



Pulse Growers

pulsepoint

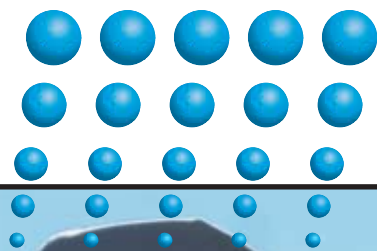
March 2004 Vol. 4 No. 2

Planting for Success



Markets For New Pulse Varieties
Getting Your Pulse Crops Off To
A Good Start in 2004
Benefits of Research

Always Thinking Ahead



Easy flow advancements in a high performance inoculant

Nodulator is a solid core granular, in furrow inoculant that performs in Western Canadian fields, and is now easier to apply than ever.

Fill your air seeder with seed, fill your extra tank with Nodulator, set the rate and go. It's that easy. The latest formulation of Nodulator resists bridging and flows easily.

Nodulator treats the soil, not the seed. This provides the opportunity for more uniform and consistent nodulation, which in turn can result in increased nitrogen fixation and yields. Don't hold back the yields of your peas, lentils, chickpeas or soybeans. Ensure that they reach their full potential by applying Nodulator.

"A few years ago we did some test strip comparisons and there were higher yields and better plant growth and nodulation with Nodulator. Plus, it's easy to handle and apply. We're quite pleased with the way Nodulator works."

Ron Leonard,
Harris, SK



Manitoba and Southern Saskatchewan call Jim Campbell: (204) 255-8401
Northern and Southwest Saskatchewan call Brian Crowley: (306) 373-3060
Alberta call Norm Standish: (403) 782-7743

the future of rhizobium inoculants


**BECKER
UNDERWOOD®**


Chairman's Message


Shawn Buhr
Chairman of the Board



Advancing the Pulse Industry


During Pulse Days this year, I had the opportunity to make four major announcements. As I commented then, I cannot take the credit for these because, in many cases, they are the culmination of years of hard work. They are however, the result of your support through your checkoff dollars. I was fortunate to be the one to bring you this good news.

For those of you that did not attend Pulse Days, here are four major announcements for our industry:

1. Two years ago, we announced the Capital Campaign for the construction of a new pulse field lab. The existing pulse lab was one of the very first critical infrastructure gaps identified in the Pulse Canada Research review of the industry. This year, construction of the pulse research lab will proceed on 108th Street on the University Campus in Saskatoon. It is expected that the lab will be ready for occupancy in the summer of 2005.
2. Peas have historically been Saskatchewan's most important pulse crop. Canada has become the world's leading exporter of peas, with about 70% originating in our province. Many factors have contributed to our success in peas, but I have no doubt that without access to affordable, competitive pea varieties, we would not be in the leadership position we are today. Public research into pea breeding (co-funded by grower checkoff funds) has been a factor, but the fact is that the majority of our varieties today are products of private breeding programs. We want our pea industry to remain competitive in world markets. By creating an environment that encourages both public and private pea breeding research, growers will continue to have access to the best pea varieties. Your Board will be investing up to \$600,000 per year for additional investment into genetic improvement of peas.

3. In 2001, Saskatchewan farmers planted 1.15 million acres of chickpeas. In 2003, we planted 130,000 acres. What happened? Disease, delayed maturity, frost and other factors have made this crop riskier to grow than most of us would like. Our successes building up to the record year in 2001 were based upon imported plant genetics that were poorly adapted to our climate. I am pleased to inform you that through the lobbying efforts of Pulse Canada, Agriculture & Agri-Food Canada (AAFC) has agreed to establish a chickpea breeding program in Saskatoon. The program will be a partnership between SPG, AAFC, University of Saskatchewan, and Saskatchewan Agriculture, Food & Rural Revitalization.
4. Finally, we announced the development of the non-GMO Clearfield lentil – a world premier – in partnership with BASF and the Crop Development Centre. In the future, Clearfield technology will give growers the tools needed for cleaner fields and higher yields.

In closing, we have been criticized in the media recently for not following through on our intentions to increase research spending with the increased dollars that the checkoff now generates. These announcements, along with the budget presented at the annual meeting, clearly indicate that your Board is committed to maintaining our competitive advantage through higher research investment. Despite the challenges that the weather has thrown at our industry, we are on pace to meet the planned level of \$4 million in research spending by 2005.

As you read this, you will be getting ready for that annual mega-project called seeding. I wish you the best of conditions so that your crop gets off to a great start. 

board

CHAIRMAN

Shawn Buhr
Lucky Lake, SK
(306) 858-2408

VICE-CHAIRMAN

Dean Corbett
Macrorie, SK
(306) 243-2047

DIRECTORS

Lloyd Affleck
Beechy, SK
(306) 858-2251

Maurice Berry
Carievale, SK
(306) 449-2241

Ron Hundebly
Elbow, SK
(306) 854-4629

Jim Moen
Cabri, SK
(306) 587-2214

Barbara Podhorodeski
Shipman, SK
(306) 426-2350



Published for:

Saskatchewan Pulse Growers
104 - 411 Downey Road
Saskatoon, SK S7N 4L8
Phone: (306) 668-5556
Fax: (306) 668-5557
e-mail: pulse@saskpulse.com
website: www.saskpulse.com

Published by:

Sunrise Publishing
2213B Hanselman Court
Saskatoon, SK S7L 6A8
Phone: (306) 244-5668
Fax: (306) 244-5679
e-mail: news@sunrisepublish.com
Web Site: www.sunrisepublish.com

Publication Dates:

September, December, March, June

Publisher:

Twila Reddekopp

Editorial Director:

Penny Eaton

Editorial:

Gordon Bacon, Penny Eaton,
Mark Goodwin, Joelle Harris,
Greg Kostal, Ken Panchuk,
Garth Patterson, Brenda Scott,
T.G. Scott, Bert Vandenberg,
Tom Warkentin

Art and Production:

Trevor Sellar

Marketing:

Linda Hamm, Colleen Kitter

Saskatchewan Pulse Growers and Sunrise Publishing make no expressed or implied warranties of merchantability or fitness for a particular purpose or otherwise, concerning the use of any product, advice provided, and market insights, and assumes no liability for any injury or damage, direct or consequential, which may be incurred from the use of such products or services therein. Federal, Provincial and Municipal laws and regulations supersede the information contained herein.

Canadian Mail Publications
Sales Agreement #40021625
Postmaster please return
undeliverable copies to
Saskatchewan Pulse Growers
104 - 411 Downey Road
Saskatoon, SK S7N 4L8
ISSN 1701-9125
PRINTED IN CANADA

Cover Photo:

Courtesy Bert Vandenberg



Please Recycle

Planting for Success

Spring is a time for planting: both for seeds in our fields and for success in our industry.

5 Markets For New Pulse Varieties

Several new pulse varieties are under development at the University. How do they fit into current and future markets?

23 Getting Your Pulse Crops Off To A Good Start in 2004

Ken Panchuk describes how to provide a good foundation for your pulse crops this year.

31 Research Vital to Pulse Crop Sector Growth

Is the pulse checkoff worth it? A recent study shows growers' research investment is paying high dividends.



in this issue



- 15 **Looking to the Future: Pulse Days 2004**
News from the biggest pulse conference of the year.
- 19 **Pulse Companies: Buyers – Processors – Brokers**
Here is our semi-annual list of companies currently dealing in pulse crops.
- 29 **India Restricting Pulse Imports From Canada**
Import regulations in India are creating trade barriers for Canadian pulses.
- 30 **New Pulse Research Facility To Be Constructed**
A world-class pulse field research facility will be constructed at the University of Saskatchewan in 2004-05.
- 35 **Best of the Best: Savouring Saskatchewan Pulse Recipes**
Reporting on the results of our pulse recipe contest.
- 37 **Working on Harmonization of Crop Protection Products**
Mark Goodwin outlines Pulse Canada's efforts to harmonize international crop protection regulations.



departments



- 3 **Chairman's Message**
Shawn Buhr discusses four major announcements that will advance Saskatchewan's pulse industry.
- 11 **Market Muse: Analyzing Global Chickpea Markets**
Greg Kostal outlines the prospects for desi and kabuli chickpea markets this year.
- 25 **On Point**
News items of interest about SPG and the pulse industry.
- 38 **Closing Thoughts**
Garth Patterson encourages the pulse industry to improve its reputation.

Markets For New Pulse Varieties

in brief

Find the varieties that best fit your farm, your budget and your marketing plan.

Introduction

Determining the best pulse variety to seed all depends on how the variety fits the operation, in terms of production factors (days to maturity, soil type, disease susceptibility, plant structure) as well as marketing considerations for that crop (seed size, shape, colour, cooking time, etc). A good approach to take is to examine the *Varieties of Grain Crops 2004* and evaluate which varieties fit into your farm, your budget and your marketing plan. In this article, Tom Warkentin and Bert Vandenberg of the University of Saskatchewan's Crop Development Centre (CDC) provide some basic market considerations for the four major pulse crops in Saskatchewan to help you decide.

FIELD PEA

The CDC's breeding program is focused on improving these traits in peas:

- yield
- disease resistance
- early maturity
- harvestability
- resistance to bleaching in green peas
- greenish seed coats in yellow peas
- seed shape
- dimpling



PHOTO COURTESY TOM WARKENTIN

Field peas from western Canada are sold into both human consumption and feed markets. These markets have separate quality requirements.

Edible Green Markets

The key quality traits used in the market for edible peas are those related to visual appearance of the harvested seeds. Green and yellow cotyledon markets also have somewhat differing requirements. Most green pea markets prefer:

- medium to small seed size (200-240 g/1000 seeds)

Twin Air Bubble Jet

Single Air Bubble Jets already provide the best coverage available because of their uniform droplet size (200-550 micron). Now using the Twin Air Bubble Jet you get over twice as many droplets per square inch (compared to a single Bubble Jet) without all the drift and wasted chemical that conventional nozzles produce. Operates at normal pressure 30-45 psi (overall range of 20-90 psi)



Ideal for: - Applying fungicides, insecticides and herbicides.
- Pulse crops, potatoes or any crop for that matter.

This season let the Air Bubble Jets and Twin Air Bubble Jets help make your operation even more efficient by putting your chemical \$\$\$ where it belongs - "On The Plant".

Ag Canada tested

Price: Air Bubble Jets \$11.25 ea Twin Cap \$8.95 ea



A B J AGRI PRODUCTS

www.abjagriproducts.com • Brandon, Manitoba
Ph.: (204) 724-4519 • Fax: (204) 727-8694
Email: abjagri@westman.wave.ca

FINORA

"The Special Crops Company"

Green and Yellow Peas • Canary Seed
Lentils • Chick Peas • Mustard

Finora Offers:

- Prompt delivery opportunities
- Timely payment
- Great customer service

1-800-898-1122

Assiniboia (306) 642-5920

E-mail: assiniboia@finora.com

Wilkie (306) 843-2507

E-mail: wilkie@finora.com

Finora is CGC licensed and bonded.

Expand rotations and profits.



There are as many crop rotations as there are farmers and each is unique. At Agricare United, our experienced Special Crops staff help identify opportunities for your operation. You'll find them listening to your concerns and offering advice – on your farm and in your field.

Beans & Special Crops

Including beans, chickpeas, peas, lentils and mustard.

Tim Ferner, Regina – (306) 751-4920

Harry Munro,
Saskatoon/Nipawin – (306) 862-5393

Carman, MB – Toll Free 1-888-384-2838

Lethbridge, AB – Toll Free 1-888-442-8398



www.agricareunited.com

Advice. Expertise. Profitability. At Agricare United

- round seed shape
- smooth seed coat surface (as opposed to a dimpled surface)
- a low proportion of seeds with bleached cotyledons

Edible Yellow Markets

In the case of yellow peas, the preferred seed size range is wider, spanning 180-300 g/1000 seeds. Again, markets prefer round seed shape and smooth seed coat surface. Also, bright white seed coats are preferred to greenish seed coats. Both green and yellow peas for human consumption markets must also have acceptable cooking quality.

Feed Pea Markets

In recent years, approximately half of the field pea production in western Canada has entered feed markets. In this case, visual appearance is a less important aspect of quality. In feed markets, the chemical composition of the seeds is critical: peas are desirable in animal rations for their protein and energy components.

Developments in near infrared spectroscopy technology (NIRS) are opening new doors in the area of feed peas. NIRS will allow breeders to assess hundreds or thousands of samples per year to select for improved feed quality. They will also allow the feed industry to buy samples based on chemical quality. In the future, low phytate field pea varieties will improve the feed value of peas by storing phosphorus in a digestible form, instead of an indigestible form. Low phytate varieties will require much less phosphate addition to rations (a significant cost saving), and result in much less phosphate pollution in manure.

Specialty Pea Markets

Peas also enter various smaller markets, including silage, maple, and marrowfat. Each of these smaller markets have unique seed quality requirements. When peas are used in silage mixtures with annual cereals, the desired traits are small seed size (100-200 g/1000 seeds) to reduce planting costs and large biomass production. The biomass should be high in protein and high in digestible energy.

Maple peas are primarily used in birdseed mixtures. Maple peas should have seed coats with a light tan background and a darker tan

mottling. Rounder varieties are preferred among the often-blocky shaped maple peas.

Marrowfat peas are primarily used as snack foods in Asia, where they are roasted or deep-fried, then spiced. Seeds should be very large (350-500 g/1000 seeds), with non-bleached, green cotyledons, and a squarish, angular seed shape.

Future Market Prospects

Recently, yellow peas have been used in China for making vermicelli (starch) noodles and the sprouting market shows promise for the future.

CHICKPEA

Priority areas for the CDC's chickpea breeding program are:

- disease resistance
- early maturity
- seed size
- seed shape
- seed coat colour
- cooking quality



PHOTO COURTESY TOM WARKENTIN

Chickpea production from western Canada is sold into human consumption markets, with only off-grade production entering feed markets. For both the kabuli and desi market classes, the key traits used in the market are those related to visual appearance of the harvested seeds.

Kabuli Chickpea Markets

The key market quality trait in kabuli chickpea is seed size. Substantially higher prices are paid for larger seed size vs. smaller seed size. The largest market within chickpea classes is the 8 mm size class. There is an



**ROY
LEGUMEX^{INC.}**

Since 1948

GOT A PULSE?

CGC Bonded

Buyers and Processors of:

- Yellow and Green Peas
- Lentils (all types)
- Chickpeas (all types)
- Beans (all types)
- Canaryseed

Please call or visit our Web site for pricing and delivery information

1-800-785-7857 (toll free)

www.legumex.com

250 Caron Street (Box 40), St. Jean, MB R0G 2B0



WALKER SEEDS LTD.

Pea • Lentil • Chickpea • Bean • Canaryseed • Canola • Flax • Cereals

Processors / Exporters /

Crop Input & Seed Sales / Special Crop Contracting

Walker Seeds Ltd. has recently expanded it's export program to include Mustard. We are currently offering new crop acreage contracts on Yellow, Brown and Oriental Mustard. Also please call and check our spot bids and get your old crop moved before summer.

Walker Seeds Ltd. has recently received the exclusive marketing rights to the AMIT (B-90) for the 2004-2005 marketing year. Please call for info on Seed prices and on our New Crop Acreage Contracts.

Licensed & Bonded

Prompt 24 hr Payment Terms

Effective Marketing for Improved Grower Returns

Ph. (306) 873-3777 • Fax (306) 873-5997

Toll-Free (877) 975-4474

P.O. Box 2890, Tisdale, SK Canada S0E 1T0

Email: walker.seeds@sasktel.net

www.walkerseeds.ca



**SIMPSON
SEEDS INC.**



CELEBRATING 25 YEARS

With over 25 years of providing pulse growers access to world markets, Simpson Seeds is a reliable buyer, shipper and supplier of high quality lentils and kabuli chickpeas.

Simpson Seeds Inc.

P.O. Box 1136

Moose Jaw, SK

S6H 4P8

Head Office

Petrolia Road

phone 306-693-2132

fax 306-693-4489

Web: www.simpsonseeds.com

E-mail: ssi@simpsonseeds.com

Rail Site Office

Highway #1 West

phone 306-693-9402

fax 306-693-9404



**CFT
CORPORATION**



Your dependable source of transportation services

CFT CORPORATION

2020 Winston Park Drive Suite 300

Oakville, Ontario L6H 6X7 Canada

Telephone: (905) 829-5829 Fax: (905) 829-5219

Toll Free: (800) 561-8238 Email: cft@cftcorp.com

www.cftcorp.com

attractive premium for 9 mm or greater seed size, but this portion of the market is relatively small. CDC Frontier is a recently released variety with 8 mm seed size, improved (fair) ascochyta blight resistance, and higher yield than any other kabuli variety in Canada.

Most markets prefer the typical 'ram's head' seed shape, discounting the round seed shape. Some markets pay premiums for whiter seed coat colour compared to the more common cream colour. CDC ChiChi has whiter seed coat colour than any kabuli chickpea variety in Canada.

Desi Chickpea Markets

In the case of the desi market class, premiums have not typically been paid for larger seed size, although some markets prefer larger seed size (CDC Nika and CDC Cabri, for example), and we may see modest premiums for larger size in the future. Seed coat colour is an important measure of quality in desi chickpea. Most markets prefer light tan seed coat colour (for example, CDC Desiray) compared to tan or dark tan. Light colour gives the impression of freshness.

Niche markets exist for varieties with green seed coats (with green cotyledons), such as CDC Jade, and for black seed coats (with yellow cotyledons) like CDC 222-11. Seed shape can vary from quite angular and creased, to plump, to round. Historically, the angular shape has been common in most markets (like that of Myles), but many markets now prefer plumper varieties (such as CDC Anna). Round seed shape is generally unacceptable for desi chickpeas.

High milling efficiency is a desirable trait since most desi chickpeas are milled (dehulled) then split, and in some cases further processed into flour (besan). The CDC is hoping to expand research in this area in collaboration with the Canadian International Grains Institute (CIGI) and other laboratories around the world as part of the International Pulse Quality Committee initiative.

LENTIL

The primary issues for the CDC lentil breeding program are:

- disease
- agronomics
- yield
- seed coat bleaching for green lentils



PHOTO COURTESY TOM WARKENTIN

- seed diameter for all classes
- seed shape
- specialty lentils

Lentil production from western Canada is sold into human consumption markets, with only off-grade production entering feed markets. A number of market classes are important, including large green, medium green, small green, small red of different caliber ranges, as well as a few niche classes like French green and Spanish brown.

Green Lentil Markets

Large green (Laird type) is the largest market class in western Canada. Large seed size is the key quality trait. Seed weight can vary with environment, but we try to keep 65 g/1000 seeds as our minimum and then select on screen sizes as well. Medium green tends to be the highest-yielding, but lowest priced market class. Seed size in the medium green category should be similar to CDC Richlea (about 50 g/1000 seeds). Small greens should have seed size in the range of Eston and CDC Milestone (33-37 g/1000 seeds).

Retention of green seed coat colour is a very desirable trait in all three green lentil market classes. Plumpness (thickness) is desirable in green lentils, since it is related to rounder seed edges and less chipping damage during handling.

Red Lentil Markets

In the case of small red lentils, there is a range of size preferences among international markets. Many Middle Eastern markets (such as Egypt) prefer the size of Crimson and CDC

Blaze (35 g/1000 seeds); others, (such as Sri Lanka) prefer larger size similar to the Australian variety Digger and the new variety CDC Redberry (42 g/1000 seeds). Markets like Bangladesh prefer smaller red lentils similar to CDC Robin (30 g/1000 seeds or less). There is potential for smaller or larger red lentil market classes to emerge if customers demand this.

Several different seed coat colours are found in red lentil varieties in international markets. The current standard is brown (for example, Crimson and CDC Robin). CDC Blaze and CDC Redberry have a uniform grey seed coat colour, which may become dominant in the future. Tan seed coats are acceptable, but markets do not necessarily accept green.

Plumpness is also important in red lentils because of less chipping damage during handling and for the fact that plumper red lentils may be easier to decorticate (remove seed coat) and easier to split, especially for the small diameter types. We intend to do more research work in this area.

DRY BEAN

Dry bean is the most-produced and most-traded pulse crop in the world. Dry bean includes a wide array of market classes primarily defined by seed size, shape, and seed coat colour. The primary market classes under development at the CDC are: pinto, black,


Peruano beans are yellow, and the seed coats of carioca beans are similar to pintos except with brown stripes instead of spots. We anticipate expanded opportunities for Canadian dry bean production in the near future in response to anticipated changes in trading agreements with the Americas.

Seed shape is also an important consideration for all types of beans. For example, buyers in Mexico prefer plump shape for all beans. The canning market is very important in the dry bean industry, and researchers therefore place considerable emphasis on this area of testing.

A recent focus of research activity has been improving quality in the pinto market class. Most pinto bean seed coats darken (oxidize) after several months in storage. The light background colour turns dark, reducing visual quality and creating price discounts. Recently, we have begun research on genetic sources for reduced darkening.

What Does It All Mean?

Whichever varieties you choose, you'll have to decide which variety best fits your soil and farming operation, but you should also consider how a variety fits into the market. Is there a large market? When is the critical time to sell? What characteristics are necessary to capture a premium? Can specific varieties be handled differently to improve quality? What are customers looking for? Finding the best fit for both sides of the equation – production *and* marketing – is crucial to improving your bottom line come harvest time.

In the last few years, the CDC has changed to focus on breeding for specific improvements in quality in response to feedback from old and new markets. Exporters, processors and growers are encouraged to pay close attention to quality attributes of all new varieties to help satisfy specific market requirements of pulse buyers around the globe. 

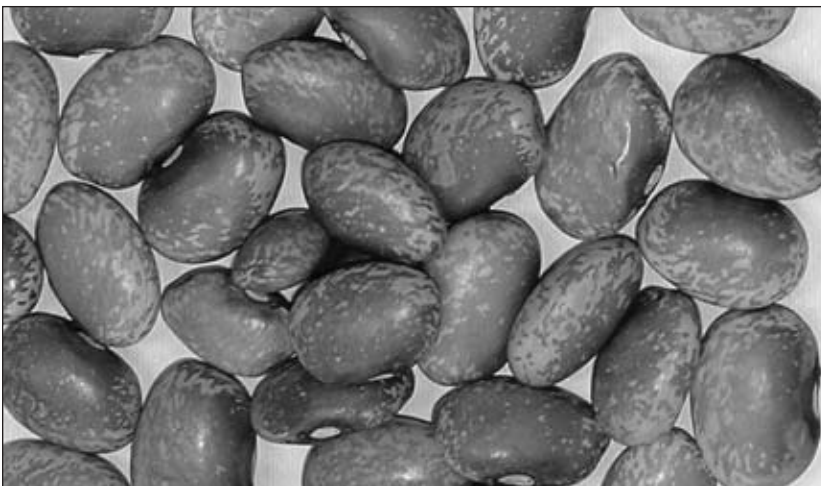


PHOTO COURTESY TOM WARKENTIN

navy, red, pink, and great northern. Recently, preliminary research efforts have begun on market classes that are preferred in Mexico (such as flor de mayo and peruano) and South America (such as carioca). The seed coats of Flor de mayo beans are pink and white.

Saskatchewan Pulse Growers invested almost \$1.5 million into pulse variety research at the University of Saskatchewan's Crop Development Centre last year. For more information about pulse varieties, see *Varieties of Grain Crops 2004*, available at all Saskatchewan Agriculture, Food & Rural Revitalization (SAFRR) rural service centers, or on the internet: www.agr.gov.sk.ca. Drs. Tom Warkentin and Bert Vandenberg are plant scientists at the University of Saskatchewan.

Analyzing Global Chickpea Markets

in brief

Are kabuli or desi chickpeas good prospects for 2004?

Introduction

Only in the past six crop cycles have chickpeas become an important prairie rotational crop. Acreage and production climaxed in 2001-2002 and then fell back to 1998-1999 levels. While recent years have offered a gloomy outlook, fundamentals of the large caliber kabuli offer inspiration into 2004-05.

There are a number of global events that will come to light before seeding, and my goal is to equip you with knowledge to make a more informed seeding decision. In the past 5 years, chickpea prices (farmgate Saskatchewan) have ranged between 10-18 cts/lb for desi and 22-40 cts/lb for 9 mm kabuli. Why the volatility? The answer depends on circumstances and type.

Desi Chickpea Markets

It's important to understand that other crops and other pulses compete with desi chickpeas in the marketplace. Desi chickpeas are universally accepted in the Indian subcontinent as a food staple in preparation of dal and/or ground into flour (called besan) to make sweets, snacks, and flatbreads, to name a few. However, many other pulses are used for the same purposes, including: mung beans, pigeon peas, cow peas, Australian dun pea, and field peas. Another main pulse food is Black Matpe, consumed in the form of papad, a major food ingredient for staples such as vada and dosa. Kidney and blackeye beans are other related pulses that would be used in individual dishes. Lower on the list is the kabuli chickpea, where demand is more niche.

Indian subcontinent consumers are generally considered to be poor. Until recently, their government policies have favored other cropping alternatives, which have curtailed potential pulse consumption due to the increased supply of other crops. That said, pulse production is

still heavily contingent on rainfall as most of the pulse land is farmed on dry land. Years that provide a high price for the yellow pulse crop family (including yellow peas and desi chickpeas) always correspond with a production shortfall either in Europe or the Indian subcontinent.

Pulses are generally considered to be among the crops with lower production costs and once emerging exporters are introduced to a market, their presence will not disappear. Examples include French peas where the incentive to export and capture edible premiums was greater than domestic values. Ukraine did and would have the capacity to export peas again if prices were to return to year ago levels. Pulses from Burma are recognized as having similar quality attributes as locally-grown product within the Indian subcontinent. Its close proximity enables Burma to export about 1 MMT of pulses to India every year, mostly black matpe. China was reported to have exported 470,000t of mung beans in 2002. Turkey, Syria and other neighboring countries provide seasonal competition. Even Pakistan was uncharacteristically exporting desi chickpeas last year.

India and most neighboring countries are positioned to harvest a good rabi season crop this March-April. Smaller crop prospects in Turkey and Syria (they are expecting normal yields this year compared to two years of above-average yields) will help moderate our competition, but no reason exists for the subcontinent to become a strong buyer. We'll have to wait until the next crop cycle, beginning with the summer khariff crop in October-November for better desi pricing opportunities.

Kabuli Chickpea Markets

Large Caliber (9-12 mm)

Demand is fairly price inelastic but relatively small. Since kabulis are eaten whole,

Looking for the ultimate in pulse seed protection?



It's now available... in a slightly more convenient package.

Apron Maxx™ RTA® is the only seed treatment that can be used on all major pulse crops. It provides broad spectrum protection against the key seed and soil-borne diseases that affect lentils, chickpeas, dry peas, soybeans and dry beans. Apron Maxx RTA is also inoculant-friendly, meaning you can inoculate and treat your seed in one operation. Plus, Apron Maxx RTA is a water-based, ready-to-apply formulation – it's convenience and peace of mind protection, all in one package.



Underground protection you can count on.



For more information, contact our Customer Resource Centre at 1-800-665-9250 or visit us at www.farmassist.ca

® RTA and the Syngenta logo are registered trademarks of a Syngenta group company.
TM APRON MAXX is a trademark of a Syngenta group company. Always read and follow label directions.



seed coat color and quality are important. India is the world's largest importer, and can be expected to import upwards of 50,000t per year. Other notable destinations for large kabulis include Europe, North Africa and the Middle East. Mexico is best suited for large caliber production, but, since kabuli chickpea prices have been in a slump, other crops have drawn more interest. This is leading to contraction in chickpea acreage, with 2004-05 acreage pegged at roughly 50% of levels three years ago. The USA also produces large caliber kabulis, but their production has also shrunk in response to low prices.

Led by the 10 mm size, prices have recently inched higher, a trend that is fundamentally sustainable in the coming year. Mexico, and to a much lesser extent the USA, sets the global price-bar.

Small Caliber (7 mm)

The Amit (B-90) and CDC Chico varieties have an "identity crisis" in that they derive value as an alternative to a desi or a large caliber kabuli: if either of those become high priced, 7 mm varieties have substitutable appeal. Amit tends to be the preferred 7 mm chickpea because in general, the seed coat is easier to remove, which tends to improve the taste, texture and color of the flour. Pakistan is the main country with a specific appetite for the 7 mm chickpea. Therefore, the best chance of increased Amit demand is linked to three things: Pakistan production prospects; the fate of large caliber kabuli fundamentals; and, to a lesser extent, Australian competition. In the absence of a production problem, a 7 mm kabuli chickpea price correlates best to desi chickpea.

Competitor harvest cycles and crops produced are important, particularly since much is known ahead of prairie seeding time. India and Pakistan typically harvest their winter or rabi crop in March-April. Harvest in Turkey and Syria is in May-June. Mexico tends to harvest in March-April, with the Australian pulse harvest occurring in December and January. In the USA, the EU-15, and Ukraine, harvest tends to be in July.

Bottom Line: Desi Chickpeas

Crop production problems in Canada have weaned prairie growers away from the desi market and that trend is now being


extended by favorable Indian subcontinent crop reports and ample yellow-pulse competition. Current 11-12 cts/lb bids are therefore representing offshore market values. Improved prices into 2004-05 will be driven by processor or food-aid demand but in general, expect this market to remain flat and depressed.

To generate and sustain profitable returns (defined as 15 cts/lb or better), we'll need to see production problems in the Indian subcontinent. New competitors will temper the ability of prices to retrace back to 18 cts/lb should Indian subcontinent production problems strike again. The good news is that since the subcontinent's crop size is typically known by March, prairie growers have time to adjust their seeding intentions. The bad news is that current Indian crop prospects are good, which means waiting for another crop cycle for the potential of better prices.

Bottom Line: Kabuli Chickpeas

Large caliber kabuli fundamentals are improving because competitive pressures are shrinking, in part due to reduced inventories in both Mexico and the USA. Demand for large caliber kabulis is fairly price inelastic; consumers are unwilling to pay more for this product even though supplies are looking tight right now, especially when new crop availability from Mexico is only months away.

Demand will likely be driven by the large caliber kabuli, but at an appropriate discount, smaller caliber will work. Consider planting a field of large kabuli on spec. There is a realistic shot of 9mm bids hitting 30 cts/lb with 10 mm at a 5 cts/lb premium this growing season. This will not be for everybody and necessitates of harvesting no less than 9 mm size, and preferably 10 mm. The fundamentals suggest wide price spreads between respective caliber sizing.


If Pakistan harvests a normal crop next crop cycle (one year from now), demand for Amit ought to improve. Of course, this could change if large kabuli acreage increases more than expected. Our benchmark 2004-05 Canadian chickpea production assumption is 90,000t on 200,000 seeded acres. 

Greg Kostal is a Senior Consultant with Sparks Companies, Inc. in Winnipeg, Manitoba. For more information, contact Greg at gkostal@sparksco.com



Greg Kostal speaking at Pulse Days about price and production outlook for 2004.

PHOTO COURTESY DWAYNE WILLIAMS PHOTOGRAPHY

Over the years, growers have come to depend on POAST® ULTRA. That's because it's the proven standard for safe, reliable and effective annual grass control. So, whether you are growing lentils, chickpeas, dry beans, flax, canola, mustard, field peas, sunflowers or potatoes – reach for POAST ULTRA to get the job done right! For more details, see your retailer, call  **BASF AgSolutions®** at 1-877-371-BASF (2273) or visit www.agsolutions.ca

Poast® Ultra
herbicide

Depend on it.



*Some conditions apply. Always read and follow directions before use. CLEARFIELD and Bag'n Box Bonanza are trademarks or registered trademarks of BASF. POAST is a registered trademark of BASF AG. AgSolutions is a registered trademark of BASF Corporation; both are used under license by BASF Canada Inc. © 2004 BASF Canada Inc.

**Save 20%* on POAST ULTRA with the
CLEARFIELD® Bag'n Box Bonanza™!**

BASF

Looking to the Future: Pulse Days 2004

PG in brief

Many thanks to our platinum sponsors for their valuable support.



Nearly 1,000 growers, researchers, exporters, and others in the pulse industry gathered in Saskatoon on January 12-13 at the annual Pulse Days Conference during Crop Production Week. The theme of this year's Pulse Days conference was "Securing Success: Shaping the Pulse Industry of the Future" and the main issues under discussion were: improved genetics and agronomics; managing risk; market prospects in North America; and the outlook for production and prices for 2004.

In the theme of looking to the future, keynote presenters this year were Graham Parsons on "Creating Wealth in Saskatchewan" and Richard Worzel on "The Future of Agriculture."

Graham Parsons, author of *Saskatchewan: This Year Country*, spoke of how Saskatchewan needs to take immediate action to capitalize on significant opportunities in energy and agriculture. "We need to create the climate in this province for growth, enterprise, investment, and yes, I will say it, profits. Big profits...We have gotten lost along the way by too much short term, parochial thinking. [Pulse producers must] rely on themselves to take action and lead the governments. Becoming a world leader means, in my view, working a plan that is active right through the production and processing cycles." Dr. Parsons



Kim O'Neil spoke of opportunities for Canadian beans when Mexico's tariff rate quote is eliminated in 2008.

suggested that, for the pulse industry to succeed, it must:

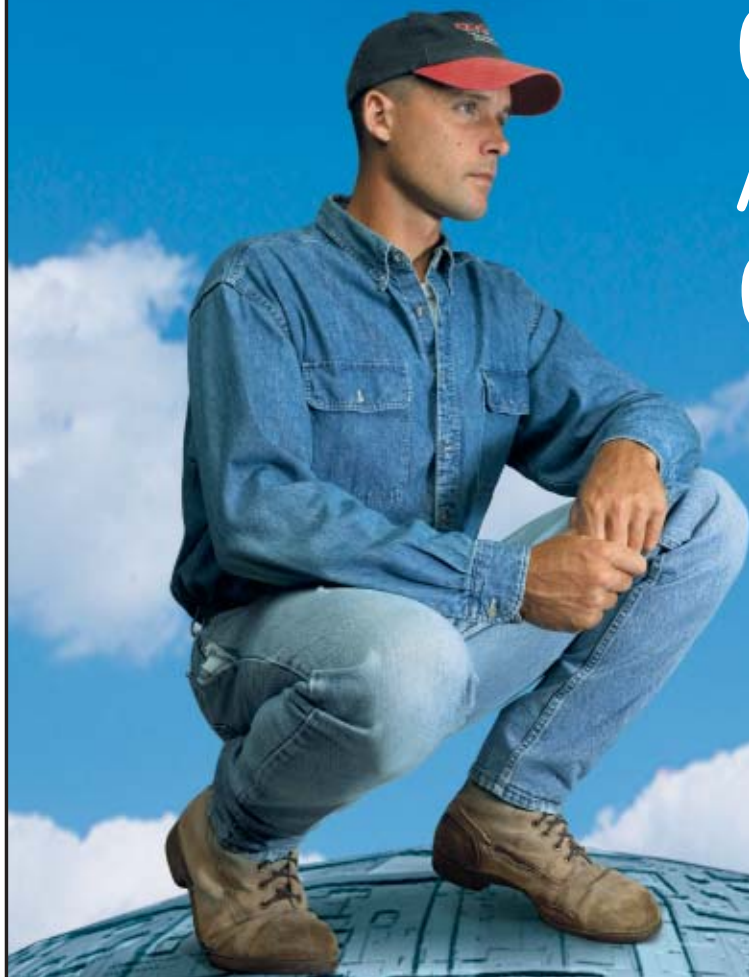
- Target niche markets
- Improve transportation
- Address trade barriers
- Increase irrigated production
- Develop accurate tracking and documentation systems

Richard Worzel, a futurist and author of *Who Owns Tomorrow*, had a lot to say about

Pulse Days 2005

Next year's Pulse Days will be held January 10-11, 2005 in Saskatoon.

GROWERS ARE TAKING CONTROL



Always read and follow label directions before use.
HEADLINE® and AgSolutions® are trademarks or registered trademarks of BASF Corporation, used under license by BASF Canada Inc.
Breaking New Ground™ is a trademark of BASF Corporation. © 2004 BASF Corporation. *Some conditions apply.



HEADLINE™
FUNGICIDE. BREAKING NEW GROUND™

Innovative growers know that controlling tough diseases demands the performance they can only get from HEADLINE™. HEADLINE delivers unprecedented control of key diseases in wheat, barley, lentils, chickpeas, dry beans and peas. Its unique activity provides systemic movement within the leaf and superior rainfastness.

To discover how growers are taking control with HEADLINE – now part of the 20/20 program* – call  BASF AgSolutions® at 1-877-371-BASF (2273) or visit www.agsolutions.ca

BASF

where agriculture is going. Consumers know more than ever before about their food, and will continue to demand more quality and more information about the pulses they eat, he said. "The good news for the future of agriculture is that we are in the midst of an economic upswing that will probably last for the next 8-10 years. This will produce good times for consumers and thereby in most cases, produce good times for farmers," he said. "Your future as farmers is going to depend on how well you prepare for tomorrow...The future is smart, flexible, nimble farming with a full knowledge of what's downstream and how consumers are using your end product. Think about getting a specific product to a specific consumer – a product that is highly value-added and not a commodity."

In the first session, conference delegates heard from Dr. Kevin Moore about how Australia is rebuilding their chickpea industry after being devastated by disease. One lesson he passed on is that the main way of spreading ascochyta in Australia is not through diseased seed, but through diseased residue spread through wind, water or harvesting. Dr. Tom Warkentin spoke about how the University of Saskatchewan develops new pulse varieties to fit global market preferences. Some of the latest developments in weed control research were outlined by Eric Johnson with Agriculture & Agri-Food Canada.

In these times of uncertainty, managing risk was a major focus at this year's Pulse Days. Craig Zawada outlined ten rules to follow before entering into a production contract. Randy Baldwin of Kelwin Management in Winnipeg discussed the results from a study on how producers can ensure payment for their crops. Another part of managing risk is making wise investments. Richard Gray and Terry Scott unveiled an economic report card on the investments producers have made into pulse research over the years. "The bottom line is that [pulse research] has been a tremendous investment for producers and an even better investment for the industry," said Gray.

In the market focus session, Kim O'Neil outlined upcoming opportunities for pulses in the Mexican food market. Lisa Campbell described current trends toward healthier eating in North America, and how pulses have a natural fit in the health food market. Another



Above:
A large crowd took part in Pulse Days at Prairieland Park.



Left:
Graham Parsons challenged delegates to become "First Movers" and capitalize on opportunities.

exciting prospect for Saskatchewan pulses is the North American feed market for hogs, outlined by Barb Stefanyshyn-Coté. "There is potential for 6 million tonnes of peas to go into hog diets [in North America]. To fill this, each and every one of you producers is going to have to triple the number of acres of peas that you put in. Something to think about."

A popular session at the conference each year is the Price/Production Outlook discussion. Greg Kostal with Sparks Companies, Murad Al-Katib of Saskcan Pulse Trading, and Larry Weber of Weber Commodities were on a panel that speculated on trends affecting the pulse industry in the coming year. "I'm predicting for 2004 a 4% increase in lentil acreage overall," said Al-Katib. "We're going to see

about 1.425 million acres with a return to more average yields for all varieties...I see [lentil production] to be very stable this year, and this may be what is needed to stabilize world trade in commodities [such as lentils]."

In addition to everyone who attended Pulse Days in Saskatoon, 287 people logged onto the live webcast during the conference,



Top:
Networking is an important part of Pulse Days.

Bottom:
Dr. Al Slinkard responded to an announcement of a new \$20,000 scholarship in his name.

from all parts of Saskatchewan and from as far away as Australia and Mexico. Participants were able to hear the live presentations and see the slides that the speaker was referring to on their computer.

"While it's not the same as being there, [the webcast] is an excellent way for people to get the highlights if they can't take the time to travel to Saskatoon," said one user who participated from his office in Weyburn. More than 300 have visited the archived webcast since Pulse Days ended. If you missed out this year, the written proceedings are available on the Saskatchewan Pulse Growers website (www.saskpulse.com/pulsedays). You can still listen to all the presentations from Pulse Days by going to that website and clicking on "Webcast."

Many thanks to all who participated and to the sponsors who made it possible. See you next year! PC

Penny Eaton is the Communications Manager for Saskatchewan Pulse Growers. Contact Penny at (306) 668-5556 or peaton@saskpulse.com.

Student Pulse Research Rewarded



PHOTO COURTESY TOM WARKENTIN

Chickpea plant infected with Ascochyta blight.

Saskatchewan Pulse Growers held a Research Poster Competition at the annual Pulse Days Conference to showcase student research projects underway throughout Western Canada. The winning entry was submitted by Sally Vail, a Masters student at the University of Saskatchewan. Her poster asked the question: "Why are my chickpeas so diseased?"

Since an epidemic of the disease ascochyta blight in 1999, many varieties of chickpeas adapted to Saskatchewan have become susceptible to Ascochyta blight. Vail's project looked at whether the current level of Ascochyta blight infection is due to an increase in the amount of disease inoculum or if the population of *Ascochyta rabiei* (which causes Ascochyta blight) has shifted to become genetically more aggressive since the late 1990s.

Vail's results suggest that there has been a shift in the population of *Ascochyta rabiei* in Saskatchewan to greater aggressiveness. This may have contributed to the increase in incidence and intensity of ascochyta blight in commercial chickpea fields within the past four growing seasons.

Congratulations to all the students who are contributing to pulse research in Saskatchewan. PC

Pulse Companies: Buyers – Processors – Brokers

Saskatchewan Pulse Growers makes no claim as to the reliability of the companies listed here. It is the personal responsibility of growers to satisfy themselves that any company they deal with is financially sound. Some of the companies on this list are registered with the Canadian Grain Commission, and some are not. Some companies do not need to be registered themselves as they are acting as agents for other companies.

Please take the time to ensure you're dealing with a reliable company. Ask questions of the company. Ask for references. Contact the Canadian Grain Commission to ask about licensing and security: see www.grainscanada.gc.ca or call (800) 853-6705 or (306) 780-5035 in Saskatchewan.

Note: For the purposes of this list, "Broker" refers to companies that arrange transactions between buyers and sellers, usually without taking possession of the crop. "Processors" are companies that handle and process the crop; they may or may not be acting as agents for other companies. "SPG Buyers" refers to companies that have registered with SPG to deduct and remit the pulse checkoff; it does not imply endorsement.

Broker	Processor	SPG Buyer	Company	Edible Peas	Feed Peas	Lentils	Beans	Desi Chickpeas	Kabuli Chickpeas	Faba Beans	Telephone	City/Town	More Info
		Y	Agricom International	◆		◆	◆		◆		604-983-6922	North Vancouver, BC	www.agricom.com
		Y	Agricore United – Head Office	◆	◆	◆	◆	◆	◆	◆	204-944-5411	Winnipeg, MB	www.agricoreunited.com
	Y	Y	Agricore United – SK Special Crops	◆	◆	◆	◆	◆	◆	◆	306-751-4920	Regina, SK	www.agricoreunited.com
	Y	Y	Agricore United – SK Special Crops	◆	◆	◆	◆	◆	◆	◆	306-343-5079	Saskatoon, SK	www.agricoreunited.com
	Y		Agrivision Processing Co.	◆		◆		◆	◆		306-645-2155	Rocanville, SK	agrivision@sasktel.net
	Y	Y	Agtech Processors Inc.			◆					306-721-5171	Regina, SK	1-800-667-7778
	Y		Aldor Farms Ltd.					◆	◆		306-574-2167	Tyner, SK	
	Y		Anderson Seed Cleaning	◆		◆					306-296-4545	Frontier, SK	
	Y		Annand Agro Services Ltd.	◆		◆		◆	◆		306-354-7675	Mossbank, SK	annand.ag@sasktel.net
	Y	Y	Argail Enterprises		◆	◆		◆	◆		306-858-2251	Beechy, SK	argail.ent@sasktel.net
	Y	Y	Bailey Brothers Seeds	◆		◆	◆	◆	◆		306-935-4702	Milden, SK	stoneyridge@sasktel.net
	Y		Baxter Seed Cleaning	◆			◆				306-862-5723	Codette, SK	
	Y		Baxter Seed Farm	◆		◆					306-445-5414	North Battleford, SK	
	Y		Beeler Seeds	◆	◆	◆	◆	◆	◆		306-528-2128	Nokomis, SK	www.geocities.com/beeler_seeds
	Y		Behnke Seed Fams Ltd.	◆		◆	◆	◆	◆		306-336-2655	Lipton, SK	
	Y		Beld Enterprises	◆							306-547-4664	Preeceville, SK	
	Y	Y	Belle Pulses Ltd.	◆	◆						306-423-5202	Bellevue, SK	bpl_bpl@qlo.com
		Y	Berdex Canada Ltd.	◆		◆	◆	◆	◆		204-944-8921	Winnipeg, MB	www.berdex.mb.ca
	Y		Bergstrom Farms Ltd.	◆		◆		◆	◆		306-573-4625	Birsay, SK	bergstromfarms@sasktel.net
	Y	Y	Best Cooking Pulses Inc.	◆							306-586-7111	Rowatt, SK	www.bestcookingpulses.com
		Y	Big Sky Farms Inc.		◆						306-682-5041	Humboldt, SK	www.bigsky.sk.ca
	Y	Y	Blue Hills Processors Ltd.	◆	◆	◆		◆	◆		306-868-4488	Avonlea, SK	www.bhpl.ca
	Y	Y	Boersch Farms			◆					306-695-2693	Indian Head SK	www.boerschfarms.com
		Y	Bornhorst Seeds Ltd.	◆	◆						306-366-2158	St. Gregor, SK	bornhorstseeds@hotmail.com
	Y		Bouvier Seeds			◆					306-648-2748	Gravelbourg, SK	
	Y		Boyes Seeds	◆							306-327-4782	Kelvington, SK	
		Y	Brett-Young Seeds Limited Partnership		◆						800-468-6509	Gilbert Plains, MB	www.byseeds.com
		Y	C. B. Constantini Ltd.		◆	◆					306-373-9730	Saskatoon, SK	
	Y		Calwell Seeds & Cleaning Ltd.			◆					306-378-4173	Elrose, SK	
	Y	Y	Canadian Select Grains Ltd.			◆		◆	◆		306-962-4227	Eston, SK	www.csgca.com
		Y	Canary Island Seed Associates	◆	◆	◆		◆	◆		306 885 4444	Sedley, SK	sedleyseeds@cableregina.com
	Y		Canora District Seed Cleaning	◆							306-563-4303	Canora, SK	
		Y	Cargill Limited		◆						204-947-6262	Winnipeg, MB	www.cargill.ca
	Y		Ceylon Pulse Plus	◆		◆		◆	◆		306-454-2245	Ceylon, SK	
Y			CGF Brokerage & Consulting	◆	◆	◆	◆	◆	◆		306-244-1124	Saskatoon, SK	www.cgfbrokerage.com
	Y		Clancy Seeds	◆							306-768-3566	Carrot River, SK	
		Y	Con Agra Grain Canada	◆	◆	◆				◆	204-925-5566	Winnipeg, MB	www.conagra-canada.com
	Y	Y	Copeland Seeds	◆		◆		◆	◆		306-378-2286	Rosetown, SK	
	Y	Y	Crown Ag International Inc.	◆	◆	◆	◆	◆	◆		306-522-8111	Regina, SK	www.crownag.ca
	Y		Cut Knife & District Seed Cleaning	◆		◆					306-398-4740	Cutknife, SK	
		Y	Dandilee Spice Corp.	◆	◆			◆			306-745-2510	Gerald, SK	dandilee@sasktel.net

Pulse Companies: Buyers – Processors – Brokers

Broker	Processor	SPG Buyer	Company	Edible Peas	Feed Peas	Lentils	Beans	Desi Chickpeas	Kabuli Chickpeas	Faba Beans	Telephone	City/Town	More Info
	Y		Danielson, Lionel	◆							306-594-2173	Norquay, SK	
	Y		Dartmore Farms Ltd.	◆		◆		◆	◆		306-862-5015	Aylsham, SK	
	Y		Dell Seeds	◆		◆					306-554-3117	Dafoe, SK	
	Y		Delorme Seeds	◆	◆	◆	◆	◆	◆		306-642-5793	Assiniboia, SK	
	Y	Y	Diefenbaker Seed Processors Ltd.	◆		◆	◆	◆	◆		306 644-4704	Elbow, SK	lionelector.stulor@sasktel.net
	Y		Epp's Farm Service	◆		◆					306-223-4377	Eston, SK	
	Y		Eskdale Seed Farm Ltd.	◆		◆					306-675-2222	Leross, SK	
		Y	Export Packers Company Ltd.	◆		◆	◆	◆	◆	◆	905-792-9700	Brampton, ON	www.exportpackers.com
	Y		Farley Seeds	◆		◆					306-757-7223	Regina, SK	
		Y	Farmer Direct Co-operative Ltd.	◆		◆	◆	◆	◆		306-352-2444	Regina, SK	www.farmerdirect.ca
	Y		Fast Seed Farm	◆		◆					306-463-3626	Kindersley, SK	wl.fast@sasktel.net
		Y	Feed-Rite		◆						306-682-2668	Humboldt, SK	www.feedrite.com
	Y		Ferndale Seed Farms	◆		◆					306-645-4423	Rocanville, SK	
		Y	Fertile Valley Processors		◆						306-856-2222	Outlook, SK	
	Y	Y	Fill-More Seeds Inc.	◆	◆	◆		◆	◆		306-722-3353	Fillmore, SK	www.fillmoreseeds.com
	Y	Y	Finora Canada Ltd. - Assiniboia	◆	◆	◆	◆	◆	◆		306-642-5920	Assiniboia, SK	assiniboia@finora.com
	Y	Y	Finora Canada Ltd. - Wilkie	◆	◆	◆	◆	◆	◆		306-843-2507	Wilkie, SK	wilkie@finora.com
	Y		Flaxcombe Seed Processors	◆	◆	◆					306-463-3730	Flaxcombe, SK	
	Y		Fraser Seeds	◆							306-745-3830	Yarbo, SK	
	Y		Fraser's Seed Farm Ltd.	◆	◆	◆		◆	◆		306-895-2042	Paynton, SK	
	Y		Geddes Seeds and Processing Ltd.	◆		◆					306-895-4307	Paynton, SK	
		Y	GH Schweitzer Enterprises	◆	◆	◆	◆	◆	◆	◆	306-962-4751	Eston, SK	www.schweitzer.sk.ca
	Y		Gibbs, Bryan			◆					306-842-5990	McTaggart, SK	
	Y		Gilchrist Seed Farms Ltd.	◆		◆		◆	◆		306-882-2901	Rosetown, SK	
	Y	Y	Global Pulse Processors Inc.	◆		◆		◆	◆		306-773-2441	Swift Current, SK	globalpulse@sasktel.net
	Y		Grassy Acres	◆							306-752-4017	Melfort, SK	
		Y	Great Sandhills Terminal Marketing Centre	◆	◆	◆		◆	◆		306-628-3843	Leader, SK	earl.hawthorne@gst.ca
		Y	Great Western Grain Company Ltd.	◆	◆	◆		◆	◆		306-825-4344	Lloydminster, SK	rwn@direcway.com
	Y		Greenleaf Seeds Ltd.	◆	◆	◆	◆				306-873-4261	Tisdale, SK	
	Y		Greenshields Seeds Ltd.	◆		◆		◆	◆		306-524-2155	Semans, SK	
Y			Grupo Canada		◆	◆	◆	◆	◆		204-478-1727	Grand Marais, MB	dnyznyk@grupocanada.com
	Y		Hanmer Seeds	◆		◆		◆	◆		306-484-4327	Govan, SK	www.lentilsCanada.com
	Y		Heenan Agri Ltd.			◆					306-522-9375	Regina, SK	
	Y		Hetland Seeds	◆	◆						306-874-5694	Naicam, SK	
	Y		Hjertaas Seed	◆		◆		◆	◆		306-452-3882	Redvers, SK	
		Y	Horizon Agro Inc.	◆	◆	◆					204-746-2026	Morris, MB	www.horizonagro.com
	Y	Y	Horizon Seed Processors	◆	◆	◆					306-253-4233	Aberdeen, SK	merlin.horizon@sasktel.net
	Y		Hurd Farms Ltd.	◆							306-762-9240	Melfort, SK	
	Y		HWY. 26 Cooperative Seed Cleaning	◆		◆					306-397-2353	Edam, SK	
		Y	International Grain Trade Canada Inc.	◆	◆	◆	◆	◆	◆	◆	604 685 5259	Vancouver, BC	www.igtcan.com
	Y		Je-Jo Farms Ltd.	◆		◆					306-342-2058	Glaslyn, SK	
	Y		JLS Perault Farms Ltd.	◆							306-275-2237	St. Brieux, SK	jlsperault.farms@sasktel.net
	Y		Junop Brothers	◆		◆					306-493-2995	Delisle, SK	
	Y		Keg Farms Ltd.	◆		◆	◆	◆	◆		306-867-8667	Outlook, SK	gcarlson@sasktel.net
	Y	Y	Keyser Farms Ltd.	◆	◆	◆		◆	◆	◆	306-723-4949	Cupar, SK	keyserfarms@sasktel.net
		Y	Klempnauer Seeds Ltd.	◆							403-655-2420	Grassy Lake, AB	www.klempnauer.ab.ca
	Y		Kostenuk Bros. Seeds Inc.	◆							306-742-4545	Wroxton, SK	k.kostenuk@sasktel.net
	Y	Y	Kyle Seed Cleaning	◆	◆	◆	◆	◆	◆		306-375-2350	Kyle, SK	jcarlson@sasktel.net
Y			Lackawanna Products		◆	◆		◆	◆		306-862-2723	Nipawin, SK	lackawanna@sasktel.net
	Y	Y	Lakeside Pulse & Special Crops Ltd.	◆	◆	◆	◆	◆	◆		204-255-5550	Winnipeg, MB	www.lakesidespecialcrops.com

Pulse Companies: Buyers – Processors – Brokers

Broker	Processor	SPG Buyer	Company	Edible Peas	Feed Peas	Lentils	Beans	Desi Chickpeas	Kabuli Chickpeas	Faba Beans	Telephone	City/Town	More Info
	Y	Y	Lashburn Ag Ventures Ltd.	◆	◆	◆					306-285-3511	Lashburn, SK	lashburnagventures@sasktel.net
	Y		Lenmar Seed Farm	◆		◆					306-335-2994	Lemberg, SK	
	Y		Lepp's Seed Farm	◆		◆					306-254-4243	Hepburn, SK	
		Y	Linear Grain Inc.		◆		◆			◆	204-745-6747	Carman, MB	www.lineargrain.com
		Y	Louis Dreyfus Canada Ltd.	◆	◆						403-205-3322	Calgary, AB	www.louisdreyfus.ca
		Y	Mainline Terminal		◆						306-435-4905	Moosomin, SK	
	Y		Manitou Custom Seed Cleaning	◆		◆		◆	◆		306-259-4944	Young, SK	
		Y	Maviga N A	◆		◆	◆	◆	◆	◆	306-721-8900	Regina, SK	www.maviga.ca
	Y		Maze Seed Farms Ltd.	◆		◆					306-398-2637	Unity, SK	mazeseeds@sasktel.net
	Y		Meadow Lake Co-op Seed Cleaning	◆							306-236-4144	Meadow Lake, SK	
	Y		Meyers Seed and Cleaning Inc.	◆							306-929-4946	Meath Park, SK	
		Y	Mid-Sask Terminal		◆						306-946-2225	Watrous, SK	
		Y	N.M. Paterson & Sons Ltd.		◆	◆	◆				204-956-2090	Winnipeg, MB	www.patersongrain.com
		Y	Naber Specialty Grains Ltd.	◆	◆	◆		◆	◆	◆	306-752-4115	Melfort, SK	nsgl@sasktel.net
	Y		Nelson Seed Farms Ltd.	◆		◆					306-825-4000	Lloydminster, SK	rwn@sasktel.net
	Y		Nelson's Seed and Cleaning Ltd.	◆		◆		◆	◆		306-357-4601	Wiseton, SK	
	Y	Y	Newfield Seeds Company	◆	◆		◆				306-862-4678	Nipawin, SK	www.newfieldseeds.ca
		Y	No-Bull Marketing Ltd.					◆	◆		403-643-2855	Carmangay, AB	www.diversifoods.ca
		Y	North East Terminal Ltd.	◆	◆						306-338-2999	Wadena, SK	www.northeastterminal.com
		Y	North West Terminal Ltd.		◆						306-228-3735	Unity, SK	www.northwestterminal.com
	Y		NorthFork Seeds			◆					306-692-1616	Marquis, SK	northforkseeds@sasktel.net
	Y		Notukeu Processing Inc.	◆		◆		◆	◆		306-582-6000	Vanguard, SK	www.notukeu.com
	Y		Palmier Seed Farm			◆		◆	◆		306-472-3722	Lafleche, SK	
		Y	Parent Seed Farm Ltd.	◆	◆	◆	◆	◆	◆	◆	204-737-2625	St Joseph, MB	www.parentseed.com
	Y	Y	Parkland Pulse Grain Co. Ltd.	◆	◆	◆		◆	◆		306-445-4199	North Battleford, SK	parklandpulse@sasktel.net
	Y		Parrheim Foods	◆				◆	◆		306-931-1655	Saskatoon, SK	www.parrheimfoods.com
		Y	Parrish & Heimbecker Ltd. (Lethbridge)	◆	◆	◆	◆	◆	◆	◆	403-320-9440	Lethbridge, AB	www.parheim.mb.ca
		Y	Parrish & Heimbecker Ltd. (Winnipeg)	◆	◆	◆		◆	◆		204-987-4318	Winnipeg, MB	www.parheim.mb.ca
	Y		Pask Farms	◆							306-745-2571	Atwater, SK	paskfarms@sasktel.net
	Y		Pasqua Farms Ltd.	◆		◆		◆	◆		306-694-2981	Moose Jaw, SK	
	Y		Peter Seed Farm			◆					306-642-4925	Assiniboia, SK	
	Y		Peterson Seed Farms	◆							306-594-2355	Norquay, SK	
	Y		Petracek Seed Farm Ltd.	◆		◆					306-745-3829	Churchbridge, SK	psf@sasktel.net
	Y		Pheasant Hill Seed Farm	◆		◆					306-333-2069	Abernethy, SK	
	Y		Phillips Seeds Ltd.	◆							306-873-5569	Tisdale, SK	phillips.c@sasktel.net
		Y	Pioneer Grain Co. Ltd.	◆	◆	◆					204-934-5961	Winnipeg, MB	www.jri.ca
		Y	PN Enterprises Ltd.	◆	◆	◆	◆	◆	◆		604-507-1131	Surrey, BC	www.pnelt.com
		Y	Poplar Valley Organics	◆		◆					306-767-2640	Zenon Park, SK	poplarvalley@sasktel.net
		Y	Prairie Mountain Agri Ltd.	◆	◆						204-937-6370	Roblin, MB	
	Y	Y	Prairie Pulse Inc.	◆	◆	◆		◆	◆		306-249-9236	Vanscoy, SK	info@prairiepulse.com
		Y	Prairie West Terminal Ltd.		◆						306-932-4446	Plenty, SK	wsmith@p-w-t.ca
		Y	Prairieland Grain Co. Ltd.	◆	◆	◆		◆	◆		204-483-3636	Hartney, MB	www.prairielandgrain.com
	Y		Premium Grain	◆		◆					306-864-3696	Melfort, SK	
		Y	Prime Pro Seeds International Inc.	◆	◆	◆		◆	◆		306-296-2055	Frontier, SK	www.primeproseeds.com
	Y	Y	Pro Can Seeds Ltd.		◆	◆		◆	◆		306-882-4482	Zealandia, SK	procan@sasktel.net
	Y		Proven Organics			◆					306-648-3282	Gravelbourg, SK	
		Y	PSC Elston Research Farm	◆	◆	◆		◆			306-373-9922	Saskatoon, SK	
	Y	Y	Pulse Depot Rosetown Inc.	◆	◆	◆		◆	◆		306-882-4440	Rosetown, SK	info@pulsedepot.com
		Y	Quadra Group		◆	◆		◆	◆		306-867-8916	Outlook, SK	www.communitypork.com
		Y	Quantum Processing Ltd.	◆		◆		◆	◆		306-759-2040	Central Butte, SK	quantum.processing@sasktel.net

Pulse Companies: Buyers – Processors – Brokers

Broker	Processor	SPG Buyer	Company	Edible Peas	Feed Peas	Lentils	Beans	Desi Chickpeas	Kabuli Chickpeas	Faba Beans	Telephone	City/Town	More Info
Y			Rayglen Commodities	◆	◆	◆	◆		◆	◆	800-729-4536	Saskatoon, SK	www.rayglen.com
	Y		Reavie's Seed Cleaning	◆							306-769-8887	Arborfield, SK	
		Y	Redvers Ag & Supply Ltd.	◆	◆						306-452-3443	Redvers, SK	
	Y		Regina Seed Processors Ltd.	◆		◆					306-586-8955	Richardson, SK	
	Y		Riverview Seeds Limited	◆							306-862-4333	Nipawin, SK	
		Y	R-K Sunview Farms Ltd.			◆					306-776-2468	Rouleau, SK	
		Y	Roy Legumex Inc.	◆	◆	◆	◆	◆	◆	◆	204-758-3597	St. Jean-Baptiste, MB	www.legumex.com
		Y	S.S. Johnson Seeds Ltd.	◆	◆	◆				◆	800-363-9442	Arborg, MB	www.johnsonseeds.mb.com
	Y	Y	Sask Wheat Pool - Seed Cleaning Plant			◆					306-692-0671	Moose Jaw, SK	merchandising@swp.com
	Y	Y	Sask Wheat Pool - Seed Processing	◆	◆	◆		◆	◆		306-882-4492	Rosetown, SK	merchandising@swp.com
	Y	Y	Saskcan Pulse Trading Inc.			◆	◆	◆	◆		306-525-4490	Regina, SK	www.saskcan.com
	Y	Y	Schumacher Seeds Ltd.			◆			◆		306-493-8274	Delisle, SK	knibbs@direcway.com
	Y	Y	Sedley Seeds	◆	◆	◆		◆	◆		306-885-4444	Sedley, SK	www.sedleyseeds.com
	Y	Y	Shamrock Seeds Ltd.	◆	◆	◆	◆	◆	◆		306-249-4151	Saskatoon, SK	shamrock.seeds@home.com
	Y		Shewchuk Seeds	◆				◆			306-497-2800	Krydor, SK	
	Y		Silhouette Seeds	◆		◆					306-423-6283	Domremy, SK	silhouette@sasktel.net
	Y	Y	Simpson Seeds Inc.		◆	◆			◆		306-693-2132	Moose Jaw, SK	www.simpsonseeds.com
	Y	Y	Smith Seeds	◆		◆		◆	◆		306-263-4944	Limerick, SK	smith.seeds@sasktel.net
		Y	South West Terminal Ltd.	◆	◆	◆		◆	◆		306-672-4112	Gull Lake, SK	www.swt.sk.ca
	Y		Southland Processors Inc.			◆			◆		306-296-4778	Frontier, SK	www.southlandsk.com
	Y	Y	Southland Pulse Inc.	◆	◆	◆			◆		306 634-8008	Estevan, SK	www.southlandpulse.net
	Y		Sudom Seeds	◆		◆			◆		306-868-4620	Avonlea, SK	b.sudom@sasktel.net
		Y	Sunrise Foods International Inc.	◆	◆	◆	◆	◆	◆	◆	306-931-4576	Saskatoon, SK	sunrise.g.neufeld@sasktel.net
	Y		Sunset Farms Ltd.	◆		◆		◆	◆		306-626-3388	Pennant, SK	
		Y	Superior Grains Inc.	◆	◆	◆		◆	◆		701-965-6241	Crosby, ND	les@superiorgrains.com
	Y		T & E Williamson Seeds	◆		◆		◆	◆		306-582-6009	Pambrun, SK	
	Y	Y	T.W. Commodities	◆		◆		◆	◆		306-773-9748	Swift Current, SK	www.twcommodities.com
	Y		Tanner Seeds			◆					306-757-7012	Regina, SK	
		Y	Terminal 22 (1998) Inc.		◆						306-334-2222	Balcarres, SK	bkercher@terminal22.sk.ca
	Y	Y	Terramax Holdings Corp.	◆	◆			◆	◆		306-522-7117	Qu'Appelle, SK	www.terramax.sk.ca
	Y		Thiel Seeds Ltd.	◆							306-747-3947	Shellbrook, SK	
	Y		Tomtene Seed Farm	◆							306-749-3554	Birch Hills, SK	
	Y		Trawin Seeds	◆							306-752-4060	Melfort, SK	
		Y	Trinidad Benham/Conida Seed Co.				◆				208-829-5411	Hazleton, ID USA	
	Y		Valleau's Cleaning Plant	◆		◆					306-277-4208	Ridgedale, SK	
	Y		Valleyview Seed Cleaning	◆		◆		◆	◆		306-856-4445	Outlook, SK	vall@sasktel.net
	Y	Y	Van Burck Seeds	◆	◆						306-863-4377	Star City, SK	vanburckseeds@sasktel.net
	Y	Y	Veikle Grain Ltd.	◆	◆	◆					306-398-4714	Cut Knife, SK	veikle.seeds@sasktel.net
	Y	Y	Vigro Seed & Supply (A division of Weyburn Inland Terminal)	◆	◆	◆		◆	◆		306-885-2144	Sedley, SK	www.wit.ca
		Y	W G Thompson & Sons Limited	◆			◆				519-676-5411	Blenheim, ON	johnthompson@wgthompson.com
		Y	Walhalla Bean Co. (Canada) Ltd.				◆				204-325-0767	Winkler, MB	walbean@mts.net
	Y	Y	Walker Seeds Ltd.	◆	◆	◆	◆	◆	◆	◆	306-873-3777	Tisdale, SK	www.walkerseeds.ca
	Y		Wallace Enterprises Inc.	◆		◆		◆	◆		306-574-4299	Tyner, SK	w.wallace@sasktel.net
		Y	Werner Agra			◆					306-721-1375	Regina, SK	www.werneragra.com
		Y	Western Commodities Trading Inc.		◆	◆		◆	◆	◆	306-872-2280	Spalding, SK	blair.wct@sasktel.net
	Y	Y	Western Grain Cleaning & Processing	◆	◆	◆	◆	◆	◆		306-657-3455	Saskatoon, SK	info@westerngrain.com
		Y	Weyburn Inland Terminal Ltd.	◆							306-842-7436	Weyburn, SK	www.wit.ca
Y			Yanez International Commodities	◆		◆	◆				306-242-1538	Saskatoon, SK	www.rodgrigointl.com/
		Y	Young Seeds Inc.	◆		◆	◆	◆	◆		306-355-2221	Mortlach, SK	ryoungseeds.colin@sasktel.net

Getting Your Pulse Crops Off To A Good Start in 2004

in brief

Some critical steps will provide a good foundation for pulse crops this year.

Step 1: Assess Soil Moisture

On average, the Saskatchewan grain belt can expect about 20 to 30 per cent of the annual precipitation in the form of snow. The amount of snow cover has improved considerably since mid January. With the remainder of winter and April precipitation to come, the chance of having enough snow melt and spring rains to contribute significantly to sub-soil moisture is good. A number of producers on fields with low levels of standing stubble practiced snow ridging to further increase the chance of capturing more moisture. Going into winter, the soil was quite dry, so it is likely that most of the snow melt will enter the soil.

Measuring how much moisture entered the subsoil can be done as soon as the frost is out of the ground and before seeding starts. A soil moisture probe can be made in any farm shop by welding a steel ball at one end of a four foot long, half-inch steel rod and a handle at the

other end. Push the rod into the moist soil – it will stop penetrating when the steel ball hits the dry soil. Where moist soil meets the dry soil is called the ‘*wetting front*.’ Check a number of places in the field to see how uniform the depth of the wetting front is. Average the depth and use Table 1 as a guide to estimate the amount of “plant available water” that is in your field.

Note that soil texture plays an important role in soil water retention. Also, crop residues and soil organic matter being added to the soil will help hold more moisture and reduce moisture loss. Use the amount of plant available stored soil water that was measured in the spring, just before seeding, plus an estimate of the growing season precipitation, to determine a realistic yield goal for each field and/or to adjust the yield goal from the fall soil tests.

Step 2: Test Your Soil

Soil testing is the next important step in planning for a good start for your pulse crops. Pulses are legumes, so ideally fields with less than 30 pounds of nitrogen should be selected, provided the other rotational conditions are also met. Soil testing can be a valuable tool for locating fields that are low in nitrogen. Nitrogen levels in the top six to 12 inches should be used as an indicator, since growth of the seedling for the first several weeks is the focus of establishing a pulse crop. If there is a large amount of nitrogen available, it will delay the onset of nodule formation while the crop preferentially uses

Table 1: Plant available soil water stored for various soil textures

Soil Texture	Inches of plant available soil water per foot of moist soil
Sand	0.75
Loamy sand	1.00
Sandy loam	1.25
Loam	1.50
Clay loam	1.75
Clay	2.00

More Info

From SAFRR:

- *Farm Facts* (for lentil, pea and chickpea)
- *Inoculation of Pulse Crops*
- *Guidelines For Safe Rates of Fertilized Applied With The Seed*
- *Stubble Subsoil Moisture Map Farm Facts*
- Web site: www.agr.gov.sk.ca

From SPG:

- *Pulse Production Manual*

the nitrogen from the soil. Nitrogen levels in the topsoil are expected to be higher than normal due to the recent dry years and the increased nitrogen mineralization potential in zero and minimum-till fields. The nitrogen contained in starter phosphate fertilizer applied with or very near the seed and the soil residual nitrogen plus mineralization is likely all the starter nitrogen that is needed to supply the pulse crop until the fixation process begins (dry bean is the exception to this).

Inoculation

For best results, inoculate your pulse crop seed with the proper stain of inoculant following the label rate. Product labels and information sheets not only describe rates and how to apply inoculants but also have information on applying fungicides and other input products too. Inoculant manufacturers welcome questions from producers if the specific information you need is not on the label or information sheets. Residual rhizobia bacteria that survive from a previous year are not likely to be as effective in fixing nitrogen as the rhizobia bacteria in the freshly applied inoculant. To check nodule effectiveness, dig up pulse plants when the nodules are actively fixing nitrogen, in about mid-June. Then gently wash the soil away from the roots by dipping the roots into a pail of water.

A seed-applied inoculant will result in nodule clusters near the seed and crown. For granular inoculants, nodules will form on the roots along the row of application. Highly effective nodules will be bright red in the centre when cut open. Other nodules will form throughout the rest of the root system with centres ranging in color from red to pink and gray, brown to green. The light pink nodules are not fixing much nitrogen and the gray, brown and green are not fixing any nitrogen. In fact, the nodules with brown, gray and green color centers are using the plant energy that normally would be directed at growth and yield. So it is critical to do the best job possible of inoculating your pulse crops. Also, keep in mind that desiccation (drying) is the biggest threat to survival of the inoculant bacteria. It is important to note that fertilizers act like salts, so adding more fertilizer than is necessary in the seed row may do more harm than good to the seed and the inoculant – especially if the seedbed moisture

is less than ideal and with narrow openers. If any fertilizer is placed in the seed row, it should be a safe rate of starter phosphate.


Fertilization

Phosphate fertilizer is another critical step in getting any crop off to a good start. Pulse crops are seeded early under cool soil conditions and have slow root growth, so it is important to place some phosphate with or very near the seed to promote early root growth. Phosphate fertilizers contain some nitrogen for early growth as well. If phosphorus is deficient, the nodules can't do their job effectively. Check your soil test for the amount of phosphate fertilizer that is needed. However, do not exceed the safe rate of phosphate fertilizer applied with the seed. Recommendations are as follows:

- for lentil, 20 pounds,
- pea and chickpea, 15 pounds of phosphate (P₂O₅) per acre using 6 to 7 inches spacing under good seedbed moisture conditions.

If higher rates of phosphate are needed, consider sidebanding the phosphate a short distance away from the seed row, using a wider seed bed utilization (wider spread under the opener), or a combination of a low rate of phosphate fertilizer and Jumpstart, a phosphorus inoculant. If your soil tests high in phosphorus and is generally non-responsive to phosphate fertilizer, consider a low rate of phosphate plus Jumpstart or Jumpstart on its own.

Preserving Soil Moisture

Keep as much stubble standing and as much residue on the surface as possible by using narrow openers on your seeding equipment. This practice will minimize moisture loss from the soil surface ensuring a good seedbed with moisture for early germination and emergence. The standing stubble will help reduce evaporation from the soil surface and the seedling leaves. These moisture conservation practices will help squeeze a few extra bushels of yield from the stored soil water in addition to precipitation during the growing season. 

Ken Panchuk is the Provincial Soils Specialist with Saskatchewan Agriculture, Food & Rural Revitalization in Regina. For more information, contact kpanchuk@agr.gov.sk.ca.

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

Larry Gramiak Chosen As Pulse Promoter Of The Year

Each year, Saskatchewan Pulse Growers presents the BASF Pulse Promoter Award to an individual who has made an extraordinary contribution to the development of the pulse industry.

This year's award was presented posthumously to Larry Gramiak, who worked for almost 30 years with Saskatchewan Agriculture. Throughout his career, Larry met and talked with hundreds of farmers across the province, answering questions about growing pulses, managing insects and diseases, soil fertility and crop rotations. He was a tireless supporter of the pulse industry and was a gracious ambassador on numerous occasions when people visited our country to learn more about Saskatchewan pulses.

On November 14, 2002, Larry passed away of cancer at the age of 53. Larry's daughter, Lisa Mechor traveled from Edmonton to Saskatoon to accept the award. "[Larry] was so involved with pulses and with this conference specifically [Pulse Days], this award would have meant so much to him," she said.



PHOTO COURTESY DWAYNE WILLIAMS PHOTOGRAPHY



Above:
Lisa Mechor accepts
the 2003 Pulse
Promoter Award from
Mark Kuchuran with
BASF Canada.

Left:
Larry Gramiak

Pulse checkoff eligible for tax credit

For 2003, 47% of Saskatchewan Pulse Growers checkoff paid by producers is eligible to earn an investment tax credit. This tax credit is available through the Scientific Research and Experimental Development (SR&ED) program, and is based on the amount of checkoff funds that support research and development.

Producers can calculate their total checkoff contribution by referring to their pulse sales receipts, which should show the checkoff allocation. Of this total, 47% is eligible to earn an investment tax credit. This resulting checkoff amount is eligible to earn investment tax credit at a rate of 20% for individuals and 35% for corporate producers that are Canadian controlled private corporations (CCPC).

The investment tax credit earned may be used as follows:

- to offset federal tax owing in the current year;
- if no federal taxes are owing, a portion may be refunded to you in that year if you are an individual, or all of the credit may be refunded if you are a corporation (CCPC);
- to be carried forward up to 10 years to offset federal tax;
- to be carried back up to 3 years to reduce federal tax paid in those years

All checkoff investment tax credit used, or refunded, must be reported as income in the subsequent year.

For more information on the process of claiming the tax credit, please consult your accountant.

in brief

News from and about Saskatchewan Pulse Growers (SPG).



More Info

Percentages of 2003 checkoff paid by producers on various Saskatchewan commodities that are eligible to earn federal investment tax credit are as follows:

PULSE 47%
(Saskatchewan Pulse Growers)

CANOLA 23%
(Saskatchewan Canola Development Commission)

FLAX 38%
(Saskatchewan Flax Development Commission)

WHEAT 81%
(Western Grains Research Foundation)

BARLEY 82%
(Western Grains Research Foundation)

On Point

SIX

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

2004 Board of Directors

The 2004 Board of Directors assumed responsibility in January. New to the Board are Maurice Berry and Barbara Podhorodeski. Maurice Berry farms in southeast

Saskatchewan at Carievale, SK, growing peas, lentils, pinto beans and soybeans. From northeast Saskatchewan, Barbara Podhorodeski farms at Shipman, SK. She is the outgoing Chair of the Saskatchewan Canola Development Commission. Incumbent Dean Corbett of Macrorie has been re-elected to the Board of Directors for a second three-year term.

Germain Dauk of Naicam and Don Meier of Star City retired after six years on the Board.

2004 SPG Board of directors
Back: Shawn Buhr, Maurice Berry, Ron Hundebly. Front: Dean Corbett, Barbara Podhorodeski, Lloyd Affleck, Jim Moen.

PHOTO COURTESY DWAYNE WILLIAMS PHOTOGRAPHY



Want to Contribute to International Pulse Relations?

Canada and Australia have a lot in common when it comes to producing and exporting pulses. Pulse Australia is sponsoring pulse

IT JUST GOT More Diseases.



On Point



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

producers on a study tour to Canada. Would you like to host Australian visitors at your farm this summer? Past hosts have appreciated the opportunity to share ideas and develop contacts in another country.

If you're interested, contact John Slatter with Pulse Australia in Toowoomba: slatts@bigpond.net.au

New CLEARFIELD Lentils Under Development

CLEARFIELD lentils will give producers access to improved broadleaf weed control using Odyssey. This will mean a cleaner, higher quality lentil product for delivery to buyers and processors. Because CLEARFIELD lentils are developed using conventional breeding



PHOTO COURTESY DWAYNE WILLIAMS PHOTOGRAPHY

Rick Holm of the Crop Development Centre (left) and Howie Zander, Business Manager with BASF Canada announced a new research agreement.

techniques, our traditional markets will accept them, according to a market impact assessment study recently completed.

BETTER More Crops.

NEW SEED PROTECTION

Introducing for 2004...the new and improved non-staining formulation of Vitaflo 280. No other product protects your cereal and pulse crops from so many diseases. Call today for more information.

Gustafson 
The Leader in Seed Protection Technology

1-800-880-9481



Gustafson Partnership, 10-2712 37th Ave. NE, Calgary, AB T1Y 5L3, 1-800-880-9481, www.gustafson.ca VitaFlo® is a registered trademark of Crompton Co./Cie. Gustafson (logo) is a registered trademark of Gustafson LLC, used under license. Read label before using.

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 Crop Development Centre is currently backcrossing the CLEARFIELD technology into existing CDC lentil varieties that already have market acceptance. Breeder seed for small red varieties is expected to be available by spring 2006, with small green available in 2007 and medium/large green available in 2008.

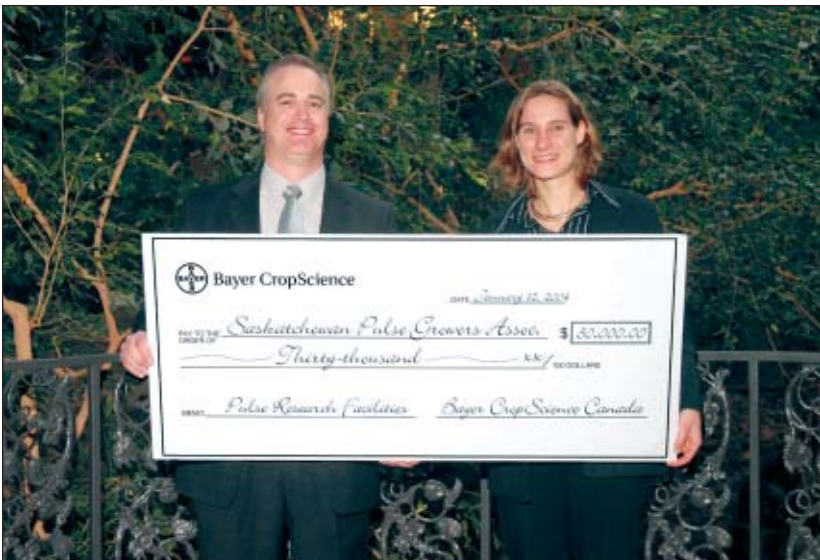
This project is a partnership between the University of Saskatchewan's Crop Development Centre, BASF Canada, and Saskatchewan Pulse Growers. Funding has been provided by Saskatchewan Agriculture, Food & Rural Revitalization, BASF and SPG.

For more information, contact the Crop Development Centre, at (306) 966-5855 or BASF Canada, at www.agsolutions.ca.

Bayer Crop Science contributes to field lab

At Pulse Days this year, Bayer Crop Science announced the contribution of \$30,000 toward the Pulse Research Field Lab Capital campaign. This is in addition to Bayer's contribution of \$20,000 in 2003, for a total of \$50,000. Christina Kruett of Bayer Crop Sciences was on hand to make the presentation. "We're pleased to contribute to the advancement of the Saskatchewan pulse industry and pulse growers across Canada with this new facility," she said.

Shawn Buhr, SPG Chair, accepts a cheque from Christina Kruett of Bayer Crop Science.



SPG Rep Chairs

CGC Grading Standards Committee

Ron Hundebly of the Saskatchewan Pulse Growers has been appointed Chair of the Canadian Grain Commission's Western Standards Sub-Committee on Pulses. The Committee's role is to make recommendations on grading specifications and standard samples, among other issues. For more information, see the CGC website (www.cgc.ca) or contact Ron Hundebly (rondonna@sasktel.net).


Changes To South Korea's Import Policy For Feed Peas

Canada's Embassy in Seoul has announced that the Korean government's quota for feed peas entering Korea has been established at 160,000 tonnes with a tariff rate of 2%. Until the start of 2004, Korea has had a tariff of 30% on feed peas entering the country.

Korea has 93 feed mills that produce 15,597,485 tonnes of feed. Hog feed, for which feed peas are best suited, accounts for 38.1% of feed production. Pork consumption has risen every year since 1985 and reached 16.9 kg/person/year in 2001. Data from 2001 shows that Korea had nearly 9 million hogs and is also an importer of pork meat.

Pulse Canada initiated feeding trials in Korea in 1999. In these trials, feed peas displaced a portion of the traditional feed ingredients (corn and soybean meal). The Canadian Embassy in Seoul and Pulse Canada have continued to push both the national feed associations and the Government of Korea for a change to the tariff to allow feed peas to compete with soybean meal. (Source: *Canadian Special Crops Association, Pulse Canada*)

SPG Annual Reports Available

The Saskatchewan Pulse Growers 2002-2003 Annual Report is now available. The Report provides a review of last year's activities and contains our audited financial statements, explaining how checkoff dollars were spent. For your copy, contact the SPG office at (306) 668-5556 or pulse@saskpulse.com. 

India Restricting Pulse Imports From Canada

in brief

Phytosanitary regulations are creating trade barriers in India.

An Indian Plant Quarantine Order, implemented on January 1, 2004, introduced new phytosanitary requirements for import of several grains, including peas, chickpeas and lentils. For most commodities exported to India, this means additional testing to ensure freedom from regulated pests. As well, the original order required fumigation for many grains with methyl bromide at 28 C or higher temperatures prior to export to India. On February 6, 2004, India amended this requirement, allowing for fumigation with methyl bromide at lower temperatures, provided the fumigation conditions are "equivalent" to those originally identified in the Order. In order to be effective, methyl bromide treatment must not be used until the temperature of the commodity reaches a minimum of 5°C.

The Canadian Food Inspection Agency (CFIA) cannot issue phytosanitary certificates unless all of the phytosanitary requirements of the importing country have been met. Because many consignments destined for India left Canada without fumigation as required in the Indian legislation, the CFIA was unwilling to issue phytosanitary certificates for those consignments that meet the current Indian requirements.

CFIA and Pulse Canada met with senior Indian officials on March 3 and 5 to discuss Canadian concerns with the new phytosanitary requirements and to try to find an acceptable solution to this major problem. They were able to secure an agreement with the Indian authorities for the CFIA to issue phytosanitary certificates on all shipments leaving Canada for India on or before March 31, 2004 without the shipment being fumigated. Certification will have to



Unloading peas at the Port of Mumbai in India.

indicate that the cargo is free of the named pests of concern to Indian authorities.

A proposal has been put forward by the Indian officials for post-March 31 shipments that will still require fumigation before the cargo reaches India. Many questions still need to be answered about specific requirements of this fumigation. Pulse Canada met with Federal Agriculture Minister Bob Speller's staff, and the President of the CFIA and his officials in early March 2004 to discuss the issues surrounding the latest Indian position and the ability of Canadian exporters to meet these requirements.

Details were not available at press time, but more information will be posted on the Saskatchewan Pulse Growers website as the situation develops.

Gordon Bacon is CEO of Pulse Canada in Winnipeg. For more information, see www.pulsecanada.com or call (204) 925-4453.

SPG in brief

The new field lab will be built at the U of S in Saskatoon.

New Pulse Research Facility To Be Constructed

"We are pleased to announce that a world-class, multi-user, pulse crop field research facility will be constructed at the University of Saskatchewan," announced Shawn Buhr, Chairman of the Board, at the

Pulse Days conference in Saskatoon in January. "The province of Saskatchewan is a recognized world leader in both pulse production and research. The expanded pulse field lab facilities are required in order to maintain this leadership position."

"The Saskatchewan Pulse Growers have had a long and productive relationship with the University of Saskatchewan and have been instrumental in the development and growth of the Pulse Research Program at the Crop Development Centre", said Graham Scoles, Associate Dean of Research, University of Saskatchewan. "The synergies that are created with co-locating researchers are a benefit to us all."

In January of 2002, the Sask Pulse Growers Board announced that they would be taking the lead to raise the funds necessary to construct this facility. "Thanks to the generous support of contributors we have raised \$1.8 million of the \$3 million required to construct the facility," said Buhr. "I am confident that the remaining \$1.2 million will be raised prior to construction."

"Plans are now being finalized for a 13,670 sq ft facility, with occupancy scheduled for the summer of 2005," said Scoles. SPG

Right: Shawn Buhr (left) of the SPG Board commends Graham Scoles of the University of Saskatchewan on the collaborative partnership on the new field lab.

Below: The existing field lab is cramped and inadequate. The new field lab facility will be a world-class centre for pulse breeding.

PHOTO COURTESY DWAYNE WILLIAMS PHOTOGRAPHY



PHOTO COURTESY BERT VANDENBERG

Saskatchewan Pulse Growers acknowledges the vision and commitment of the following partners who have contributed to the Pulse Field Lab

Organization	Contribution	Organization	Contribution
Nitragin Inc	\$75,000	Bayer Crop Sciences	\$50,000
Philom Bios	\$100,000	DuPont Canada	\$10,000
Bourgault Tillage Tools	\$10,500	Benson ADD Board	\$500
Bourgault Industries	\$50,000	Agri-Food Innovation Fund	\$1,500,000



in brief

Pulse growers' research investment is paying high dividends.

Research Vital to Pulse Crop Sector Growth

A recent report points to the powerful influence of research on the growth of the pulse crop sector in Saskatchewan. The pulse sector has grown from practically ground zero in the early 1980s to account in recent years for 14 per cent of farm cash receipts from crops and eight per cent of total Saskatchewan farm cash receipts. Pulses, including peas, lentils, chickpeas and beans, have offered producers a valuable opportunity to diversify production and increase their incomes.

The economic benefits derived from pulse crops do not end at the farm. Other business activity has occurred in primary agriculture alongside on-farm innovation and development. The pulse sector creates business opportunities in specialized farm machinery manufacturing, production of inoculants, and in handling, distribution and processing. Saskatchewan-based companies have succeeded in capitalizing on these opportunities.

When a sector of agriculture achieves such remarkable progress, it can be valuable to understand the reasons for the success, in the hope that lessons learned can be applied elsewhere to produce positive outcomes. Many factors contributed to pulse sector growth, as noted in the report prepared by

University of Saskatchewan economist, Richard Gray and consulting economist, Terry Scott. Among the factors are: new market demands, low prices for traditional crops, government policy changes, entrepreneurial leadership and many others. However, as the report demonstrates, the research activity conducted over the course of twenty years to adapt pulse crops to Saskatchewan conditions has played a vital role in facilitating innovation and growth.

In 1984, a group of pulse growers brought forward a plan for a check-off system that would deduct a portion of every pulse sale and invest it in the development of the pulse industry. This plan was voted on in a plebiscite and established with the strong support of growers. In 2003, the Board of Saskatchewan Pulse Growers (SPG) asked for a report focusing on research funded by pulse growers since 1984, including an estimate of the economic benefits for growers and the Saskatchewan economy relative to costs incurred by the growers.

The study conducted by Gray and Scott examined grower-funded research relating to genetic improvement, disease management, fertilizers and inoculants, pulse crop quality and utilization, weed and insect control, machinery and facilities, and general agrono-

More Info

The full report "Returns to Research" by R. Gray and T.G. Scott is available on the SPG Web site www.saskpulse.com.



NitraStik. For profit that sticks.

Get more stick. More yield. More profit from pulses. NitraStik™ has superior adhesion and proven performance. And when you put it to work in your fields, more profit will stick to you.

NITRASTIK

Ask for NitraStik by name. Get the proof you need at www.nitragin.com.

my. For purposes of estimating research benefits and costs, the authors divided the research into two categories. *Genetic improvement research* makes up one category. The remaining activities comprise a second category referred to as *other development research*. Separate benefit/cost ratios were estimated for each of the two categories. These were then combined to produce an overall benefit/cost ratio.

A scenario of producer returns which reflects the effects of the two categories of research expenditure is essentially compared in the study to a scenario of producer returns which would have existed had there been no SPG and therefore no grower expenditures for research. The difference between the two scenarios is the benefit achieved by growers through their funding of research. The costs and benefits of research were estimated for the period 1984 to 2003 and, in the case of the benefits, projected forward to 2020. The 2020 projection accounts for the fact that research expenditures already made will produce future benefits in addition to those already experienced by growers.

Genetic Improvement Research

The study focuses first on the returns generated for growers themselves. For *genetic improvement research*, the first step was to identify pulse crop varieties developed by the Crop Development Centre with SPG assistance. Performance in variety trials was then used to estimate increased yield available with each variety. The benefits arising from improved disease resistance was estimated as reduced fungicide costs for growers. Acres



PHOTO COURTESY BERT VANDENBERG

seeded to the new varieties were approximated using Crop Insurance data and projected forward for future years. A market price was used to value the increased annual production from each variety, ultimately allowing an estimate to be made of the increased grower surplus resulting from varieties developed with SPG funding. Because pulse growers are not the only source of funding for genetic research, the benefit was adjusted to reflect SPG's share of total genetic research expenditure on pulse crops.

Based on the above approach, the study finds that growers are benefiting substantially from their expenditures on *genetic improvement* research. The benefit/cost ratio is estimated at 12.8 to 1.0, meaning that for each dollar invested in genetic research growers have received or can expect to receive \$12.80 in return over the period 1984-2020.

Investment in pulse research has resulted in new varieties, among other benefits.

CROWN AG
INTERNATIONAL INC.

Our Expertise links the World's Best Farmers with the World's Best Markets

CGC
Bonded

• **Lentils • Chickpeas • Marrowfat Peas**

SGS
Grading

250 Henderson Drive, Regina, SK S4N 5P7 www.crownag.ca

Call Don Bonk today at 306-522-8111 or 1-866-CROWNAG

Other Development Research

For *other development* research, the authors employed a 'development acceleration' method to estimate research benefits. SPG, through its various research activities, is estimated to have accelerated the growth of the pulse sector by two years during the 1984 to 2003 period. As a result, pulse growers were able to reap the improved returns made possible by pulse crops earlier than would otherwise have been the case. Through the acceleration of development, it is estimated that \$17 of grower benefits have been achieved for every \$1.00 of *other development* expenditures by the SPG.

Returns to Growers

The returns to growers from their commitments to research have been impressive. Together, *genetic improvement* research and *other development* research produce an estimated \$15.60 of benefits on average for every dollar of expenditure. This estimate is based on a calculation of the present value of the stream of benefits and costs over the period 1984 to 2020. For growers who prefer early returns, when benefits are estimated only from 1984 to 2008, the benefit/cost ratio is only marginally lower, at 13.5 to 1.0.

Table 1: Benefit/Cost Ratios for Grower Funded Research in Saskatchewan
(Based on Benefits and Costs for 1984 to 2020 Stated in 2003 Present Value Terms)

Benefit to Cost	
	Total Impact
Return to Growers (Benefit/Cost Ratio)	15.6 to 1
Return to Industry (Benefit/Cost Ratio)	31.3 to 1

The study goes on to estimate the economic returns beyond the farm that have been generated as a result of the impact of pulse research on pulse crop production. This includes increased returns in a number of value added sectors. Some farm machinery inputs (e.g. land rollers, belt conveyors, and header equipment) are relatively unique to pulse crops and would either not be manufactured at all or would be produced in lower volume in Saskatchewan in the absence of the pulse industry. Inoculants are a further input which very much depends on demands from pulse growers. Downstream, the pulse sector has enabled an active pulse handling, distribution and processing industry and has contributed to reducing feed costs in the province's hog industry. Aside from the value added sectors, considerable benefits for consumers have also been generated through SPG research funding.

The study provides a benefit/cost estimate that takes into account the benefits from research for *all* parties, including growers, the value added sectors, and consumers. When these various research benefits are aggregated and compared to the total grower check-off, the resulting benefit/cost ratio is 31.3 to 1.0. For every \$1.00 of check-off collected, there are economic benefits to one party or another in the amount of \$31.30.

The study by Gray and Scott does not attempt to estimate non-economic pulse sector benefits such as health benefits and contributions to bio-diversity and, if anything, the study leans toward a conservative approach in estimating economic benefits. Even so, the benefits relative to the costs are still shown to be very high. The favorable returns are a testament to the foresight and initiative shown by pulse growers in contributing to the ongoing development of their industry over the last twenty years. The report points clearly to the benefits a strong program of research can produce on behalf of growers and for other sectors as well.

Terrence Scott is a private consultant based out of Saskatoon. For more information, see www.saskpulse.com/library or contact tscott1@sasktel.net.

4 Million TIRES

The SSTC is excited and proud to announce that to date, over 4 million tires have been recycled in Saskatchewan since the start of the program in 1996. Diverting 4 million tires from our province's waste stream is a tremendous milestone that is good news for our environment and for the people of Saskatchewan. The future looks very bright for our program. We will continue to strive for excellence in our community.



Saskatchewan Scrap Tire Corporation

P.O. Box 1936
Phone: 306.721.8473 [721.TIRE]
Email: info@scraptire.sk.ca

Regina, SK. S4P 3E1
Fax: 306.721.1585
Web: www.scraptire.sk.ca

Best of the Best: Savouring Saskatchewan Pulse Recipes


in brief

Taste for yourself the best pulse recipes in Saskatchewan.

Although Saskatchewan exports more lentils and peas than anywhere else in the world, there are many in our province who are unsure about how to incorporate pulses into everyday recipes for spreads, salads and entrees. But that's changing. Observers and contestants had the opportunity to experience some of the best pulse dishes in the province at the Pulse Days 2004 Taste Saskatchewan Recipe Contest on January 13. Four top recipes were selected from the more than 40 pea, lentil, bean and chickpea recipes submitted.

A distinguished panel of judges shared their expertise at the session: Alma Copeland, pulse producer and writer for *The Western Producer*; Shona Pearson, Chef at the University of Saskatchewan Faculty Club; and Dr. Al Slinkard, famous pulse scientist and Professor Emeritus at University of Saskatchewan

It was a tough call to make, but in the end, the Judge's Choice winner was Kim Sothmann's Prairie Baked Pulses and the People's Choice winner was Irene Hagel's Summer Bean Salad. The two runner-up recipes were Janet Mandersheid's Chickpea Dip with Toasted Pita Bread and Joanne Nicholl's Lentil Shepard's Pie. All of these recipes are available on the SPG website in the Cooking section: www.saskpulse.com.

We'll be sharing more recipes in future issues of *PulsePoint*, and we're planning another recipe contest in the coming year. Let's get cooking! 

PRAIRIE BAKED PULSES

Casserole:

½ lb (250 g)	bacon, cut up and cooked
1-2	onions, chopped and cooked
14 oz (398 mL)	can kidney beans
3 X 14 oz (3 X 398 mL)	cans pork & beans
1½ cups (375 mL)	lentils, cooked
1 cup (250 mL)	chickpeas, cooked

Sauce:

1 cup (250 mL)	ketchup
1 cup (250 mL)	brown sugar
1 tbsp (15 mL)	dry mustard
½ cup (125 mL)	molasses

Mix altogether in a large casserole dish or bean pot (3 L or 12 cups) and bake for 1½ hours at 300°F.



submitted by
Kim Sothmann,
Elrose, SK

PHOTO COURTESY TREVOR SOTHMANN

SUMMER BEAN SALAD

2 cups (500 mL)	cooked beans	1½ teaspoon (7 mL)	salt
2 cups (500 mL)	canned chickpeas	1 teaspoon (5 mL)	lemon herb seasoning
2 cups (500 mL)	cauliflower florets	1 cup (250 mL)	Italian salad dressing
2 cups (500 mL)	broccoli florets	¼ cup (50 mL)	Parmesan cheese, divided
1	medium onion, thinly sliced	24	cherry tomatoes

Cook beans and then cool (may use white or pinto). Drain beans and chickpeas well. Add spices and vegetables. Mix and let sit at room temperature for ½ hour.

Pour dressing and half the cheese over the salad. Toss lightly and refrigerate overnight. Just before serving, mix in the rest of the parmesan cheese and the cherry tomatoes.



submitted by
Irene Hagel,
Chiceland, SK

PHOTO COURTESY DWAYNE WILLIAMS PHOTOGRAPHY



DEAD SIMPLE

The only good weed is a dead weed. That's why you should use SELECT® Herbicide on your pulse, flax and canola crops. It consistently takes care of tough grassy weeds including quackgrass. It just doesn't get any easier.

SELECT®

See your local Arvesta retailer
or call 1-866-761-9397

Arvesta
Canada

Always read and follow label directions. SELECT, Arvesta and the Arvesta logo are registered trademarks of Arvesta Corporation.

© 2004 Arvesta Canada, Inc. 215-2304CA

Working on Harmonization of Crop Protection Products

in brief

Pulse Canada is working to harmonize international crop protection regulations.

Maximum residue limits (MRLs) are the maximum level that is permitted of a specific crop protection product (pesticide) on a specific foodstuff. They are set by government regulatory agencies and monitored both internally within nations and as food passes from country to country through trade. Pulse Canada is working with other countries around the world to harmonize MRL regulations and ensure food safety.

There are a number of initiatives currently underway with respect to crop protection products and the MRLs for pulse crops.

JAPAN



Deltamethrin in peas, beans and other pulses

Japan is calling for a MRL of 0.1 ppm for imported pulses treated with products to control grasshoppers, including organophosphate pesticides and deltamethrin. However, deltamethrin is much more environmentally friendly than organophosphate pesticides in late-season applications on pulse crops, particularly if temperatures are moderate. Pulse Canada has asked Japan to consider an MRL of 1 ppm for deltamethrin on these crops – as is used in many other major jurisdictions – as an alternative to the 0.1 ppm option

More clarity on the glyphosate MRL for ‘other pulses’

The Japanese have suggested MRLs of 2 ppm for beans, 5 ppm for peas and 2 ppm for “other pulses”. The MRLs for glyphosate on chickpeas and lentils would fall into the last category.

The MRLs for these chickpeas and lentils vary greatly through different jurisdictions around the world and are as high as 5 ppm in the United States. The Canadian MRL for glyphosate on lentils is 4 ppm and we suggested that this level be used in the deliberations

that the Japanese are conducting. We also suggest that this be described as “lentil” instead of being categorized under “other pulses”.

Malathion tolerances on pulses

The Codex standard for malathion on pulses is 8 ppm. Pulse Canada has proposed that the current Japanese MRL, set at 0.5 ppm, be increased so that it is closer to this Codex limit. If it is not possible to take this number as high as 8 ppm, then 3 ppm has been suggested as a somewhat midway approach. This is the Canadian level.

EUROPE




Pulse Canada is still working with Canadian government contacts in the European Union to highlight methodology disputes. There are some countries where the testing for specific chemicals is viewed as neither accurate nor even the correct procedure. For example, the Italian test for DDT elicits false positives.

The Europeans continue to move towards removing vast numbers of pesticides from their growers’ legitimate use list and we are keeping a close eye on the situation with respect to import tolerances.

USA



Pulse Canada submitted a ‘wish list’ of MRLs for harmonization so that American and Canadian MRLs are the same. This list was provided to the NAFTA working group on pesticide regulation. Longterm, this is the real solution to problems wherein small differences in MRLs are being used as a trade weapon. 

Mark Goodwin is the Pest Management Coordinator for Pulse Canada in Winnipeg. He is working to develop a sustainable pest management approach for the Canadian pulse industry. For more information, contact Pulse Canada at (204) 925-4455 or office@pulsecanada.com



Closing Thoughts

Garth Patterson
Executive Director

Time to Improve Our Industry's Reputation

the team

EXECUTIVE DIRECTOR

Garth Patterson

RESEARCH & DEVELOPMENT MANAGER

Joelle Harris

COMMUNICATIONS MANAGER

Penny Eaton

ADMINISTRATIVE ASSISTANT

Tasha Nett

ACCOUNTING CLERK

Esther Zvacek

CONTROLLER

Helen Baumgartner

SPECIAL PROJECTS MANAGER

Brenda Scott

CONTACT US

104-411 Downey Road
Saskatoon, SK S7N 4L8
tel. (306) 668-5556
fax (306) 668-5557
pulse@saskpulse.com



Over the last year, green lentil prices have fallen significantly since producers signed delivery or production contracts in the winter of 2003. Producers have expressed concern that the price decline has resulted in some companies not honoring contracts with them. Previously, when prices have increased after contracts have been signed, pulse buyers have indicated to me that some producers have not honored contracts.

This lack of trust contributes to the volatility of our industry. Guaranteed prices at appropriate times of delivery offer growers an opportunity to more effectively man-

the Marketing section for more details (www.saskpulse.com).

I applaud the Canadian Special Crops Association (CSCA) for their plans to educate their members with the tools that they need to be successful. In the future, only companies that meet or exceed CSCA requirements will be recognized for membership in the Association. New entrants to the industry will receive a status of "member in training" until they have met these requirements. These self-imposed expectations for expertise and professionalism in the industry will increase grower confidence in dealing with CSCA members. This will be an


We are all responsible for a solution.

Growers and buyers need to place a value on integrity.

age market risk and cash flow. Pulse exporters can suffer huge losses if they get caught on the wrong side of a market. Production contracts are one way for exporters to reduce their risk in forward sales.

What can growers do? Growers should be familiar with what a fair contract looks like. A contract should be, as much as possible, "win-win" for both parties. If a contract looks too good to be true, it probably is. Fortunately, Saskatchewan Agriculture, Food & Rural Revitalization has some advice, based on the work of Craig Zawada, a Saskatoon lawyer. Go to the SPG website in

important step forward in the maturation of our industry.

We are all responsible for a solution. Growers and buyers need to place a value on integrity. Integrity allows parties to develop long term relationships based on trust. Making a quick buck or "pulling a fast one" is counterproductive. When one party gets shafted and another wins big, there is no incentive to honor a contract or to deal with each other again. Until we all take responsibility for a solution, our industry will continue to suffer from volatility, instability and unpredictable profitability. 



THE KING OF SEED PROTECTION

NOW APPROVED FOR CHICKPEAS.
CONTROL SEED-BORNE ASCOCHYTA BLIGHT IN YOUR
CHICKPEA AND LENTIL CROPS THIS SEASON.
TREAT YOUR SEED WITH CROWN SEED PROTECTANT.

Gustafson 
The Leader in Seed Protection Technology

Gustafson Partnership, 10-2712 37th Avenue NE, Calgary, AB T1Y 5L3, 1-800-880-9481, www.gustafson.ca

Crown® is a registered trademark of Crompton Co./Cie.

Gustafson (logo) is a registered trademark of Gustafson LLC, used under license.

Read label before using.

Take it to the Bank



The most profitable inoculant.

Farmer trials prove that TagTeam is the most profitable inoculant. TagTeam delivers a 3 to 1 net return and 11% higher yield than other inoculants. That's why farmers have made TagTeam the leading pulse inoculant.*



TagTeam®

THE PHOSPHATE AND NITROGEN INOCULANT

www.philombios.com
1-888-744-5662



Smart farmers read the fine print.

In 116 farmer-applied, split-field demonstrations, TagTeam increased yields of pea, lentil, chickpea and dry bean by an average of 11% versus a competitive inoculant – that's an average of \$14.57 more profit per acre after costs based on average commodity prices (1998-2002). *TagTeam is used on more acres than any other brand of inoculant according to the Ipsos Reid 2003 Pulse Growers Study. ®TagTeam is a registered trademark of Philom Bios Inc.