

Why scout for pulse diseases?

High yield losses are possible if disease inoculum is present and rainfall is available to cause disease development and spread within a crop. Early identification of infection sites is critical as it allows time for a decision regarding fungicide application to be made before the disease gets a foothold in the crop. Remember that tiny microscopic organisms cause disease. By the time large-scale symptoms can be seen during a quick drive-by, it may be too late to take action as the damage is already done.

Growers should not adopt an "I'm going to spray anyway" approach. Some well-planned scouting can determine how to get the most efficient use of a fungicide application. As well, chemical injury, weather damage, fertility, insects or root disease may be mistaken for foliar diseases. Applying fungicides for the wrong problem or at the wrong time will greatly reduce economic returns and can limit control options for later in the season if disease risk increases.

How to scout for pulse diseases?

It is not realistic to scout all pulse crops for disease, so it is essential to develop efficient scouting skills. Scouting for disease depends on the type of pulse crop, weather conditions, and disease risk for your region. (Table 1)

Conclusion

Remember that fungicide application is just one tool to protect pulse crops against disease. An integrated approach that incorporates a number of good management practices is far better than relying on fungicide application alone. Farmers know their crops the best when it comes to yield potential and whether disease control will be economical. Incorporating some effective scouting techniques will help in making those decisions.

Penny Pearse is the Provincial Plant Disease Specialist with Saskatchewan Agriculture and Food in Regina. For more information, contact Penny at ppearse@agr.gov.sk.ca.

More Info

Where do I find additional resource material?

Ascochyta Blight in Chickpea – Guidelines for Fungicide Application, is a SAF factsheet available at:
www.agr.gov.sk.ca/
(under > Crops
> Integrated Pest Management
> Diseases)

Also available on CD-ROM by calling 306-787-5297

Pulse Production Manual
www.saskpulse.com/library/ppm/index.html

Diseases of Field Crops in Canada
This comprehensive field guide includes detailed information and colour photos of crop diseases important to the prairies. Available at the University of Saskatchewan bookstore (306-966-5565).

by Thomas M. Wolf and Sabine Banniza

Fungicide Application on Chickpea

in brief

Fact or fiction? Overcoming the spraying technology myths.

YOUR CHECKOFF DOLLARS AT WORK
Another Project Funded By Saskatchewan Pulse Growers

Fungicides are important crop protection tools for Saskatchewan pulse crops. Although the use of resistant cultivars and cultural practices such as crop rotation are the first lines of defense for plant disease, there are situations where fungicide application is necessary.

Fungicide application requires spray coverage and penetration considerations that are usually not required for herbicides. Plant diseases may target specific plant parts such as stems and petioles, leaves or pods. Often, diseases develop first at the bottom of dense canopies, therefore good penetration is required. We will draw on field and laboratory studies with fungicides on pulses to answer some common questions.

Spray Technology Myths

Based on work to date, primarily originating in Europe, there are some (mis)perceptions about the application of fungicides.

Fine sprays are needed for coverage. This is partly true. At any given volume, smaller droplets will increase overall droplet numbers, and this will increase coverage *if they land on the target.* On the other hand, these finer sprays also evaporate very quickly and can't be accurately placed because they are subject to drift. Coarser sprays will provide just as much coverage as long as water volume is reasonable (>10 gpa). In the end, droplet density (number per square inch) is more important. Adequate densities can be achieved with a wide number of application methods.

High pressure improves penetration. This is mostly false. Some believe that higher pressure accelerates droplets and forces them deeper into the canopy. In fact, the acceleration of droplets by higher pressure does not persist very long (only a few centimetres beyond the nozzle for most droplets) and has no impact by the time the droplets reach the canopy. The most important thing pressure does is produce a finer spray, and if one can live with the increased drift potential, this may increase coverage.

More coverage is better. One would think this is always true. In many studies where coverage was compared to disease control, results were highly variable. This does not mean that good coverage is not necessary – it is. But, because there are so many other factors at play (disease pressure, variable crop stages, etc.), improved coverage does not guarantee better disease control. Also, once sufficient coverage is obtained,

Figure 1: Application method

Ascochyta disease severity on Sanford (unifoliate leaf type- Kabuli) with four fungicides and three application methods. Twin, Lurmark TwinCap with conventional flat fan nozzles; XR, TeeJet XR flat fan (conventional); ABJ, Air Bubble Jet (air induced). Application volume 200 L/ha @ 40 psi.

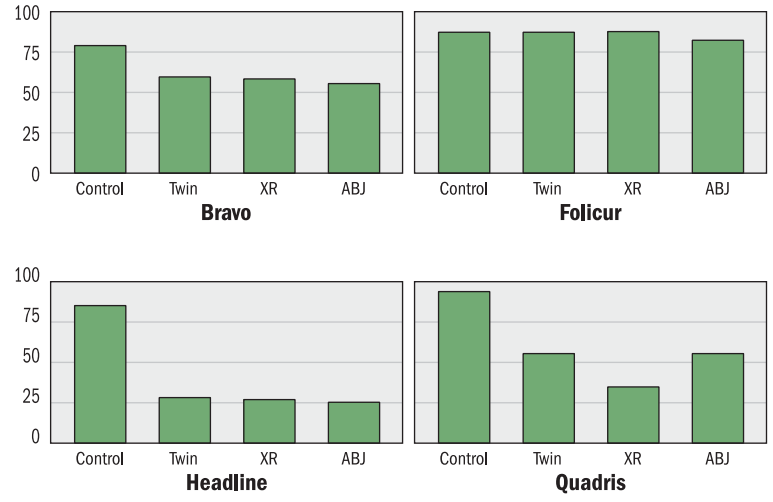
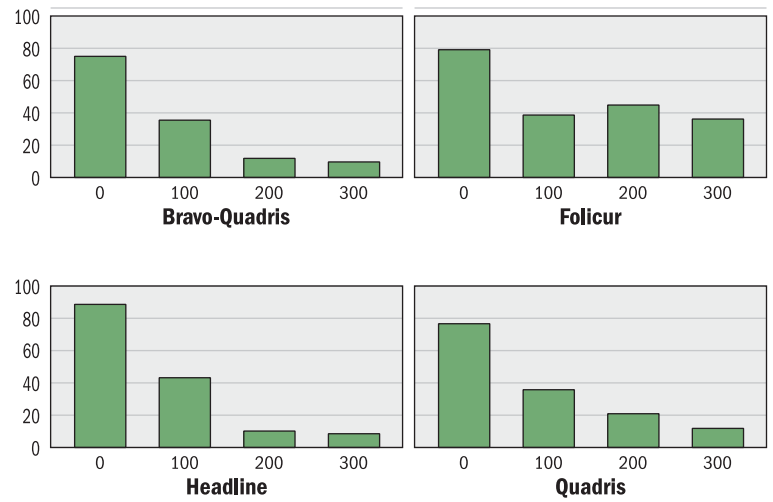


Figure 2: Volume (L/ha)

Ascochyta disease severity on Yuma (fern leaf type – Kabuli) with four fungicides and three carrier volumes @ 40 psi.



a further increase in coverage does not increase the benefit. Still, it is good practice to strive for the best possible coverage to improve consistency.

Study 1: Ascochyta Control in Chickpeas

A study comparing application method of fungicides in chickpea was completed in 2003. In one experiment, the effect of nozzle type was evaluated. A double nozzle (Lurmark® TwinCap) was compared to a conventional flat fan (TeeJet® XR) and an air-induced nozzle (Air Bubble Jet®). Application volume was 200 L/ha at 40 psi with all nozzles. In the second experiment, the effect of carrier volume was evaluated using a flat fan nozzle traveling at different speeds to achieve 100, 200 and 300 L/ha.

Observations: Fungicide type had a significant effect on disease control in the majority of trials (Figure 1). Headline® and Quadris® tended to provide better disease control than Bravo® or Folicur®. Nozzle type did not have a significant effect on disease control.

Water volume had no significant effect on unifoliate chickpeas, but showed a significant response in a fern-type canopy. With most products, application in 200 L/ha provided significantly greater disease control than 100 L/ha (Figure 2). In some cases, 300 L/ha was slightly better than 200 L/ha.

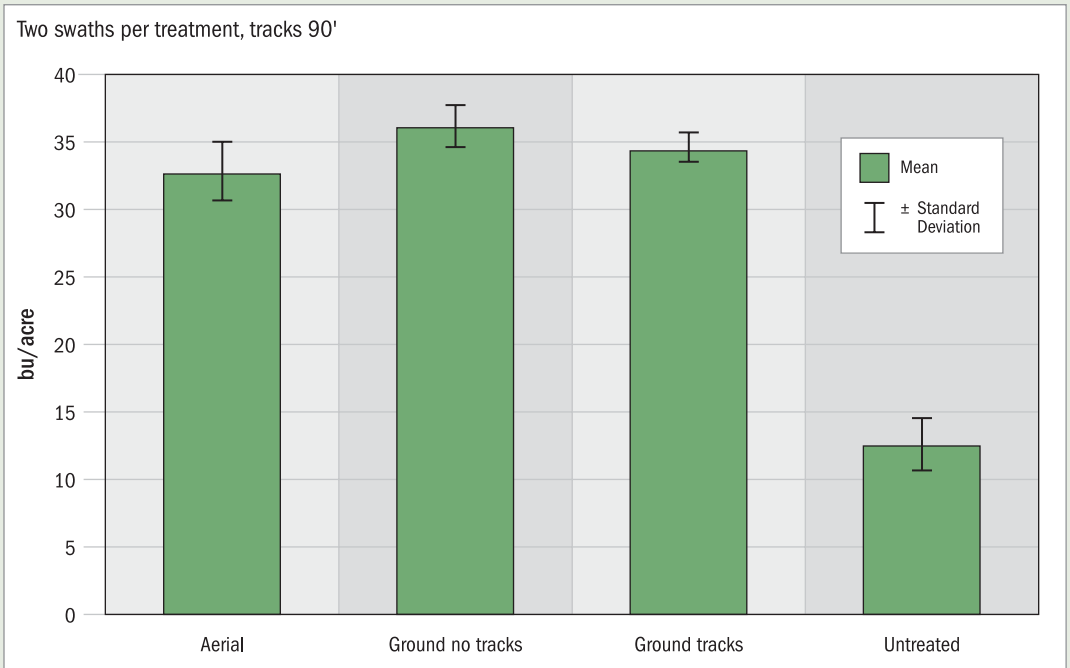
Disease control observations were confirmed with spray retention studies. For fern- or unifoliate leaf types, nozzle type had no significant effect on spray retention. Carrier volume had no significant effect on retention on unifoliate leaf types, but on fern leaf types, higher carrier volume provided significant improvements in spray retention.

Conclusion 1: There was no effect of droplet size on ascochyta disease control or spray retention in fern- or unifoliate chickpeas. Higher carrier volumes tended to provided better disease control and retention values in fern- (dense canopy), but not unifoliate (open canopy) leaf types.

Study 2: Aerial vs Ground Application

Ascochyta rabiei control from aerial and ground application was assessed near Saskatoon in 2003 and 2004. Each year, a site of about 30 acres was seeded CDC Xena kabuli chickpea. At the first sign of disease, fungicide was applied and repeated at approximately 10-day intervals. In 2003, four applications [two with Headline® (pyraclostrobin), two with Lance® (boscalid)] were conducted. Aerial application was made using a Cessna AgTruck applying 4 US gpa using CP nozzles emitting a spray with a volume median diameter (VMD) of approximately 271 micrometres. Ground applications were conducted using a Melroe SpraCoupe applying 11 US gpa using XR8003 nozzles with a VMD of approximately 246 micrometres. Disease ratings were done throughout the

Figure 3: Chickpea (CDC Xena) seed yields from plots treated with aerial or ground application methods



season and seed yields were recorded at crop maturity.

Disease incidence was 80-90% in the untreated plots and fungicide application reduced disease incidence to 20-30% and increased seed yield in both years. Disease incidence and seed yield were not affected by application method in either season. The role of sprayer tracks in spreading disease is still unknown – there was no evidence that disease was more severe in the wheel tracks.

Conclusion 2: In a four-spray per season program, aerial application was just as effective as ground application in suppressing disease and increasing seed yield in kabuli chickpea.

Overall Summary and Recommendations

Fungicides represent a major expenditure in the production of crops in Saskatchewan. Ensuring high levels of performance is difficult with application method alone. Other factors that determine disease severity can often over-ride improvements in application technique. Nonetheless, it is important to apply fungicides properly and the following steps are recommended:

- Apply fungicides in high carrier volumes (minimum 12 to 15 gpa) unless the label specifically recommends against it. Higher volumes improve both coverage and penetration of the spray and this is the single most important variable for foliar fungicides.
- Do not apply fungicides as very fine sprays. There appears to be no advantage to this, and it can lead to excessive spray drift and evaporation. Although fine droplets are important for coverage, they are contained in all sprays (even low-drift) and are more effectively deposited when associated with larger droplets or air assist.
- Double nozzles do not appear to benefit fungicide performance in chickpeas. Our best information to date (from work with fusarium headblight in wheat) suggests that these nozzles are most effective when used with coarser sprays. This is because coarser droplets maintain their original direction of travel for a longer period of time and therefore cover the leading and trailing sides of the target more effectively. Finer sprays are easily displaced by wind and turbulence and the initial direction of travel is soon lost. More work needs to be done in this area.
- Aerial application appears as effective as ground application for control of ascochyta blight.

Dr. Thomas Wolf is a Research Scientist at Agriculture and Agri-Food Canada's Saskatoon Research Centre.

Dr. Sabine Banniza is the Pulse Pathologist at the Crop Development Centre in Saskatoon.

2006 Board of Directors
Nominations

If you are a registered pulse producer (i.e. you have sold pulses and paid levy within the last two years), and would like to be instrumental in building Saskatchewan's pulse industry, fill in the nomination form below. It must be signed by three other registered growers.

One position is open for Directors on the Board of the Saskatchewan Pulse Growers. Nominations are being accepted until noon on MONDAY, OCTOBER 31, 2005.

Responsibilities:
- 10 Board meetings per year (one per month except during harvest and seeding); conference calls as required
- Average time commitment of board members is 50 days per year
- Terms are for three years, with a maximum of two consecutive full terms

Nomination Form

In accordance with the Saskatchewan Pulse Growers Regulations, I, the undersigned hereby submit my name as a candidate for election to a seat on the Board of Directors of the Saskatchewan Pulse Growers.

First Name _____ Last Name _____

Address/Town _____

Postal Code _____ E-Mail _____

Telephone _____ Fax _____

Signature _____

I have grown the following pulse crops:

	2004	2005
	_____	_____
	_____	_____
	_____	_____

I nominate the above pulse producer as a candidate for election as a director of the Saskatchewan Pulse Growers.

Name of Registered Producer (signature)	Name of Registered Producer (signature)	Name of Registered Producer (signature)
Name (please print)	Name (please print)	Name (please print)
Telephone	Telephone	Telephone
Fax	Fax	Fax

Please return this form to:

Saskatchewan Pulse Growers, #104-411 Downey Road, Saskatoon, Saskatchewan, S7N 4L8
Telephone: 306-668-5556 Fax: 306-668-5557

Note: Only registered producers can hold office, vote, or nominate others. If your dealings with the Saskatchewan Pulse Growers (e.g. levy submission) have been through your company name, rather than your own name, you may have to sign the "Designated Representative Form" which designates you as a representative of the company for election and nomination purposes. Please contact the Saskatchewan Pulse Growers Office at (306) 668-5556 if you think this might apply to you.

in brief

Students have developed tasty new recipes with pulses.

Pulses Make Great Snacks!

In the last issue of *PulsePoint*, we highlighted two of the winning recipes from a student contest featured at Pulse Days. Students from the Home Economics Education and Nutrition programs at the University of Saskatchewan and Nutrition students from McGill University in Quebec put together more than forty new recipes using pulses.

Among the top four were Rachel Nussbaumer from the University of Saskatchewan and her recipe for Peanut Butter Chickpea Cookies, and Heather Whittick, also a U of S student, whose Mexican Dip delighted Pulse Days participants.

Try out these pulse dishes today. We'd love to hear how you use pulses in your kitchen.

PHOTO: J. BLONDEAU

Mmmmelt-in-your-mouth peanut butter chickpea cookies.

Contact Us

Have a question or an experience cooking with pulses you would like to share? Send your comments to pulse@saskpulse.com.

MEXICAN DIP – *Heather Whittick*

396 ml (14 oz) can of pitted black olives
4 large tomatoes
115 ml (3 oz) sliced jalapenos
250 ml (1 cup) low fat Italian dressing
375 g (12 oz) shredded Monterey Jack Cheese
5–10 green onions
250 ml (1 cup) black beans

In a food processor, combine black olives, green onions, jalepenos, and black beans. Process until finely chopped. Add to the Monterey Jack cheese in a large bowl. Dice tomatoes and add to the mixture. Add Italian dressing and stir until well mixed. Dip can be refrigerated or frozen to keep longer. Serve with black bean or corn tortilla chips. Yield: 1500 mL (6 cups)

PEANUT BUTTER CHICKPEA COOKIES – *Rachel Nussbaumer*

250 ml (1 cup) whole wheat flour
1 ml (¼ tsp) salt
125 ml (½ cup) softened margarine
125 ml (½ cup) white sugar
5 ml (1 tsp) vanilla
15 ml (1 tbsp) water
2 ml (½ tsp) baking soda
250 ml (1 cup) flattened chickpeas
125 ml (½ cup) brown sugar
125 ml (½ cup) light peanut butter
1 egg (unbeaten)

Sift the first 3 ingredients together. Place chickpeas between wax paper and use a rolling pin until they are completely flattened. Cream together the margarine, sugars, peanut butter, vanilla, egg and water in a large bowl. Mix in the chickpeas and flour mixture. Drop by teaspoon onto a prepared cookie sheet. Make small balls because they spread easily. Press lightly with a fork dipped in flour. Bake at 170°C (325° F) for 12–17 minutes. Yield: 30 cookies

Pulse Field Lab Project

Building the Dream

How will the new lab benefit growers?

BASF

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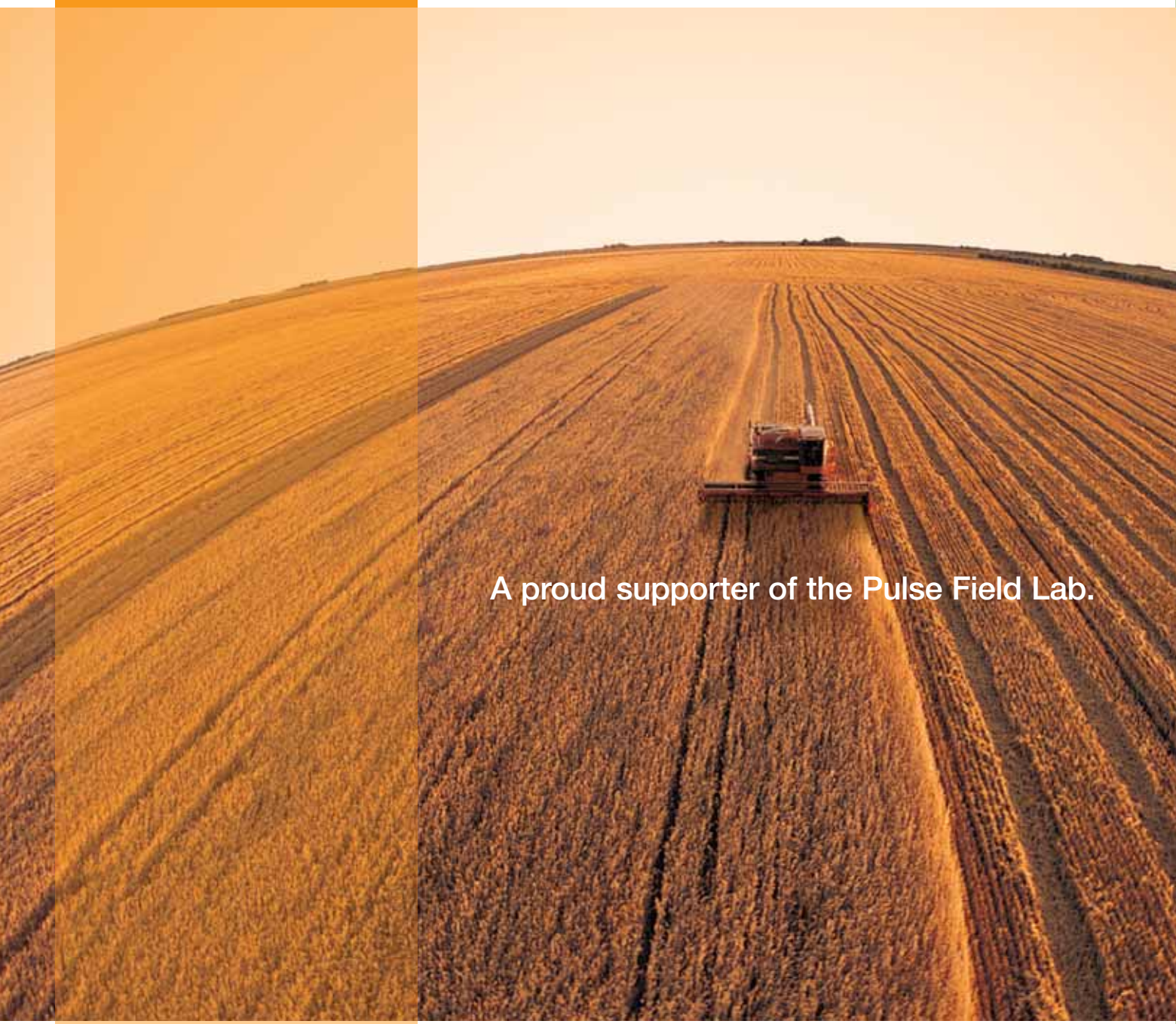
Responding to **Growers' Needs**



For more information call **BASF AgSolutions**® at 1-877-371-BASF (2273)
or visit our website at www.agsolutions.ca

Dear Pulse Industry,

It's interesting to look back three and half years to when we first announced the capital campaign for the pulse field lab and see the progress that's been made. When we initiated this project, we had a vision for what this facility would do for our industry and the fit it would have with our own research directives. We didn't have detailed floor plans at that stage, nor exact costs, but we knew that the concept had merit and was worth our efforts and struggles to achieve.

We've been extremely fortunate to have strong support from Government and private industry for this project. Many of these organizations made significant contributions very early in the process, based on their trust of our leadership and determination. We salute those visionaries for their faith and foresight.

Today, as the pulse field lab addition nears its structural completion, we would like to say thank you for making our dream a reality.

Yours truly,

Dean Corbett

Dean Corbett, Chairman
Saskatchewan Pulse Growers

Inside:

Western Economic Diversification Canada | Diversification de l'économie de l'Ouest Canada

Greetings from the Honourable Stephen Owen

Western Economic Diversification Canada (WD) is proud to be a part of the construction of a new Pulse Crop Field Lab on the University of Saskatchewan campus.

When the Pulse Crop Field Lab opens in Fall 2005, it will provide Saskatchewan scientists with access to a world-class facility where they can conduct and expand on traditional plant breeding techniques and agronomic research. Their work will lead to higher quality pulses with increased agronomic performance, and will enable Saskatchewan and Canadian pulse growers to remain globally competitive.

At WD, we collaborate with our provincial colleagues as well as universities, community groups, and business associations in Western Canada to expand economic opportunities in Saskatchewan and across the West. A result of the combined efforts of WD, Saskatchewan Pulse Growers, Province of Saskatchewan, University of Saskatchewan and the private sector, the Pulse Crop Field Lab demonstrates what can be achieved when community members work together in partnership.

To learn more about WD's work across Western Canada, visit our Web site at www.wd.gc.ca.

Souhaits de l'honorable Stephen Owen

Diversification de l'économie de l'Ouest Canada (DEO) est fier de participer à la construction du nouveau laboratoire de terrain pour les légumineuses du campus de l'Université de la Saskatchewan.

Lorsque le laboratoire ouvrira ses portes à l'automne 2005, il donnera aux scientifiques de la Saskatchewan accès à une installation de calibre mondial où ils pourront étudier et améliorer les techniques traditionnelles de reproduction des plantes et faire de la recherche agronomique. Leur travail mènera une meilleure qualité de légumineuses et à un rendement agronomique supérieur, et permettra aux cultivateurs de légumineuses de la Saskatchewan et du Canada de rester concurrentiels sur le marché mondial.

À DEO, nous collaborons avec nos collègues provinciaux ainsi qu'avec les universités, les groupes communautaires et les associations de gens d'affaires de l'Ouest canadien afin de développer les possibilités économiques en Saskatchewan et dans l'ensemble de l'Ouest. Résultat des efforts combinés de DEO, des Saskatchewan Pulse Growers, de la province de la Saskatchewan, de l'Université de la Saskatchewan et du secteur privé, le laboratoire de terrain sur les légumineuses est la preuve de ce que l'on peut réaliser lorsque les membres d'une communauté travaillent en partenariat.

Pour vous renseigner davantage sur le travail de DEO dans l'Ouest, visitez notre site Web à www.deo.gc.ca.

The Hon. Stephen Owen, P.C., Q.C., M.P. /L'hon. Stephen Owen, C.P., C.R., député
Minister of Western Economic Diversification and Minister of State (Sport)
Ministre de la Diversification de l'économie de l'Ouest canadien et
ministre d'État (Sport)

Canada

New R & D Facility Benefits Saskatchewan Pulse Growers

By Karen Millard and James Weseen

The new Pulse Field Lab is key to SPG's long-term research strategy

Wagon Wheel Seed Corporation, a pedigreed seed business owned by the Kaeding family of Churchbridge, Sask. has grown up with the province's pulse industry.

In 1980, just five years before Warren and Carla Kaeding graduated from the University of Saskatchewan, Statistics Canada had reported only 30,000 acres of pulses in the entire province.

By 1985, when the young couple launched their business with Kaeding's father, Roger, growers were viewing pulses with a little more interest. Warren Kaeding recalls being easily persuaded by the Allstate Grain agent to put in 50 acres of lentils the first year. The Saskatchewan Pulse Crop Development Board, later called the Saskatchewan Pulse Growers (SPG), was already a year old and had received check-off revenue of $150,543.

Twenty years later, SPG's annual check-off revenue amounts to some $5.5 million, and peas alone account for well over two million acres annually. Pulse crops in total surpassed the one million acre mark in the mid-nineties. Now covering four to five million acres, they are Saskatchewan's third most important crop export, accounting for about 15% of farm income.

Warren Kaeding turned his attention from lentils and now produces over half a dozen varieties of green and yellow peas. He also produces pinto beans and is experimenting with soybeans, his eye

Architect's rendering of the new Pulse Field Lab.

on the Chinese brewing market. A third-generation farmer, Kaeding credits his father for the inspiration. "Dad was always an innovator," he says.

In fact, "a remarkable story of innovation" is how Richard Gray and Terry Scott, authors of a 2003 study commissioned by SPG, described the phenomenal growth of Saskatchewan's pulse industry. Innovation begins with basic research and ends with the transfer of research results—new products, new methods or new technologies—into the marketplace.

Over the years, pulse research sponsored by SPG and other private and public sector organizations has resulted in new varieties that provide higher yields, better seed quality and greater resistance to diseases such as powdery mildew and ascochyta blight.

Research has also helped growers exploit new market opportunities by delivering a food product that satisfies the world's increasingly discerning pulse consumers. "Colour is very important to a pulse crop," Kaeding notes. "So are cooking parameters such as the viscosity of the broth."

The successful development and commercialization of new varieties has helped to establish Saskatchewan as Canada's leading pulse crop producer and, in turn, to propel Canada to the front of the pack as the world's leading exporter of pulses.

Yet that's a position no one takes for granted. Pressure from Australian and U.S. producers is increasing and consumer demands are ever-changing. For instance, rather than simply selecting the locally-grown variety, today's microwave-owning Mexicans prefer a bean that looks familiar yet cooks faster.

"Do you say 'No' to the customer...or do you say 'We can do it'?"

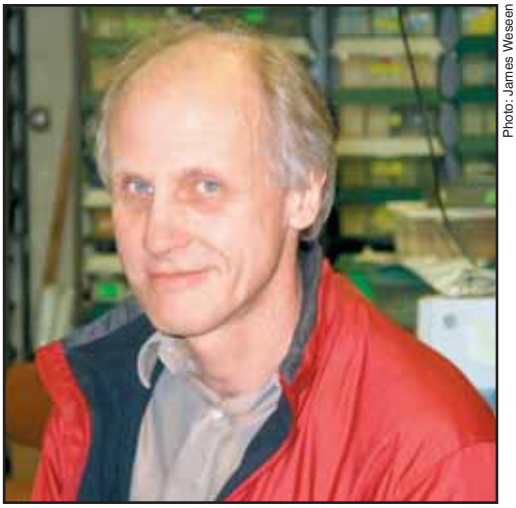


Photo: James Weseen

Dr. Bert Vandenberg reflecting on future opportunities.

As well, Kaeding adds, "What works in one market doesn't necessarily work in another market."

Dr. Bert Vandenberg, a pulse breeder at the U of S Crop Development Centre (CDC), recently returned from the Middle East. Red lentil consumers in the three countries he visited had clearly expressed preferences—and all differed from one another. Saudi Arabians want lentils of a different size, shape and colour than the people in Dubai. "Do you say 'No' to the customer," Vandenberg asks, "or do you say 'We can do it'?"

If Saskatchewan producers want to maintain their top position, the answer will have to be, we can do it. "We have to stay one step ahead of our competitors," says SPG Chair Dean Corbett, "and that always depends on research."

Since the development of a new variety takes seven to twelve years from the first cross to the time the farmer holds the seed in his hands, pulse researchers can't afford to slacken the pace.

The CDC's Crop Science Field Laboratory was built almost 15 years before SPG was established. The area allocated to pulse crop research was designed to accommodate one scientist and one technician. This space now houses four different breeding programs, and up to 28 people may jostle for elbow room.

Vandenberg offers a wry comparison. "Imagine you're living in a closet," he says. "It was okay when it was just you…." His voice tails off as he surveys the cluttered tables and the shelves stacked high with storage bins.

Research Assistant Brent Barlow, manager of the pulse science field lab, is pragmatic but he, too, reveals a sanity-saving sense of humor. "We've begged and borrowed table space in other parts of the building," he says. "We have a bit of a reputation."

Photo: James Weseen

The current pulse field lab – cluttered tables, improvised wiring, overflowing storage areas.

Inevitably, work has spilled out of the confined space. The team has commandeered a nearby uninsulated quonset and a few trailers. "We spend a lot of time lugging stuff around from building to building," Vandenberg says.

The continuous improvisation, as plant pathologist Dr. Sabine Banniza points out, affects efficiency and drives up research and development costs. Banniza conducts her pathology research from the sixth floor of the Agriculture Building on campus. Lacking the space to separate so-called "clean" and "dirty" work, she deals with contamination problems as well as the frustration of running an integrated part of the program from a separate location entirely.

The outdated facility causes problems in human, as well as economic, terms. Vandenberg admits to a sense of embarrassment when he shows international visitors the modest facility, and Barlow longs for a larger space with adequate light and good ventilation.

This summer, Barlow will finally get his wish.

The new Pulse Field Laboratory, already under construction, is expected to be completed by August 2005. The 14,000 square-foot addition to the existing Crop Science Field Laboratory will be a first-class facility fully capable of meeting the demands of current and future research programs.

Designed to reflect the assembly-line nature of the work, it will significantly improve efficiency. As Vandenberg puts it, there will be "a seamless flow of seed samples in one end and out the other."

Although the new lab will create immediate benefits by allowing existing programs to operate more efficiently and more cost-effectively, it will

also allow more projects to run simultaneously. In the short term, says Corbett, "The new lab will help accommodate a third breeder and expand on the tremendous work done at CDC and the U of S." In the longer term, SPG plans to expand the breeding team to four scientists.

The new lab will house all field-related research activities—breeding, physiology, agronomy, data processing and seed storage. Pathology, too, will come home at last. Banniza is looking forward to more efficient communication and interaction with other researchers. She points out that a major strength of the existing pulse research program is its integrated, comprehensive approach. "This new building will promote that by drawing the disciplines under one roof," she says.

Photo: Saskatchewan Pulse Growers

Snow covered construction site, January 24, 2005.

A new pulse field lab represents the second objective in SPG's aggressive response to problems identified in Pulse Canada's 2001 National Research Strategy. The first objective, to fund the expansion of critical research by increasing the producer check-off, risked putting even greater pressure on an already overburdened facility.

SPG announced the fund-raising campaign for a new field lab in January 2002. As of May 2005, $2,905,350 of the required $3 million had been pledged by pulse growers and by organizations in the public and private sectors. A partnership agreement that will see the U of S responsible for managing the construction, maintenance and operation of the facility, was announced in January 2004.

Like the industry itself, Wagon Wheel Seed Corporation is entering the next phase of growth. Having established his market, ranging from Ontario to BC and into the northern United States, Warren Kaeding's immediate plans include increasing his pea crop from 800 to 1,400 acres. In the future, he says, "We just need to improve our retail facility. We need to have lots of successful varieties."

The development of superior pulse crop varieties in a wide range of market classes is one of the objectives already announced for the new lab. Potential benefits of other planned research include more cost-effective production practices, greater disease resistance and better disease management strategies, and innovative new uses for pulse crops.

In their 2003 study, Richard Gray and Terry Scott referred to pulses as "a success story amidst the challenges of Saskatchewan agriculture," but the story began almost thirty years ago. Future chapters will come from today's researchers, working side by side in the province's own state-of-the-art Pulse Field Laboratory.

Karen Millard and James Weseen are Saskatoon-based freelance writers with a special interest in commercial and business writing. For more information about the Pulse Field Lab Project, contact Jackie Blondeau at jblondeau@saskpulse.com.

Please join us in thanking these contributors to the

Pulse Field Lab Project

Western Economic Diversification Canada | Diversification de l'économie de l'Ouest Canada

WALKER SEEDS LTD.

To learn more about this project or to make a pledge, please refer to our website at www.saskpulse.com or contact Jackie Blondeau at (306) 668-9988

Agri-Food Innovation Fund	$1,500,000
Western Economic Diversification Canada	$750,000
BASF Canada	$125,000
Philom Bios Inc.	$100,000
Morris Industries Ltd.	$75,000
Nitragin Inc.	$75,000
Bayer CropScience Inc.	$50,000
Becker Underwood	$50,000
Bourgault Industries Ltd.	$50,000
Syngenta Crop Protection Canada Inc.	$50,000
Dow AgroSciences Canada Inc.	$30,000
Ralph McKay Industries Inc.	$12,500
Bourgault Tillage Tools Ltd.	$10,500
Belle Pulses Ltd.	$10,000
Best Cooking Pulses Inc.	$10,000
E.I. DuPont Canada Company	$10,000
MacDon Industries Ltd.	$10,000
Saskcan Pulse Trading Inc.	$10,000
Simpson Seeds Inc.	$10,000
Walker Seeds Ltd.	$10,000
Port of Montreal	$3,000
Cecil and Barry Reisner	$2,000
Prof. Rick Holm	$1,800
Affleck Seeds	$1,000
Allan Seeds Ltd.	$1,000
Assiniboia Soil Conservation Co-operative	$1,000
Lutzer–Latrace Seeds	$1,000
Germain Dauk	$750
Benson ADD Committee	$500
Don Tait	$500
L S McLean	$500
Mossbank Soil Management Co-op Ltd.	$500
Pasqua Farms Ltd.	$500
A.J. Bat Inc.	$100
Amberfield Farms Ltd.	$100
Fast Seed Farm Ltd.	$100
Parrheim Foods – Saskatoon	Not published
In kind contributor: Sask. Agriculture, Food & Rural Revitalization	

Pledges as of May 31, 2005	$2,905,350
Additional Funds Needed	$94,650
Total Capital Budget	$3,000,000

Private Sector Companies See New Lab as an Investment in the Future

By Karen Millard and James Weseen

Strong private sector support fuels the success of the Pulse Field Lab project

When Saskatchewan Pulse Growers (SPG) kicked off its capital campaign for a new Pulse Field Laboratory at Pulse Days 2002, Nitragin (known then as Liphatech), immediately dug into its corporate pocket. In doing so, one of the leading developers of legume inoculants and seed treatment products earned the distinction of being the first private sector sponsor of what will be a world-class research and development facility dedicated to pulse crops.

According to Seed Enhancements Manager John Hren, the decision to support the project was an easy one to make. "We saw the opportunity to increase value for the industry," he says. "It's not very often that you have an opportunity to advance technology for the betterment of everyone."

The new Pulse Field Lab is being built in partnership with the University of Saskatchewan, which is managing the construction and will own and operate the facility. The 14,000 square-foot addition to the existing Crop Science Field Laboratory will replace the space allocated to pulse crop research 30 years ago and still in use. The additional space will allow research programs to expand, and will significantly increase efficiency by allowing the U of S Crop Development Centre's (CDC) pathology, physiology, agronomy and breeding programs to operate side-by-side.

Photo: Don Miller

Exterior walls are up, March 28, 2005.

Nitragin's $75,000 contribution kick-started a fundraising campaign which, as of May 2005, had seen organizations in both public and private sectors pledge $2,905,350, just shy of SPG's goal of $3 million.

Photo: Saskatchewan Pulse Growers

Preparing to pour the floor in the new pulse field lab addition, April 21, 2005.

Less than six months after the campaign was launched Philom Bios, developers of TagTeam®, a combination phosphate and nitrogen inoculant for pulse crops, announced a $100,000 contribution. Incorporated in 1980, Philom Bios is headquartered in Saskatoon and employs over 70 people across North America. Says company President Calvin Sonntag, "We know how important it can be to a project's success to have credible stakeholders show faith in a

"It was a way for us to say thanks for the confidence that Saskatchewan farmers and SPG have shown in our business by showing we had confidence in theirs."

Source: Calvin Sonntag, President, Philom Bios

project and its sponsor at the early conceptual stage." As well, he says, "It was a way for us to say thanks for the confidence that Saskatchewan farmers and SPG have shown in our business by showing we had confidence in theirs."

Photo: James Weseen

Jeff Bertholet,
Seed Technology Manager
with BASF Canada

A $125,000 pledge from BASF Canada, announced at Pulse Days 2005, is the largest yet received from the private sector. BASF also sponsors Pulse Days, the Pulse Promoter Award and the SPG Summer Field Day. The company's agricultural products division supplies crop production products, including fungicides and herbicides.

In January 2004, BASF Canada announced a partnership with the CDC and the SPG to commercialize BASF's herbicide-tolerant CLEARFIELD® lentils. Speaking for the company, local Seed Technology Manager Jeff Bertholet says BASF Canada's commitment to strong partnerships is behind the sizeable contribution. "The relationship between the CDC and the SPG is unique," he says, "and both organizations are strong partners with BASF. It was natural for us to want to maintain a partnership that sustains the research which both organizations do in order to help the industry."

Bertholet's comments echo those of Richard Gray and Terry Scott, authors of a 2003 study commissioned by SPG. Gray and Scott found that research leading to the development and commercialization of new technologies was a key factor in the growth of the pulse sector over the last two decades, and that the research had been a "broad-based effort on the part of private sector players and public sector institutions." In turn, they conclude, the pulse sector has led to significant economic benefits for related industries. Every $1 producers invest in pulse research leads to a $15.60 return for farmers and a $31.30 return for the industry as a whole.

In a release announcing the company's contribution to the new Pulse Field Lab, BASF Canada stressed that the success of the Canadian pulse industry depends upon continued research and innovation in crop development.

Calvin Sonntag of Philom Bios expresses a similar view when he says, "We see the Pulse Field Lab as critical to a vibrant pulse industry.

Photo: James Weseen

Sorting chickpeas in Dr. Rosalind Ball's physiology lab. Says Brent Barlow, "we invade it once and a while."

Photo: D. Williams Photography

Evaluating Co-op Trial lentils for shape on the orbital sorter at the Crop Science Field Laboratory.

As an innovation-driven company, we know how important the right facilities can be to developing technology."

Nitragin's John Hren believes that with the advanced state of technology today, a wider range of technologies have to interact to increase the overall potential. "No one discipline can do it alone," he explains. "Plant growth promotion technology, seed hybridization, pathogen controls and better nutrient management all overlay. The new Pulse Field Lab can bring these all together."

Construction on the new Pulse Field Lab began in November 2004 and will be completed by August 2005. An investment in the project, says Sonntag, will mean "not only a firmly rooted pulse industry in Saskatchewan and the prairies, but a vibrant and growing one as well."

Karen Millard and James Weseen are Saskatoon-based freelance writers with a special interest in commercial and business writing. For more information about the Pulse Field Lab Project, contact Jackie Blondeau at jblondeau@saskpulse.com.

Building a Better Pulse Industry

We understand that to build a better crop, you have to start with a great foundation. The new Pulse Field Lab in Saskatoon will strengthen the foundation of an already vibrant pulse industry.

As an innovation driven company born, bred and headquartered in Saskatchewan, we know how important the right facilities are to developing technology. We are proud to support the Canadian pulse business with our contribution to the Pulse Field Lab. Congratulations to all the stakeholders for helping build a strong and vibrant pulse industry.

Congratulations

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1-888-744-5662

Philom Bios
the inoculant company

by Shaun Wildman

Pea Market Outlook

in brief

Pulse Days speaker Shaun Wildman provides the latest outlook for peas.

This past fall, Canadian farmers produced more peas than ever before. In fact, production exceeded the previous record crop in 2000/01 by 18% and our average yield of 36 bushels per acre was the second highest ever.

Despite the abundance of this year's pea crop, producers have been very reluctant sellers. As of the end of March, less than half of this year's total supply has been marketed. In a normal year, more than 60% of the crop would have been marketed by now and even in the dismally small crop year of 2002 more than half of our total supplies had moved.

According to economic theory, commodity prices will gravitate to the price that preserves some crop for the end of the year, but will not leave an excess amount (the so-called invisible hand which guides our market prices). In the case of this year's pea crop, the invisible hand is going to be pushing down any attempt at a price rally in the hopes of stimulating new demand and preventing a gigantic carryout.

The one downfall of relying on official statistics to forecast prices is that it's kind of like driving a car while looking in the rearview mirror. While we know that Canadian pea stocks as of the end of March are huge, what is also important for the price outlook is the current and anticipated future demand. Nonetheless, with March 31 stocks sitting at only 15% less than last year's total crop size, we truly need to see some unexpectedly large demand or a crop failure in the coming year to

Figure 1: Canadian pea usage in June/July as a percentage of total supply

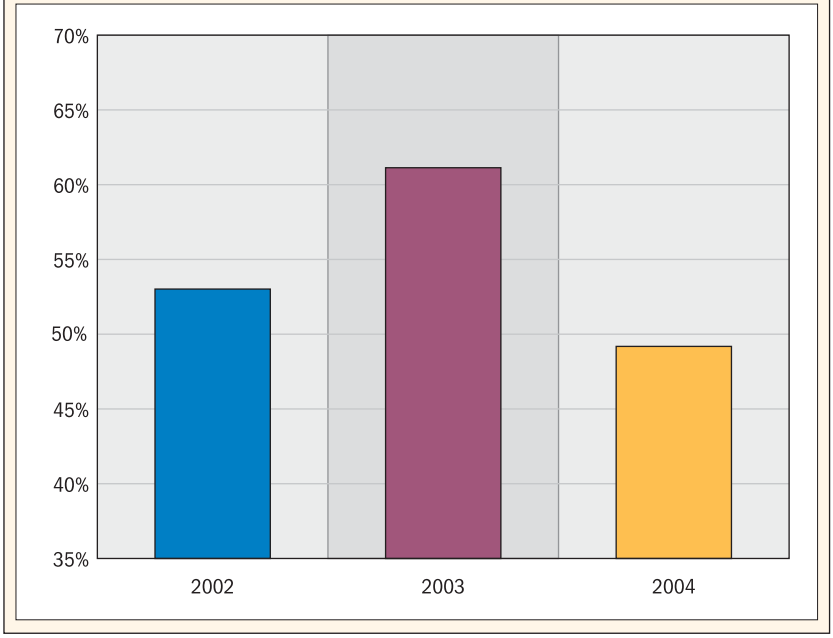


Figure 2: Canadian pea supply (MMT)

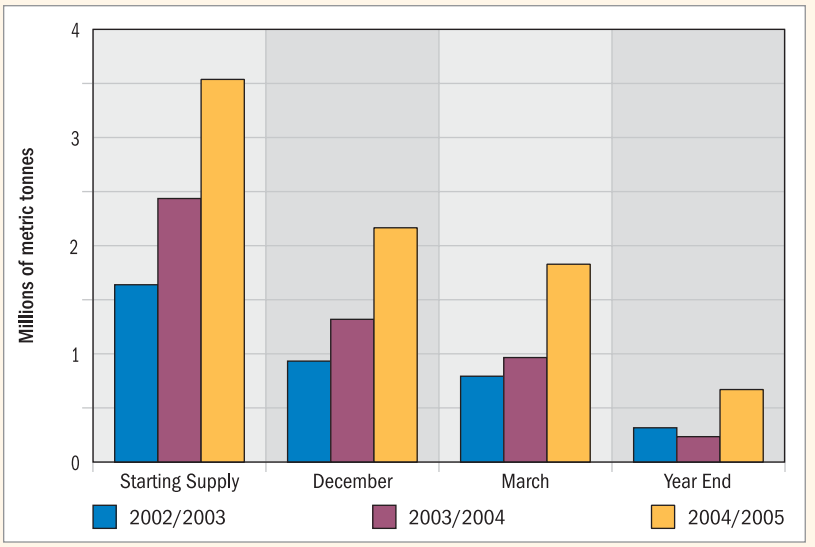
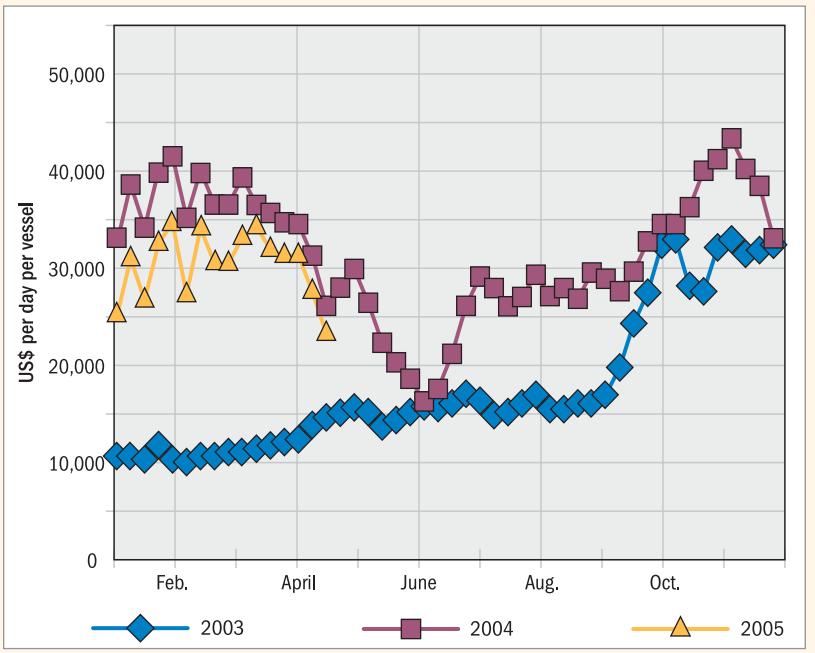


Figure 3: Per day Panamax cost (US$)



really stimulate a price rally. Currently, we are estimating this crop year's carryout at 650,000 mt which would be nearly 3 times last year's carryout.

One positive factor supporting new business is the decline in ocean freight rates. For ocean freight business taking place out of Vancouver, rates have fallen significantly. Since the highs reached in December, per day rates for Panamax cargo vessels (ships that are the maximum possible size for the Panama Canal) have fallen by nearly 50%. Even with the sharp drop in rates, ocean freight still sits 60% higher than the rate from 2 years ago and about the same as the rate this time last year.

The recent drop in ocean freight costs are related to a slowdown in Chinese purchases as well as the typical seasonal tendency for freight rates to soften in the summer. Freight markets are similar to any commodity market in that they tend to rally and crash far beyond their equilibrium or "fair value" point. We shouldn't be surprised to see further declines in the freight market in the summer months, which will likely be followed by a return to historically high ocean freight values by this fall.

The Atlantic freight market hasn't seen quite the same decline as the Pacific market on account of the lack of steel back-hauls. Typically, vessels come into the great lakes for the purpose of delivering steel from northern Europe for the North American auto industry. Currently, the steel demand is soft, leaving fewer vessels available to book in the lakes.

For the coming crop year, we anticipate similar values to the past 12 months, though we are more likely to see the weakest prices in the fall with values firming in the winter months. With the huge carryout we are anticipating as well as unchanged acre expectations from last year's record figure, Saskatchewan farmers could see harvest values of $3.25-$3.75 for #2 yellow peas with the potential for a winter rally to $4.00/bu. #2 green peas should see a $0.50-$1.00/bu premium to yellow peas, but anything with more than 10% bleach is likely to be pushed into the feed market if we get a normal quality crop.

Feed peas are likely to find support in the range we are currently at, with central Saskatchewan spot values averaging $3.15/bu. There could be as much as $0.50/bu upside in the feed pea market this fall if the dryness in Spain results in more feed demand and Canada produces a typical pea crop with only 15% feed quality peas.

Shaun Wildman is a Senior Merchandiser with Saskatchewan Wheat Pool. Shaun was also a speaker at Pulse Days 2005. For more information, see www.saskpulse.com/pulsedays/.

by Mark Goodwin

Regulating Pesticides – Maintaining Pulse Markets

in brief

What will changes to Maximum Residue Limits mean for Saskatchewan pulse growers?

There are few crops exported as widely as pulses. The Canadian pulse industry can be proud of the fact that we export high quality crops all over the world.

As an exporting nation, our crops are subject to pesticide maximum residue limit (MRL) legislation in various countries. These levels vary widely from country to country and because of that, our industry needs to track potential problems in this area, and seek ways around the problems. What follows is a short explanation of Canada's perspective on pesticide issues in two key markets – namely the European Union and the NAFTA area.

MRLs In Europe

In 1991, the European Union (EU) passed Directive 91/414/EEC, which is intended to harmonize registration and control of crop protection chemicals. As part of the directive, several hundred herbicides, insecticides and fungicides are slated for review.

Directive 91/414/EEC provides for the establishment of a "master list" of plant protection products, which the EU deems to be safe to the environment and to people. The master list is known as 'Annex I'. EU Member States are only allowed to use plant protection products if the active ingredient is on this list. Between now and 2008, 834 crop protection products will have been reviewed.

Of concern to Canadian pulse exporters is the effect of this effort on MRL levels in the EU. More specifically, the concerns are:

1. The 'lower limit of detection' is being changed to 10 parts per billion (ppb). This is lower than the previous 50 ppb level and it opens the risk of minute amounts of pesticides leading to rejection of shipments.
2. The imposition of additional data requirements on the 834 products will make some chemical companies decline to spend the resources on additional testing. They will simply withdraw products from the EU, which may ripple through to Canadian producers with respect to product availability. Indeed, this has been the case for about half of the products under review.
3. There is a need to attain a clear path of communication regarding changes in the status of key products so that we can alert our exporters to changes of significance.
4. Non-EU jurisdictions in Asia and the Middle East watch EU decisions and may take the lead from the EU with respect to MRLs.

More Info

For the Maximum Residue Limit database, see the Market section of the Pulse Canada website: www.pulsecanada.com

Update On EU Situation For Pulses

Pulse Canada has been working on this issue for 18 months. Here is where the situation is today:

1. There is little point in lobbying to see if the 10 ppb limit could be changed because Canada's default MRL is zero – a much more stringent level.
2. Pulse Canada has developed links with key federal government personnel in Brussels and Ottawa. These sources notify us on a weekly basis when products are being dropped entirely from the EU market. To date, most have been products not used on our pulses and so we have 'passed' on providing input. When a significant product comes under review, we consult with provincial associations and extension services to determine use patterns.
3. Pulse Canada updates a website database on a regular basis that gives current MRL status for key active ingredients. This database is found in the password-protected area of the Pulse Canada website, a site that is available to Canadian pulse growers at no cost.
4. As we watch the situation unfold, we are working to provide reduced-risk minor use alternatives so that we can transition our industry to products that do not threaten markets. (For example, replacements for vinclozolin or Ronilan®)

Harmonization of MRLs is key to ensuring that Canadian pulses continue to gain market acceptance.

MRLs in the NAFTA Area

We have made good progress on MRL harmonization in the NAFTA region. Producers on both sides of the border are lobbying for regulatory agencies to harmonize MRLs between the USA and Canada.

Up to 20 MRLs in beans, peas, lentils and chickpeas are in the 'hopper' to be harmonized. Additionally, scientists at the Pest Management Regulatory Agency have developed a software package that delivers consistent MRL conclusions regardless of whether the data inputted is being entered, reviewed and interpreted by US, Canadian or Mexican regulatory personnel. This will hopefully solve MRL differences in the future.

Three Things Growers Can Do

1. **Stick to registered products.** The new detection levels are equivalent to finding a drop of product in a swimming pool full of water. With detection levels of 10 ppb, non-registered use is not an option.
2. **Pay attention to late-season applications.** Later-season applications such as fungicides at flowering or later, insecticides at flowering or later and preharvest glyphosate or Liberty® all require special attention. To minimize the risk of residue, apply them at the label rate and at exactly the right time. Problems with high MRLs can result if you apply the product too early or too late.
3. **Support your local pulse association.** The MRL issue is a problem, but there are plenty of resources we can use. Foreign Affairs and International Trade, Agriculture and Agri-Food Canada, the Canadian Food Inspection Agency and the Pest Management Regulatory Agency all are willing to help. However, without coordination and information from the commodity associations, the pieces will not come together and stay together.

Mark Goodwin is the Pest Management Coordinator for Pulse Canada in Winnipeg. For more information, contact (204) 925-4455 or office@pulsecanada.com.

by Ray McVicar

Harvesting Top Quality Pulse Crops

in brief

Harvest and handling tips can improve your yield and quality.

To say that Saskatchewan has seen varying harvest conditions over the past two years is a huge understatement! In 2003, harvest conditions were excellent, with most of our pulse crops taken off in #1 condition, followed by 2004 which for many people saw crops that were, well let's just say, not in #1 condition!

The weather at harvest time can really take quality control out of the hands of growers, but following some tried-and-true procedures and carefully monitoring the crop throughout the growing season can greatly improve seed yield, colour and quality.

Using a land roller can improve the ease of harvesting low, lodged and tangled crops. In fact, more growers are using a land roller for more than just pulses, especially when they can pull the roller in one pass. Land rolling compresses soil ridges and reduces the risk of "earth-tag" on the seed. In years where the weather conditions put the crop on the ground, having a smooth surface to work with can really pay off.

Plant diseases such as ascochyta blight can often cause discoloured seed. In-season monitoring of crops is the best way to watch for these problems and to know whether or not to take action to prevent the spread of the disease onto the pods. Protecting the crop from diseases is a great way to reduce the risk of yield and grade loss.

PHOTO: SASKATCHEWAN AGRICULTURE AND FOOD

Bean pods at the buckskin stage.

Pick-up reels and/or lifter guards are standard issue on pulse harvesting equipment. Whether mounted on the swather or the header, they can turn a potential flat and tangled nightmare into just another crop. And in years like 2004, they turn out to be very handy for all crops. Narrow-row bean growers have learned the value of a properly equipped swather. Narrow-row dry bean is typically

PHOTO: GREG SIMPSON

Harvesting lentils on the Simpson farm near Moose Jaw.

swathed when about 50-60 percent of the leaves have dropped and 50-60 percent of the pods have turned colour from green to the buckskin stage. Swathing at this stage overcomes variable maturity caused by sprayer wheel tracks and uneven, rolling topography, and has greatly reduced harvest losses in narrow-row bean production.

Research at the Agriculture and Agri-Food Research Station at Swift Current is looking into the best way to manage slow-to-mature chickpea crops. Treatments compare swathing early when bottom pods begin turning colour, swathing late when 80 percent of pods have turned, using pre-harvest glyphosate, using REGLONE DESICCANT®, and waiting until natural maturity or frost kills the plants. Yield and quality factors such as the percent of green seed are being measured. Preliminary results indicate that swathing will reduce yields, but swathing early will also reduce percent green seed in a slow-maturing year like 2004. Other treatments did not seem to affect yield or quality. Stay tuned for more results.

REGLONE DESICCANT® is registered for use on chickpea, pea, lentil and dry bean. LIBERTY® is registered for use on lentil. Desiccants do not mature the crop but provide quicker dry-down which can be especially important with pulses where a quick removal from the field is needed to reduce the risk of seed discolouration.

Glyphosate products (such as ROUNDUP®, TOUCHDOWN iQ®, MAVERICK®, CREDIT®, RENEGADE®, VANTAGE®, FACTOR® and GLYFOS®) are registered for pre-harvest weed control in dry bean, lentil and pea. Glyphosate does not desiccate the crop. Application of glyphosate for pre-harvest weed control on unregistered crops such as chickpea should not be done.

For more information on desiccation and pre-harvest weed control in pulse crops, consult the product label, the SAF publication *Guide to Crop Protection* or the *Pulse Production Manual*.

Flex-headers and air reels can be added to combines to reduce losses and increase the speed of straight-cutting pulse crops.

Peeled and chipped seeds quickly cause the loss of a grade, but can be reduced by fine-tuning the combine. New rub bars and concaves should be "worn in" on other crops before tackling pulses. The clean grain, return and unloading augers should be properly adjusted to reduce sharp edges. Augers should be operated full and at low speeds.

Always remember to thoroughly clean your grain auger and bins before harvest time to eliminate the risk of contamination with treated seed. The same is true for the black and discoloured seeds around the bin door or blending this year's crop with the crop from a previous year. Most pulse crops are graded on colour, so keep off-colour seeds separate.

Pulse crop processing plants use belt conveyors to gently handle the crop. Pulse growers using long-term storage to help their pulse marketing plan can also make good use of a belt conveyor. Pulse crops often need to be given a rotation in the bin to prevent spoilage, and the use of a conveyor can accomplish this with very little seed damage. If you are in the need of a new auger, investigate the idea of moving to a belt system. Damage from augers can be reduced if the moisture content is higher than 14 percent. That's why pulse crops are often combined at 18 percent moisture and then placed in aeration.

The red lentil splitting industry prefers product that has a moisture content below 13 percent to improve the efficiency of their splitting plant, so check with your red lentil buyer to find out if they have any seed moisture content instructions.

As always, good luck at harvest time!

More Info

Crop Protection Guide
www.agr.gov.sk.ca/Docs/crops/cropguide00.asp

Pulse Production Manual
www.saskpulse.com/library/ppm/index.html

Ray McVicar is the Special Crops Specialist with Saskatchewan Agriculture and Food in Regina. Contact Ray at rmcvicar@agr.gov.sk.ca for more information.

by Michelle Fleury

Understanding the Feed Pea Marketplace

in brief

What are the feed industry requirements for pulses?

Feed peas are one of the highest quality ingredients available to the feed industry. Although the feed pea market provides an outlet for downgraded and off-standard peas, it also purchases a significant proportion of peas suitable for human consumption. From 2000/01 to 2003/04, nearly 50% of Western Canadian peas entered the export and domestic feed markets, even though it is estimated that up to 95% of yellow peas and 80% of green peas would have been eligible for edible grades under "normal" growing conditions. As producers of edible peas in excess of market requirements, we are all producers of feed peas. Understanding the needs of the feed industry may help us to better recognize opportunities within this marketplace.

PHOTO: SASK PORK

Nearly 50% of Western Canadian peas enter the feed market.

Livestock Requirements

Peas are well suited for use in livestock diets. *The Canada Feed Pea Industry Guide* indicates that peas contain approximately 45% starch, which is digested to yield the high-energy glucose that drives metabolic processes. Peas also contain 23% protein, from which animals extract the amino acids they require to synthesize their own proteins. Peas contain relatively high levels of lysine, one of the amino acids required to maximize growth in pigs and chickens. The high energy and lysine content of peas allows the crop to be economically competitive in both hog and poultry diets.

Peas vie for access to a feed market that values quality, uniformity and consistency of supply. Other protein sources, such as soybean meal, canola meal and meat meal are available year-round and blended to make uniform products with minimum nutrient guarantees through oil extraction, rendering and bulk-handling processes. In contrast, feed peas sourced from producers vary with the growing conditions of each field and year, range in content, and delivery may be affected by road bans or weather. The variability of peas purchased from grain companies may be reduced through blending, but foreign material levels must be negotiated because the Canada Grains Act does not define a maximum for feed peas.

Commercial Feed Processors

Oleet Processing, a division of O&T Farms near Regina, has turned the challenges of uniformity and inconsistency of supply into a thriving business. Oleet Processing extrudes peas and off-grade canola into a high-energy protein source marketed under the name Extrapro. Although Extrapro is its main product line, Oleet also produces four other products containing various pea, oilseed, cereal and

dehydrated alfalfa blends for dairy, equine and starter diets. Oleet purchases up to 600 MT of peas and 550 MT of oilseeds from producers and other sources each week. Leonard Underwood, Senior Vice-President of O&T Farms, appreciates that the expertise gained by producers has resulted in peas with lower levels of foreign material and earth tag – contaminents that are abrasive to feed processing equipment. Oleet purchasing specifications for peas are: a maximum of 4% dockage, 0% shrink, 17% moisture and a bushel weight within 10% of the annual average. Payment for grain is issued within 30 days of delivery.

On-Farm Feed Manufacturers

Over 80% of pigs in Western Canada consume diets manufactured on-farm, and this segment of the livestock industry has rapidly adopted peas as a feed ingredient. Owner-operators are able to profit directly from the savings associated with pea-based diets, plus the single-species mills have greater flexibility to devote bin space to peas.

Casey Smit is Vice-President of Nutrition with Big Sky Farms, Inc., the largest hog production operation in Saskatchewan. Smit indicates that peas are a key component of their hog-feeding program, providing a price-competitive alternative to soybean meal. Big Sky Farms purchases over 95% of their pea and cereal requirements from the surrounding community which, in combination with strict quality control guidelines for purchasing grains, assures access to the high-quality ingredients required to maximize hog performance. Smit says that the quality of peas has improved noticeably during the past decade, primarily due to the reduction of soil and foreign material in samples.

Inconsistency of supply is the major issue limiting the use of peas by Big Sky Farms. Peas are limited to a maximum inclusion of 25% in grower and finisher diets in an attempt to maintain adequate inventory, even though the use of more peas would be economical. Big Sky Farms attempts to attract peas by offering consistent price premiums; however, Smit feels that in a pea market which has no futures-based mechanism of price discovery, producers have difficulty determining at what price to market peas. Big Sky Farms purchases yellow and green peas with minimum 58 lb. bushel weight, maximum 16% moisture and maximum 1% foreign material. Although dockage is not deducted from the delivery weight, it takes approximately 10 working days for payment to be issued through their head office.

The domestic feed industry provides an important level of price support to pea producers. However, it may be difficult for producers to decide to market feed peas during times of depressed prices. The feed industry determines the value of feed peas based on the price of other feed ingredients, and therefore the futures pricing for soybean meal, feed wheat, feed barley and corn provide some insight into the future value of feed peas.

Michelle Fleury is the Animal Nutrition Consultant responsible for SPG's domestic feed market development activities. For more information, contact Michelle at mfleury@sasktel.net.

by Sabine Banniza

News From The Pulse Pathology Front

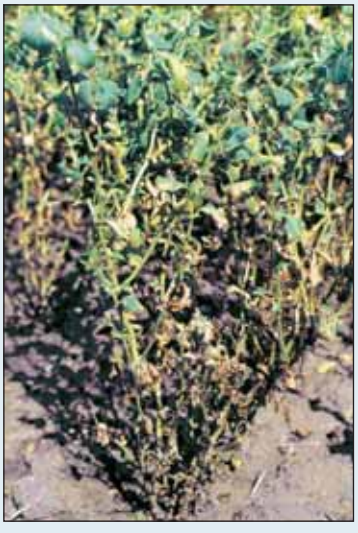
in brief

Disease management research at the Crop Development Centre.

Diseases can do considerable damage to pulse crops, but whether they will be a major problem in a particular season is unpredictable and highly dependent on the amount and frequency of rain. An important part of our research efforts at the Crop Development Centre goes into developing cultivars with better resistance, which is the least expensive and most effective way of controlling disease. However, we rarely are able to achieve complete resistance to diseases. Consequently, another important part of our research focuses on the development of other disease management strategies.

A comprehensive study on fungicide timing and rotation in chickpea, funded through the Saskatchewan Agricultural Development Fund (ADF), was finished recently and concluded that the right timing of a fungicide application, often at the seedling stage, is critical to preventing a major epidemic. Many of our results were incorporated in the CD *Management of Ascochyta Blight of Chickpea in Saskatchewan* that was put together by Saskatchewan Agriculture and Food as a free management tool for producers.

Botrytis grey mould and sclerotinia white mould are diseases that can cause severe lentil damage in wet years. We have been looking at the management of sclerotinia white mould for several years in collaboration with scientists at Agriculture and Agri-Food Canada, funded in part through ADF and partly through Saskatchewan Pulse Growers (SPG). Results



Above: Sclerotinia white mould symptoms on lentil

Left: Chickpea ascochyta blight

Below: Stemphylium blight symptoms on lentil

Learn more at the Pulse Field Tour

Dr. Sabine Banniza and her pathology research will be showcased at the Pulse Tour 2005 on July 21 at the Kernen Crop Research Farm in Saskatoon.

Check out page 47 For more information.

Table 1: Growth stage

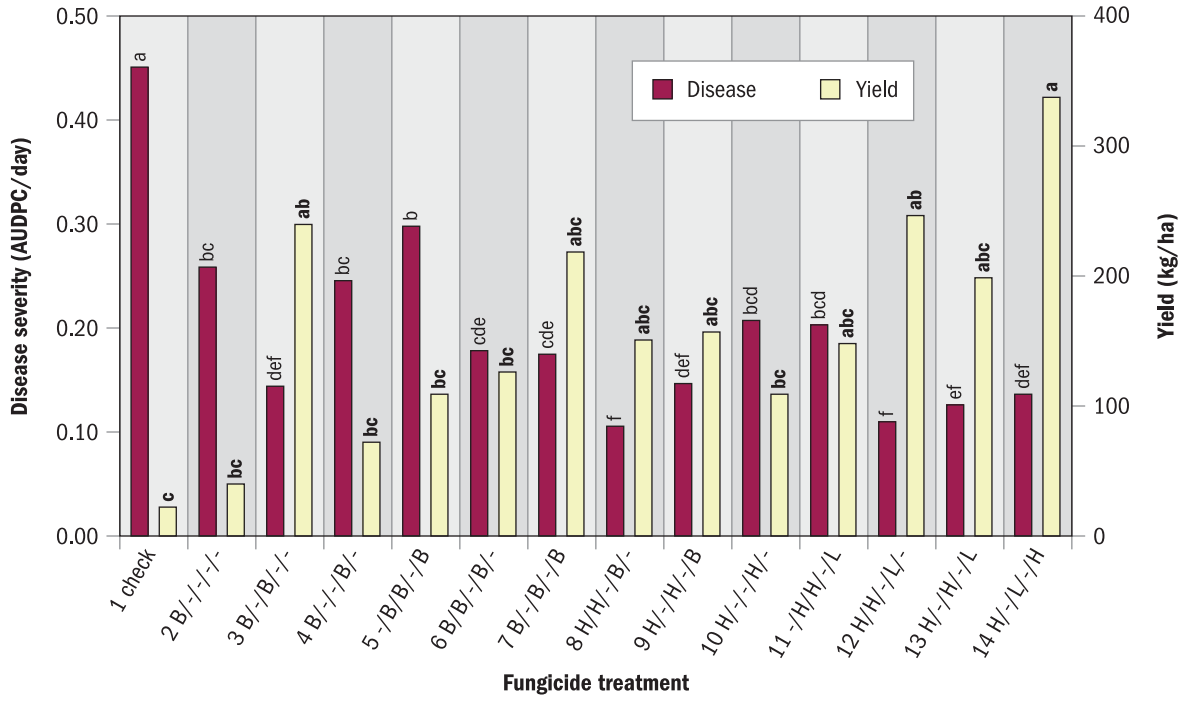
Treatment	Pre-Flower	Early Flower	Mid-Flower	Late-Flower
	~7 days before first flower	10-14 days after last application	10-14 days after last application	10-14 days after last application
1	Check			
2	Bravo			
3	Bravo		Bravo 500	
4	Bravo			Bravo 500
5		Bravo 500	Bravo 500	
6	Bravo	Bravo 500		Bravo 500
7	Bravo		Bravo 500	
8	Headline	Headline (2003-2004)		Bravo 500 (2003-2004)
9	Headline		Headline	
10	Headline			Headline
11		Headline	Headline	
12	Headline	Headline		Lance (Bravo in 2002)
13	Headline		Headline	
14	Headline (Lance in 2002)		Lance	

showed that the fungicides Rovral®, Benomyl® and Lance® reduced disease severity in 2 out of 4 station years, and a gain in yield was only observed in one station year. The effect of fungicide applications appears to be highly variable. The assumption for fungicide applications was that the fungus colonizes flower petals through spores as in canola and bean, and then infects the plant from there, which is why control aims at protecting the flowers. However, in our trials, flower petal infection was poorly correlated with actual disease on the plants. So even though fungicides may be effective at preventing *Sclerotinia* from invading plant tissue, a fungicide applied at early or mid flowering may just be at the wrong place at the wrong time. We think that the fungus may directly invade yellowing leaflets commonly found in the understory of the lodging lentil crop late in the summer. Later applications usually are not helpful because by then the canopy is too thick for the sprays to penetrate. We will be conducting some experiments to get a better understanding of how *Sclerotinia* infects lentil. In the coming years, we also want to test whether we can 'lighten' up the canopy by reducing seeding rates with the new imidazolinone (imi)- tolerant lentil cultivars where weed control is less of an issue. That may create a microclimate less welcoming to fungi in general and may also improve the efficacy of the fungicides by allowing better penetration.

Podding
10-14 days after last application
Bravo 500
Bravo 500
Bravo 500 (2003-2004)
Lance (Bravo in 2002)
Lance
Headline (Lance in 2002)

Figure 1: Ascochyta blight severity on chickpea

Ascochyta blight severity and yield of 2004 field plots of Sanford (kabuli) chickpea at Kyle to evaluate different timings of fungicide application at pre-/early/mid/late flower/podding with Bravo (B), Headline (H) and Lance (L). Disease severity measured as area under the disease progress curve (AUDPC) per day of rating. Bars labeled with the same letter are not significantly different. Letters in bold type cannot be compared with letters in regular type.



An area of concern to us, for both disease management and breeding for resistance, is the possibility that pathogens change, making our fungicides ineffective, or our cultivars susceptible. This spring we finished a study on ascochyta blight in lentil showing that the fungus has changed and that some sources of resistance are not as effective anymore as they were in the past. Recently, we discovered that *Ascochyta rabiei* isolates from 2001 and 2002 caused more ascochyta blight on chickpea than those collected in 1998. A changed pathogen may help explain the explosive increase of ascochyta blight we have experienced in chickpea. Although we have little influence on the evolution of fungi, monitoring these changes is important to re-evaluate resistance in cultivars and adapt disease management strategies.

Determining whether new pathogens are a problem of economic importance is an important first step when dealing with 'new kids in the plot'. An example of this is a research project, jointly funded through ADF and SPG, on the lentil pathogen *Stemphylium botryosum*. This fungus has been showing up more frequently in recent years. Our objective is to determine under what conditions it thrives and whether it causes yield loss in lentil (i.e. if it is a pathogen we have to worry about). What we have found so far is that this fungus likes it warm, but we have also learned that it slowly starts developing at temperatures as low as 4°C. From experiments in the greenhouse, we also know that it can reduce yield and seed size if it infects during flowering and at early pod setting. However, when infection actually occurs in the field is unknown and will be investigated in more detail this coming season.

Pathogens interact with crops in complex ways, and the more we understand these interactions, the better we will get at controlling diseases. We will probably not be able to eliminate them for good, but with strategic research we will hopefully stay ahead of the game.

Dr. Sabine Banniza is the Pulse Pathologist at the Crop Development Centre in Saskatoon. For more information, contact Dr. Banniza at banniza@skyway.usask.ca

More Info

www.pulse.usask.ca/poster.html

Ascochyta Blight in Chickpea – Guidelines for Fungicide Application, is a SAF factsheet available at:
www.agr.gov.sk.ca/
(under > Crops
> Integrated Pest Management
> Diseases)

Also available on CD-ROM by calling 306-787-5297

For more information about SPG activities, please call: (306) 668-5556
e-mail: pulse@saskpulse.com, or visit our Web site: www.saskpulse.com.

in brief

News from and about Saskatchewan Pulse Growers (SPG).

New Staff at SPG

Dr. Kofi Agblor

Dr. Kofi Agblor has been named as the Saskatchewan Pulse Growers' Acting Research and Development Manager for a one-year term ending April 30, 2006. Dr. Agblor is assuming this position with SPG while Joelle Harris, R&D Manager is on a one-year maternity leave.

Dr. Agblor will be responsible for managing all of SPG's current research projects, as well as for identifying new research investment opportunities. Kofi's experience as Program Manager for Agricultural Processing with the Agriculture Development Fund of Saskatchewan Agriculture and Food will enable SPG to build on its strong relationship with the Provincial Government. Kofi will also be interacting closely with Pulse Canada in their pulse utilization-related initiatives.

Kofi was educated in the disciplines of Agriculture (plant protection) and Agricultural Engineering (post-harvest technology). He attended universities in Ghana, England and Manitoba. Kofi and his family (wife and two daughters) have spent all of their 17 years in Canada west of Ontario, the first 10 years in Manitoba, and the past seven years in Saskatchewan. Kofi is an avid walker and reader on the subjects of religion, economics, and philosophy!

Dr. Agblor can be contacted at 306-651-0859 or kagblor@saskpulse.com.

Jackie Blondeau will be Acting Communications Manager for a one-year term beginning in June 2005 while Penny Eaton is on maternity leave. Jackie is currently SPG's Special Projects Manager with a focus on the Pulse Field Lab project. She will continue to lead Pulse Field Lab activities in addition to her new Communications responsibilities. Jackie covered for Penny as Communications Manager in 2001-02.

Jackie Blondeau can be reached at 306-668-9988 or jblondeau@saskpulse.com.

Congratulations to Joelle and Mark Harris, whose baby girl, Shelby Lee, was born on May 6, and to Penny and Aubrey Eaton who are expecting their second bundle of joy at the end of June!

SPG's New Livestock Nutrition Consultant

Michelle Fleury

Michelle Fleury, MSc., PAg., is the new livestock nutritional consultant responsible for pulse market development within the feed industry. The feed market development initiative is funded by Saskatchewan Pulse Growers and Alberta Pulse Growers and was the responsibility of Barb Stefanyshyn-Coté for over 13 years. Michelle has worked with Barb on several projects over the past decade and has also worked in the commercial feed industry. Michelle's objective is to see peas used as the protein source of choice for livestock diets both domestically and abroad.

Sign up for the Pulse Brief

The Pulse Brief is a free e-mail information service providing news bulletins of interest to the pulse industry. It is distributed on a bi-weekly basis by Saskatchewan Pulse Growers and covers topics like market and food trends, SPG and Pulse Canada activities, and pulse production information from around the world. To sign up for the Pulse Brief, visit www.saskpulse.com.

Syngenta and Walker Seeds Contribute to Pulse Field Lab Project

In April, Syngenta Crop Protection Canada Inc. and Walker Seeds Ltd. committed $50,000 and $10,000, respectively towards the Pulse Field Lab Project.

"We are extremely pleased to be a part of this important project," said David Hoar, Crop Manager – Pulses with Syngenta in Calgary.

For more information about SPG activities, please call: (306) 668-5556
e-mail: pulse@saskpulse.com, or visit our Web site: www.saskpulse.com.

"The work done in this new lab will be instrumental to the further development and continued success of Canada's pulse industry, and we are very proud to support that."

Saskatchewan Pulse Growers (SPG) is raising capital for the construction of a world-class, multi-user pulse crop field research facility, which is being built in partnership with the University of Saskatchewan in Saskatoon. The new facility will be a 14,000 square foot addition to the existing Crop Science Field Laboratory, which was built in 1971 when the pulse industry was in its infancy. The addition will provide enhanced capacity and efficiency in pulse breeding, physiology, pathology and agronomy research.

"Syngenta has been a major supporter of Saskatchewan Pulse Growers activities, and is a Platinum Sponsor for many of our events, including Pulse Days and the upcoming Summer Pulse Tour," says Dean Corbett, Chairman of the SPG Board. "We are proud to acknowledge Syngenta as a partner in the new pulse field lab facility currently being built at the University of Saskatchewan."

Support from industry has been strong. "We see this as a joining of forces between industry and growers, to ensure that the pulse industry is here for the long-term and continues to be competitive in the world marketplace", says Corbett. "We're really on the home stretch from a fundraising perspective and Syngenta's contribution is giving us the momentum we need."

For more information on the Pulse Field Lab Project, please refer to the insert in the centre of this magazine or www.saskpulse.com/production/production-capital.html.

Processing Conference Scheduled for November 29, 2005

Saskatchewan Agriculture and Food, in coordination with Saskatchewan Pulse Growers, is hosting the bi-annual Processing For Profit Conference in Saskatoon on November 29, 2005. The conference is aimed at pulse processors and traders. For more information, contact Brian Sim with Saskatchewan Agriculture and Food at 306-933-5344 or bsim@agr.gov.sk.ca.

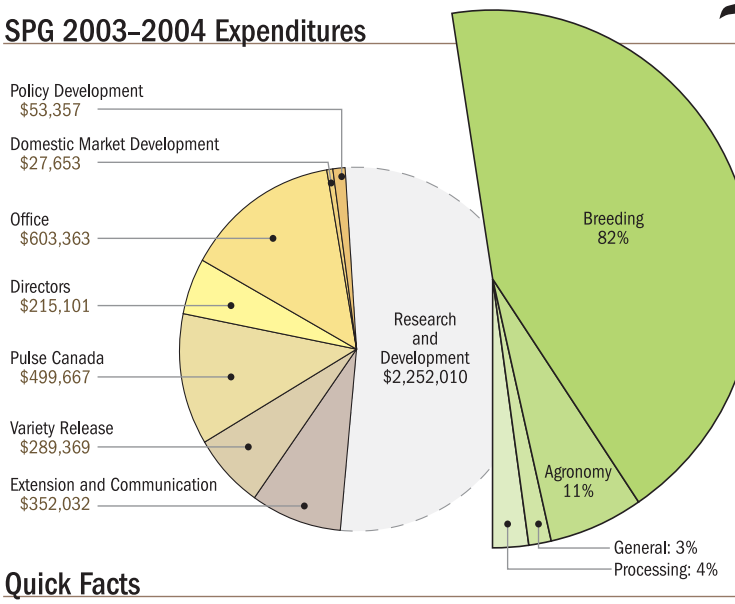
Feed Peas Poised to Move into China

Dr. RJ Wang

Pulse Canada, The Canola Council of Canada, the Canadian International Grains Institute and the Canadian Embassy are working together to support a new position to develop the feed market – Feed Industry Consultant in China. Dr. RJ Wang of Beijing was recently selected as the successful candidate and traveled to Canada in April to begin focused training on feed peas and canola meal. Dr. Wang has a strong technical background, years of experience providing technical marketing support for a multinational feed company and has worked on behalf of the Canadian International Development Agency (CIDA) and other international aid agencies. He comes highly recommended by CIDA and by Pulse Canada's contacts within the Chinese feed industry.

Your Check-Off Dollars at Work

SPG 2003–2004 Expenditures



Quick Facts

- SPG check-off income between 1984 and 2004 totalled just over $25 million.
- Between 2000 and 2004, SPG spent $7.2 million on Research and Development.
- Every $1 invested in pulse crop research leads to a $15.60 return for growers.
- 44 varieties have been released through the SPG Variety Release Program.

in brief

News from and about Saskatchewan Pulse Growers (SPG).

SASKATCHEWAN pulse Growers

Garth Patterson
Executive Director

Friday the 13th: A Good Day for the Pulse Industry

the team

EXECUTIVE DIRECTOR
Garth Patterson

RESEARCH & DEVELOPMENT MANAGER
Dr. Kofi Agblor

SEED COMMERCIALIZATION MANAGER
Allison Krahn

COMMUNICATIONS MANAGER
Jackie Blondeau

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SASKATCHEWAN pulse Growers

Why? Because on Friday, May 13th

the Canadian Grain Commission (CGC) announced a new policy that will encourage all companies dealing in or handling pulses (and other western grains) to be either licensed or exempted by August 1, 2006.

I congratulate the CGC for their leadership. Not only will all pulse buyers be licensed and secured (or exempted), but there will also be increased monitoring of companies by the CGC. This should result in – but will not guarantee – increased security for farmers if a buyer is unable to pay. The CGC has also worked with the Export Development Corporation and AON Reed Stenhouse to provide buyers with cost effective alternatives to bonding.

PHOTO: J. BLONDEAU

Grading lentils at the Canadian Grain Commission.

Ten years of history stand behind this announcement. Payment security for producers, and the absence of a level playing field between licensed and unlicensed pulse buyers are issues that have plagued our industry. Growers have wanted competition among pulse buyers, and were concerned that security requirements may have been a barrier to the entry of new participants. Grain companies have wanted alternative security tools to bonding, which tended to tie up valuable working capital.

The result was that for more than a decade, growers have sold into an environment of "buyer beware" because some pulse buyers were licensed and some were not. Most of the time, this was acceptable. However, even with those that were licensed, there was no guarantee that their bond was large enough to cover losses, as was discovered by the CGC and growers with Naber Seed and Grain.

After Naber Seed and Grain's bankruptcy, it became clear to the SPG Board that change was required in order to better protect farmers. SPG developed partnerships with the Alberta and Manitoba Pulse Growers, the Canadian Special Crops Association, and the Western Canadian Processors and Marketers to establish an Industry Security Committee. Its mandate is *"To represent the pulse industry in finding a solution for security of payment to producers."*

Our Industry Security Committee commissioned two independent studies by Kelwin Management Associates. Based on their findings, we concluded that the CGC should modify the current system of producer payment security to be mandatory, affordable, efficient and well understood. Specifically, we wanted alternatives to bonding for security, mandatory licensing and increased monitoring.

Some have suggested that the Ontario Corn Model would have been more appropriate for us to adopt. Unfortunately, this would have taken more time to implement because of the required legislative changes, and it was less favoured by growers because of the requirement for another deduction to build up a reserve fund.

The pulse industry has matured to a point where there is plenty of competition among buyers. Over 90% of Saskatchewan pulses are now purchased by CGC licensed and secured buyers. By August 1, 2006 this will rise to 100%, unless a company is exempted. The CGC's announcement still won't guarantee 100% payment, but I believe it will reduce growers' risk of a significant loss.

PULSE TOUR 2005

Pulse Crops Field Day

Thursday, July 21, Kernen Crop Research Farm
University of Saskatchewan, Saskatoon
Breakfast and Registration: 7:30 AM Tour Begins: 9:00 AM

Featuring:

- Pulse variety comparisons
- Weed and disease control in pulses
- Organic agronomy – mechanical weed control in cereals
- Feed pea potential
- Herbicide interaction and N-fixation
- New crops – fababean and soybean

Admission is only $15 and includes breakfast, lunch, refreshments, tour booklet and a shot at the door prizes.

For More Information, call 306-668-0350
Register at the door

Directions: The Kernen Crop Research Farm is located east of Saskatoon. At the junction of Highways #5 and #41, head north on Highway #41. After about half a mile turn left on Blackley Road (gravel) for a few yards to the gate of the Kernen Crop Research Farm.

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Summer Field Days at a Glance:

July 7 – Annual Field Tour
Wheatland Conservation Area
Swift Current, SK
Bryan Nybo
Tel. 306-778-7289

July 7 – Canola Day
Seager Wheeler National Historic Farm
Rosthern, SK
Brian Weightman
Tel. 306-232-5959

July 12 – Annual Tour
AAFC Melfort Research Centre
Melfort, SK
Randy Kutcher
Tel. 306-752-2776 ext 232

July 13 – Canola Field Day
Saskatchewan Conservation Learning Centre
Prince Albert, SK
Laurie Hayes
Tel. 306-953-2796

July 14 – Scott Field Day
Western Applied Research Corporation/AAFC
Scott, SK
Sherrilyn Phelps
Tel. 306-247-2011

July 15 – Scott Organic Day
Western Applied Research Corporation/AAFC
Scott, SK
Sherrilyn Phelps
Tel. 306-247-2011

July 19 – Zero-Till Field Day
Indian Head Agricultural Research Foundation
Indian Head, SK
Judy McKell
Tel. 306-695-4200

July 19 – Annual General Tour
Saskatchewan Conservation Learning Centre
Prince Albert, SK
Laurie Hayes
Tel. 306-953-2796

July 20 – Annual Field Day
South East Research Farm
Redvers, SK
Scott Chalmers
Tel. 306-452-3161

July 21 – Pulse Field Tour
Kernen Farm, University of Saskatchewan
Saskatoon, SK
Saskatchewan Pulse Growers
Tel. 306-668-0350

July 28 – Annual Tour
East Central Research Foundation
Canora, SK
Kim Stonehouse
Tel. 306-563-5551

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