

WINTER CANOLA EDITION

U.S. CANOLA LA

digest

An official publication of the U.S. Canola Association

**Dr. Tom Peeper:
Winter Canola Pioneer**

**National Canola Research Program
Helps Grow Acres**

**Trial by Field:
National Winter Canola Variety Trials**



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Jeff Scott has helped pioneer winter canola as a profitable alternative to wheat on his Pond Creek, Oklahoma farm. In the six years since he began canola rotation, he's noticed dramatic improvement: cleaner wheat fields with yields jumping 30 percent or better. Canola not only increases wheat profits, but is often more profitable than wheat itself.

“DEKALB has played a key role in driving acceptance of winter canola to help us break our wheat monoculture,” says Scott, who currently plants 85 percent of his winter canola with DEKALB brand. He credits the company's advancements in germplasm as well as the Genuity™ Roundup Ready® system with making winter canola a viable cropping alternative.

Scott also gives DEKALB high marks for the development of Sulfonylurea Residual Tolerance (SURT™) technology for winter canola. “The SURT™ products are a huge addition to our seed portfolio,” he says. “Having winter canola that is SU-tolerant has played a major role in the rapid expansion of winter canola acres in the southern Plains.”

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Jeff Scott, Pond Creek, Oklahoma

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On the Cover: Farmers in the Great Plains, Pacific Northwest, Midwest and south are looking to winter canola as a profitable rotational crop.

The *U.S. Canola Digest* Winter Canola Edition is published once a year in June/July by the U.S. Canola Association (USCA). Subscription is complimentary to all USCA members and other qualified members of the U.S. canola industry. Reproduction of contents is forbidden. Copyright 2010.

Winter Canola Summer Milestones



and challenging of his career.”

As Warth Distinguished Professor of Agronomy, he has helped pioneer the OKanola program at OSU, inspiring farmers to try a new crop for sustainable weed control in wheat. His legacy will continue for years to come as winter canola acreage expands, bringing an end to the wheat monoculture in the region. Read about Peeper’s journey with canola on page 12.

Winter Canola Research

The National Canola Research Program (NCRP), administered by the U.S. Canola Association (USCA), provides funding for five regions on a competitive basis for agronomic research related to breeding, weed control, crop rotation and more. For the winter canola-growing regions, NCRP-funded research is critical for expanding the crop. Inside (page 16) are research findings on improved varieties and management practices, optimal fertilizer and seeding date recommendations, rotational benefits with cereal grains, blackleg and cabbage seedpod weevil resistance and how to breed to succeed.

Variety Trials

Winter canola seed varieties need to be evaluated by an independent authority

to help farmers determine which ones are best for their fields. The annual National Winter Canola Variety Trial, coordinated by Kansas State University since 1994, evaluates the performance of released and experimental varieties and determines where these varieties are best adapted to increase canola acreage across the nation. Learn more about how this program can benefit you on page 10.

Expanded Crop Insurance and Desiccant Use

For some winter canola growers in Oklahoma and Washington, obtaining crop insurance for the 2011 crop year may no longer require the hassle of obtaining coverage through a written agreement, according to the USCA Update on page 6.

This June may also bring good news about the registration of diquat for use as a canola harvest desiccant nationwide. The Environmental Protection Agency (EPA) notified the USCA that it may establish a permanent tolerance for diquat as early as this month and a section 3 registration for diquat tolerance should follow shortly thereafter.

Expanded Crush

The Producers Cooperative Oil Mill (PCOM) of Oklahoma City, Okla., will expand its canola crushing capacity by 2012. Having crushed exclusively cottonseed for nearly half a century, PCOM added facilities to crush canola about two years ago, giving regional canola farmers a place to take their crop. PCOM’s current crush plant, which processes both cotton and canola seed, accommodates 600 tons of canola seed. A new 180-acre plant is being built to crush canola at a rate of 1,800 tons per day. This bodes well for the anticipated winter canola expansion in the Great Plains.

Summer Dish Makeover

Lighten up this summer with canola oil in barbecue marinades and picnic items. Check out three delicious, better-for-you variations on summer classics on page 22. Cheers to winter canola in the summer! ❖

Angela Dansby
Editor, U.S. Canola Digest

Welcome to the second annual winter canola edition of *U.S. Canola Digest*! This crop continues to expand in several U.S. states, especially in Oklahoma and Kansas. One agronomist predicts up to 250,000 planted acres in the Great Plains alone in 2011, with the potential someday of 1.5 million acres!

Jeepers, Peeper’s Retiring

That agronomist happens to be Dr. Tom Peeper, a champion for winter canola, who is retiring this month from Oklahoma State University (OSU). This issue of *U.S. Canola Digest* pays tribute to him for his outstanding work to make canola a viable rotational crop in the Great Plains. Peeper calls the last eight years “the most exciting



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Winter Canola Farmers May Rest Insured

Crop Insurance to Expand in the Great Plains and Pacific Northwest

Dale Thorenson



For some winter canola growers in Oklahoma and Washington, obtaining crop insurance for the 2011 crop year may no longer require the hassle of obtaining coverage through a written agreement. That's because in March 2010, the Risk Management Agency (RMA) received initial approval from the Office of Management and Budget to expand the canola crop insurance policy to several counties in the two states next year. In Oklahoma, the counties tentatively scheduled

to be added include Alfalfa, Blaine, Caddo, Custer, Garfield, Grant, Kingfisher, Major and Woods; and in Washington, Douglas and Okanogan. If all internal filing deadlines are met, official notification from the RMA should take place in June.

This planned expansion of the canola insurance policy is timely in that canola acreage in the Great Plains is on the verge of exploding. According to the National Agricultural Statistics Service planting report released March 31, Oklahoma canola acreage increased 90 percent in 2010 to 80,000 acres. A favorable harvest this year coupled with a canola price premium of \$3 more

per bushel than wheat and expanded crop insurance could make 2011 the year winter canola gains a permanent rotational slot in Great Plains cropping systems.

Harvest Desiccant for Canola Nears Registration

The U.S. Canola Association's (USCA's) efforts to facilitate the registration of diquat – available from Syngenta under the brand name Reglone® – for use as a canola harvest desiccant nationwide are nearing completion. The Environmental Protection Agency (EPA) notified the USCA that it is on track to establish a permanent tolerance for diquat. The *Federal Register* notice for the tolerance has been signed and the Section 3 label for the use of diquat as a harvest desiccant on canola may be in place as early as June 2010. Also, the EPA is working with Syngenta and states that have requested a Section 18 for emergency use of diquat for the 2010 harvest to ensure the product's availability should the Section 3 not be completed in time.

Canola Oil & the RFS2

During meetings with the USCA and other stakeholders this spring, the EPA indicated willingness to complete a life cycle analysis for canola oil as quickly as possible be eligible for the

Canola: Area Planted by State and United States, 2008-2010

State	Area Planted			
	2008	2009	2010 ¹	2010/2009
	1,000 Acres	1,000 Acres	1,000 Acres	Percent
ID ²		15.0	18.0	120
MN	23.0	13.0	31.0	238
MT	7.5	6.5	18.0	277
ND	910.0	730.0	1,060.0	145
OK ²		42.0	80.0	190
OR ²		4.9	5.5	112
Other States ³	70.5	15.6	15.6	100
US Total	1,011.0	827.0	1,228.1	149

¹ Intended plantings in 2010 as indicated by reports from farmers.

² Beginning in 2009, ID, OK and OR are published individually.

³ For 2008, other states include CO, ID, KS, MI, OK, OR and WA. For 2009 and 2010, other states include CO, KS and WA. 2010 estimates are carried forward from 2009. The first 2010 estimate will be published in the U.S. Department of Agriculture's National Agricultural Statistics Service's acreage report on June 30, 2010.

Source: U.S. Department of Agriculture's National Agricultural Statistics Service



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Renewable Fuel Standard program (RFS2). Currently, canola oil will not meet the standards of the RFS2 when it goes into effect on July 1. The USCA continues to facilitate the flow of information to the EPA's technical staff responsible for conducting the life cycle analysis. To review the information provided to the EPA, visit www.uscanola.com.

Biodiesel Tax Credit

Congressional action on a tax extenders package, including a retroactive extension of the biodiesel tax incentive, remains stymied by the need to find offsets to cover the cost of extending the tax credits and comply with pay-go rules. The House Democratic leadership continues to indicate their intent to pass the tax extenders bill as soon as possible, with a goal of having an agreement ready for House action the week of May 10 so the Senate will have time to consider it before the Memorial Day recess. However, again, reaching agreement on offsets will be challenging. The USCA continues to work with Congressional supporters to extend the biodiesel tax incentive to the end of 2010, retroactive to the first of the year.

Climate Change and Energy Legislation

Political gridlock continues over potential climate change and/or energy legislation. Bipartisan work on a climate and energy bill broke down in late April over the possible consideration of highly contentious immigration reform legislation. While Senate Majority Leader Harry Reid has left open the possibility that the Senate may take up a climate change bill, it is not likely it will have the 60 votes needed to move forward. Some have advocated moving an energy-specific bill without the more contentious

climate change-related provisions. However, passing an energy bill without addressing climate change would likely raise opposition from environmental groups and climate change proponents.

Food Safety Legislation

Food safety legislation may come before Congress during or after the completion of regulatory reform of financial markets, which could impose record-keeping requirements on companies that process and store commodities. Some proponents argue that traceability of commodities which end up in food products should extend all the way back to the farm level; however, to date, commodity organizations have successfully prevented such language from being included in bill drafts. Given the popularity of efforts to strengthen food safety after several recent incidents, Congressional action this election year is likely.

2012 Farm Bill Hearings

The House Agriculture Committee started its 2012 Farm Bill process on April 21 with an announcement by Agriculture Secretary Tom Vilsack and the first of eight field hearings was held in Des Moines, Iowa, on April 30. House Agriculture Chair Collin Peterson (D-MN) and several members of the committee expressed interest in making changes in the Average Crop Revenue Election program and in federal crop insurance to provide a more effective safety net for commercial farmers. ❀

Dale Thorenson is associate director of the U.S. Canola Association in Washington, D.C.



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A Crush on Canola

Producers Cooperative Oil Mill Expands Facility

Kristyn Schiavone

With only two canola crushers under its belt and a third approaching in July, Producers Cooperative Oil Mill (PCOM) is looking to expand.

Its current plant, which processes both cotton and canola seed, is 43 acres and accommodates 600 tons of canola seed and 1,200 tons of cottonseed per day. A new 180-acre plant will crush only canola at a rate of 1,800 tons per day.

Currently, the nearby, new facility houses only a few silos and X marks on the floor where each machine will go, but Oilseed Procurement Manager Brandon Winters said it will be operational as early as the end of 2012.

“This means potential for a lot more acres in the region,” he said. ❖

Kristyn Schiavone is associate editor of U.S. Canola Digest.

If You Were a Canola Seed ...



You would most likely arrive at PCOM by hopper-bottom trailer, where you would be dumped into storage buildings filled floor-to-ceiling with other canola seeds. You might also arrive by rail.



After you were cleaned, pre-conditioned, flaked, cooked and pressed, you would travel to the solvent plant in a “press cake” and the remaining oil would be extracted from you.

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Photos courtesy of Kristyn Schiavone.

Trial *by Field*

National Winter Canola Variety Trials Generate Valuable Results

Michael Stamm, M.S.

Anyone familiar with winter canola knows it makes an excellent rotational crop for cereal grain cropping systems. But one might wonder where growers find the information necessary to select the best varieties for their farming operations, especially when most states lack their own winter canola performance testing programs. Where do seed salespeople and researchers obtain the information they need to help producers make informed decisions about adapted varieties?

The answer is the National Winter Canola Variety Trial (NWCVT), a novel approach to conducting winter canola performance testing, coordinated by Kansas State University (KSU) since 1994. The NWCVT provides unbiased research data

that enables producers to grow winter canola profitably. Industry personnel use the data to support growers with top-of-the-line products and test the latest technologies coming to the market.

The objectives of the NWCVT are to evaluate the performance of released and experimental varieties, determine where these varieties are best adapted and increase the visibility of winter canola across the nation.

Interest Increases over the Years

The level of interest, number of entries and diversity of germplasm in the NWCVT have increased since the first NWCVT (formerly the Advanced Canola Nursery or ACN) was established at 12 locations in six states during the fall of 1994. This trial included only seven released varieties from various breeding programs in addition to

21 experimental lines selected from the KSU canola breeding program. All varieties were open-pollinated and none possessed herbicide resistance.

Today, the NWCVT is planted at locations in the Great Plains, Midwest, Northern Plains, Pacific Northwest and Southeast. This environmental diversity has improved our knowledge and understanding of winter canola variety performance. The 2009-10 NWCVT was distributed to 56 locations in 24 states and includes 45 entries (Figure 1). Of these entries, 24 are released varieties, 16 are hybrids and seven possess herbicide resistance. These entries were provided by 10 domestic and global seed suppliers. Entry fees cover the costs of data management, student labor, and total oil and protein testing.

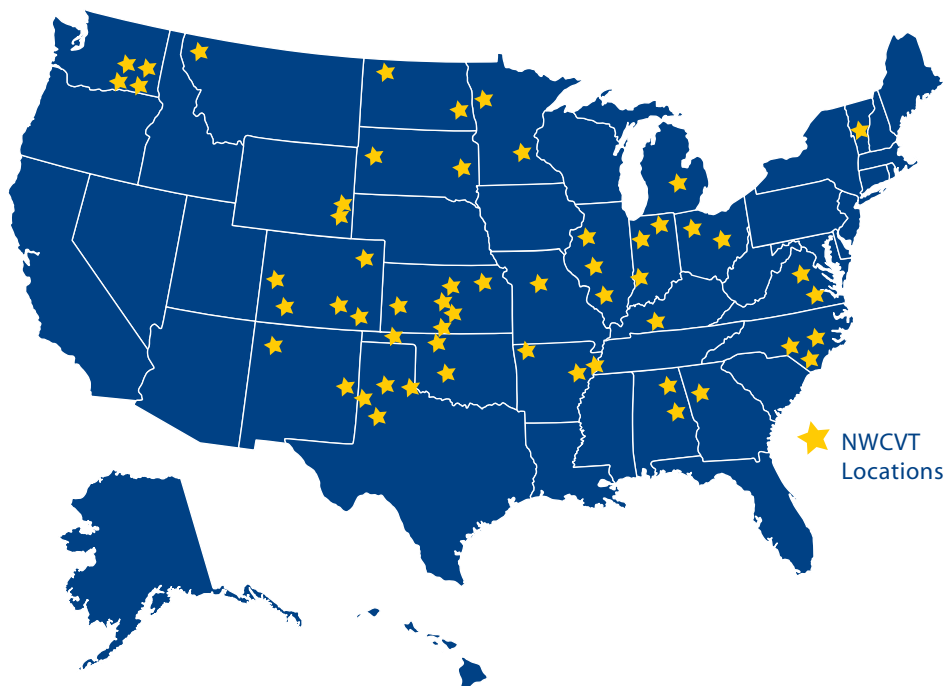
All trials are planted in small research plots (approximately 100 square feet) and replicated three times. An annual publication details performance results, agronomic information, site descriptions and growing conditions for each location.

Oil content is important for the development of new varieties and critical for end users of canola. Grower cooperators are required to keep samples from each harvested entry for oil testing. The Brassica Breeding Program at the University of Idaho and the Robert M. Kerr Food and Agricultural Products Center at Oklahoma State University perform total oil and protein analyses. This data is also reported in the annual publication.

The Value of Variety

Information from the NWCVT facilitates identification of experimental lines and hybrids for release as new varieties in areas where they can be profitably marketed. Performance data is at a premium when new products are being developed for the marketplace. Kevin McCallum, general manager of DL Seeds, Inc., agrees.

National Winter Canola Variety Trials 2009 - 2010



Continued on page 20 ►

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INCREASING INTEREST IN WINTER CANOLA FUELS UPSWING IN ACRES, BRIGHT OUTLOOK

As the 2010 winter canola harvest wraps up across the southern Plains, there is general consensus among farmers, researchers and the industry that the 2009-2010 growing season was good to producers—and that this cropping alternative to winter wheat is here to stay.

“Winter canola acreage doubled this year, from 40,000 to an estimated 80,000 acres in Oklahoma alone,” says Dr. Tom Peeper, Warth Distinguished Professor of Agronomy at Oklahoma State University. “Actually, the 80,000-acre estimate is probably on the low side.”

Peeper reports that the winter canola crop across Oklahoma was in pretty good shape going into harvest and many fields had compensated for slow growth due to a cool, overcast spring and the plants were loaded with pods. “There was a lot of optimism going into harvest,” Peeper says. “Our growers were impressed with how well the winter canola survived the winter. In some areas, the winter survival rates for canola were higher than those for winter wheat.”

A number of factors are fueling this surge of interest in winter canola, according to Peeper, who has been heavily involved as a researcher in a major initiative to promote the new crop. After more than a century in a wheat-on-wheat monoculture, he says this area of the Southern Plains and High Plains, notably Kansas, Oklahoma, north Texas and the Texas Panhandle, is in dire need of an alternative crop. Both wheat yields and quality have plummeted in recent years, due to unbroken weed and disease cycles. Yet research trials and farmer experience have demonstrated that wheat following a year of winter canola often results in yield and grain quality improvements.

ACHIEVING STRONG YIELDS

Significant advances in the quality of winter canola seed germplasm, combined with effective weed control enabled by biotech traits such as the Genuity® Roundup Ready® system, enable growers to achieve good, strong yields and clean up their land of some really pesky winter annual grasses that are such a problem in wheat. Once these weeds and perennial grasses are brought under control by over-the-top applications of Roundup® agricultural herbicides, the subsequent wheat crop can benefit significantly from the reduced weed competition.

“Our growers have been really happy with the weed control in winter canola this year,” Peeper observes. “Some farmers estimate that they have gotten rid of 90 percent of their feral rye. In any given field that’s 30 percent infested with rye, they have been able to knock those populations down to three percent.”

Peeper adds that Oklahoma State University recommends that winter canola growers make two over-the-top applications of a grass-control herbicide—one in the fall and one in the spring.

Dr. Rob Ihrig, Specialty Crops Technical Manager for Monsanto, says that major advances in winter canola germplasm are pushing yields up well into profitable levels. He also notes that the disease-tolerance and herbicide-resistance packages available in winter canola greatly increase the opportunity for a successful crop.

“Some of the most important weeds and grasses that wheat growers need to control have become tolerant or even resistant to sulfonylurea (SU) and ACCase herbicide

chemistries,” Ihrig explains.

“Some of the older weed-control tools that growers have used for a long time just aren’t as effective as they once were. The Genuity® Roundup Ready system provides control of most of these weeds.”

On a bushel-to-bushel basis, winter canola is often more profitable than winter wheat. Compared to wheat prices, prices for canola oil have been relatively stable over the past several years and are forecast to remain high and even climb as world stocks of vegetable oil tighten. Consumer preferences for healthier cooking oils—as well as demand for canola as a biofuel in Europe—also bode well for winter canola.



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Photo courtesy of Kristyn Schiavone.

Dr. Tom Peeper:
Pioneer of Winter
Canola in the
Great Plains

A PEEPER(ER)

Kristyn Schiavone

Tom Peeper, Ph.D., has always known the importance of trying new things. To his friends and colleagues at Oklahoma State University (OSU) in Stillwater, Okla., the Warth Distinguished Professor of Agronomy’s most notable leap of faith has been pioneering the OKanola program at OSU and helping establish canola as a profitable rotation crop in the Great Plains. But since his childhood, Peeper has never been one to stay in his comfort zone – an attitude he instills in everyone who crosses his path, from his wide-eyed agronomy students to veteran farmers reluctant to grow canola.

He's retiring in June 2010, the same month he turns 65, but his influence is far from over. As Peeper looks back on everything that's happened to agriculture in the Great Plains in the last 40 years, it's apparent that there is still ground left to break.

Weed Science Pioneer

Peeper was born in Apache, Okla., where his grandfather settled in 1901 and built the Apache Milling Company. His father worked at the company, which milled primarily wheat and some corn, and then started his own business selling lumber and hardware during Peeper's childhood. In their household, discipline and hard work went hand-in-hand and were taught through agriculture.

"I'm one of five boys, so dad's solution to keeping us out of trouble was to keep us busy," Peeper said, smiling. "He decided we should do some farming on the side, so I got exposure to agriculture from all different directions."

This experience brought Peeper to OSU for his undergraduate education, where he has a family history dating back to 1907 that includes both his parents. Despite his mother's hopes that he would become a pharmacist, which she thought would be a

more stable career not to mention better for his allergies, Peeper completed a bachelor's degree in agronomy in 1967 and immediately entered his master's program at OSU in weed science. In the 1960s, weed science was a new field and the fact that he was among the first graduate students to study it made it even more attractive to Peeper.

"My advisors and the other weed scientists were not weed scientists by training – they were just agronomists who adopted weed science," he said. "I thought it was a good time to get into the field."

Actually "getting into the field" wouldn't happen for Peeper until after his time in the army. He finished his master's degree and Reserve Officers' Training Corps (ROTC) program in 1969 and left for a three-year army stint, including one year in Vietnam. Once back in the U.S., Peeper moved to North Carolina with his wife and earned his doctorate degree at North Carolina State

“

I got a call from one of the guys at Monsanto and he asked me if we'd be interested in taking a look at some Roundup Ready® canola. My reaction was if it'll grow, we're interested. So he rolled in a few days later with probably ¼ cup of seed and said, 'Here you go. See what you can do with this.'"

University. But one year after finishing his program, he was summoned back to the field – and to OSU – to fill a new position specializing in weed control in wheat.

In the Weeds

Wheat became a primary crop in Oklahoma in the late 1920s, when boll weevil insects "bowled over" cotton acres. But wheat wasn't without its own problems, such as winter annual grasses that had started to take over when Peeper returned to OSU. His job was to control weeds with anything but an alternative crop since the

Farm Act," that crop rotation became a federally supported option for weed control. The law increased planting flexibility by allowing participants to plant 100 percent of their total contract acreage to any field crop.

"I don't know why it took the government so long to wake up to the fact that they shouldn't lock farmers into producing one crop," Peeper said. "But that opened up a few doors and guys began to think, 'By golly, we could probably control some of our weed problems if we could rotate to other crops.'"

Peeper and his students got to work on testing wheat rotations with crops like soybeans and grain sorghum, but they quickly found that adopting a workable rotation was far from a simple solution. Limited rainfall in Oklahoma made it difficult for farmers to go directly from a summer to winter crop and planting date restrictions for wheat and soybeans made it almost impossible for farmers to grow both crops in one season. Such a rotation also forced earlier wheat planting, which prevented the cattle from grazing in the winter, thereby aggravating weed problems. In addition, farmers struggled to afford the herbicides often required for successful wheat production.

Finally, in 2002, Peeper's team began to see a bright yellow light at the end of the tunnel.

Canola to the Rescue

The initial introduction of canola to the Great Plains was, as Peeper tells it, shockingly simple.

"I got a call from one of the guys at Monsanto and he asked me if we'd be interested in taking a look at some Roundup Ready® canola," Peeper said. "My reaction was if it'll grow, we're interested. So he rolled in a few days later with probably ¼ cup of seed and said, 'Here you go. See what you can do with this.'"

As it turned out, the trials were everything Peeper's team and Monsanto had hoped for.

OF FAITH

In fact, when representatives from Monsanto returned, they found that their own recommendation of planting the canola at 5 pounds per acre had been too tight because so much of it had actually grown. Peeper's team did three field experiments that first year, harvesting the crop with their wheat equipment by enlisting people for each side of the combine to push the canola in with broomsticks.

"Really, I didn't even know whether we were doing it right or wrong," Peeper said. "I thought, 'Is that the way canola's supposed to look?'"

After harvest, Peeper and his team found that canola yields were surprisingly good. The next step was getting the farmers to try a new crop, so the team found 10 farmers who were willing to step into uncharted territory. They could get canola to grow, but there were other pieces to assemble before they could make a profit. For one thing, canola had to be crushed, and without a local facility to do so, Peeper's team made arrangements with a few small, out-of-use crushing plants in neighboring states. But when those fell through, farmers had to send their crop up to North Dakota and the transportation costs outweighed

livestock. At first, the cattle weren't interested in canola, but as soon as the first freeze hit and caused canola's sugar content to rise, they devoured it. Yet, the biggest issue for canola was farmer acceptance.

"Tradition is pretty strong, particularly in rural areas," Peeper said. "There's a great reluctance to change when you feel like you've been relatively successful in your farming career. Everybody was waiting on somebody else to try canola first."

Teaching the Trade

Peeper realized that in order to make canola catch on, he would have to invest more than just research. He would have to put his teaching skills, honed from nearly 40 years of experience at OSU, to work, so he started with the students. Over the years, Peeper's taught many different weed science classes, but he said the undergraduate class was always his favorite. One day he decided the best way to learn is through hands-on experience, so he took his students outside and gave them each a little square of land full of weeds that was to be their 100-acre farm for the semester. When Peeper first started the project, he told students to select

equipment to scouting for insects.

"I told the extension guys, 'When you roll into that field, I want the farmer sitting beside you,'" Peeper said.

Despite all the work involved in introducing a new crop to the region, Peeper calls the last eight years the most exciting and challenging of his career. As a weed scientist and agronomist, he's even had to teach himself a few things about how all of the components of crop production work together. He believes the work will eventually pay off to the tune of a 1.5 million acres of canola in the Great Plains. Even in his retirement, Peeper said he'll be back every once in a while to make sure the OKanola program at OSU is more than "okay." Meanwhile, farmer enthusiasm for canola is growing as wheat acres slowly decline.

"When farmers go to the elevator and their crop is worth \$7 a bushel and the elevator behind them has wheat that's \$4 a bushel, there's some serious thinking that goes on," Peeper said.

Quasi-Retirement

As a professor who spends much of his day with college students, it's no surprise that Peeper has given some thought to whether or not agriculture will continue to attract young people. He suspects that not only will agriculture continue to be attractive to students, particularly as new technology puts it at the forefront of science, but that the industry's best and brightest are yet to come. For example, Peeper said he expects plant breeding to make rapid advances and describes current breeding technology as "primitive" compared to, say, 50 years from now. He looks forward to these advances as a researcher and farmer, but also as someone who saw firsthand the effects of malnutrition during his time in Vietnam. He knows more can be done to nutritiously feed the world.

With such advancements to come, Peeper finds it difficult to retire. He has plenty of projects on deck to keep himself busy, like "piddling around" on 40 acres of wheat, fixing up antique tractors and spending time with his wife, though she's skeptical he'll cut off ties with OSU. And she's probably right – there's just too much he'd be missing, considering the promise of canola in the Great Plains.

"The outlook is pretty darn good," Peeper said. "I've had fun. But I'm not just going to go sit down somewhere."

If he does, hopefully it will be amidst 1.5 million acres of winter canola. ❖

Kristyn Schiavone is associate editor of U.S. Canola Digest.

“

The students who were assigned winter canola had it made – they cleared up all their weed problems and all the other students were out there scratching their heads trying to figure out what to do.”

the potential profit. Luckily, Producers Cooperative Oil Mill (PCOM) in Oklahoma City, Okla., was looking for another oilseed to crush in addition to cotton. Peeper notes that if it hadn't been for PCOM, canola acreage never would have increased in the Great Plains.

After that hurdle, however, the race to grow canola was far from over. Peeper's team had to get grain elevators to manage both wheat and canola during harvest. The elevators were designed to accept only wheat and figuring out how to get them to also accommodate canola was a struggle and continues to be, Peeper noted, especially as acres in Oklahoma grow. There was yet another lesson to be learned when farmers tried out canola by sectioning off a corner of wheat fields where they grazed

two crops from a list, including wheat, oats, barley and of course, canola. But in recent years, he's made Roundup Ready® canola a mandatory part of the crop line-up.

"What I realized when I started this class was that the students who were assigned winter canola had it made – they cleared up all their weed problems and all the other students were out there scratching their heads trying to figure out what to do," Peeper said.

The project is not a lesson in crop production as much as decision-making, he noted, and his job is to give the students enough guidance to make the right decisions. That's the same approach Peeper or his extension specialists take when they're helping farmers grow canola. The team helps growers with everything from calibrating seeding

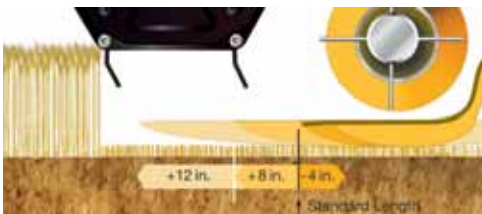
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National Canola Research Program Helps Grow Winter Canola Acres

Demand for canola oil in the U.S. has increased significantly in recent years due to rising health-consciousness among American consumers, particularly around removing *trans* fat from restaurant items and packaged foods. However, the roughly 1 million acres of canola now planted annually in the U.S. amount to less than one-third of total domestic

consumption and Canada supplies the rest.

Most of those 1 million acres and a significant portion of canola research can be found in North Dakota and Minnesota. But in the Great Plains, Pacific Northwest, southeast and Midwest regions, winter canola acres are growing as yields, harvest and storage practices and pest management improve. The National Canola Research Program (NCRP), administered

by the U.S. Canola Association, provides funding for each region on a competitive basis for agronomic research related to breeding, weed control, crop rotation and more. For the winter canola-growing regions, NCRP-funded research is critical for expanding the crop. *U.S. Canola Digest* asked researchers from each region to summarize some of their most important NCRP projects.

Great Progress in the Great Plains

By Michael Stamm, M.S.

The long-term goal of the Great Plains canola research program administered by Kansas State University (KSU) is to facilitate the adoption of winter canola as a viable rotational crop in the region. Researchers have adopted high-priority winter canola production systems, including genetic improvement and more. Because of research and extension efforts and NCRP funding since 1991, winter canola is an emerging crop in the Great Plains (mainly Oklahoma and Kansas, but the region also includes Missouri and Nebraska). As a result, the U.S. Canola Association established 800,000 acres as a benchmark for regional production by 2015.

The Great Plains NCRP External Research and Advisory Committee, which includes canola producers, industry personnel, researchers and extension experts throughout the region, meets annually to discuss the program's progress, suggest new areas of research and identify hot-button topics for canola growers. Extension and research, including publishing variety trial results and completing reports of progress, provide

information to growers on the performance and adaptability of winter canola varieties to the region and help them grow canola successfully. University personnel participate in a number of field days and extension meetings, write agronomy production updates, and give radio and television interviews.

Improved Management Practices

In recent years, several successful variety trials and production management studies have been conducted on topics such as swathing prior to harvest versus direct combining, stand establishment in no-till farming, dual-purpose canola varieties for grain and grazing, and winter canola variety development. In the swathing versus direct combining study, three years of data have shown that producers can safely implement either swathing or direct cutting to harvest a successful crop. Simulated grazing studies demonstrate that grain yield is reduced by one-third on average; however, differences in plant structure allow varieties with a flat, low growth habit to not show a negative effect on yield following simulated grazing. As a result of this discovery, a dual-purpose winter canola variety will be recommended for release in summer 2010. In another study, results showed that removing crop residue from the seed row in whatever manner necessary enhances fall stand establishment, winter survival, vigor and grain yield in no-till canola production systems.

Improved Varieties

'Kiowa,' a winter canola variety with enhanced winter survival, will be available to growers as foundation seed in the fall of 2010. Another winter canola variety with 1 percent higher oil content than long-term check varieties will be proposed for release this summer. These adapted varieties are a direct result of the ongoing support of the NCRP.

The 2009-10 National Winter Canola Variety Trial, also managed by the Great Plains canola research program, was planted at 65 locations in 25 states and included 42 entries from 10 breeding programs. Results from the trials aid canola growers with variety selection and have assisted various breeding programs in making decisions on the release of experimental lines. For more on the National Winter Canola Variety Trial, see page 11.

The impact of the U.S. tax dollar is being observed on the southern Great Plains in the form of little yellow flowers. Through efficient use of the NCRP funding, researchers in this region are enabling farmers to increase their standard of living by growing a highly desired and profitable crop. ❖

Michael Stamm, M.S., is a canola breeder at Kansas State University in Manhattan.

Pacific Northwest Plays the Field

Tom Chastain, Ph.D.,
Chengci Chen, Ph.D.,
Grant Jackson, Ph.D.,
and Don Wysocki, Ph.D.

This year, NCRP programming in the Pacific Northwest, which includes Washington, Oregon, Idaho, Montana and Utah, was dedicated mainly to breeding new varieties such as fast-emerging, cold-tolerant cultivars and evaluating crop management practices like nitrogen application.

Nitrogen Matters

Adequate nitrogen is essential for high yield and good seed quality of winter canola. Both amount and timing of available nitrogen are important. The optimum amount must be present prior to rapid growth in April. Using an uptake curve as a guide, researchers in the region have been experimenting with timing and rates of nitrogen application. In the Oregon State University fertilizer guide for canola (<http://extension.oregonstate.edu/catalog/pdf/em/em8943-e.pdf>), the base need is 7 pounds of nitrogen (N) per 100 pounds of expected grain yield. For an expected yield of 2,000 lb/acre, the nitrogen recommendation would be 140 lb/acre minus the available soil nitrogen.

Following this general recommendation, researchers have examined the timing and rates of nitrogen application in dryland conditions in eastern Oregon. Application rates of zero, 0.5, 1 and 1.5 times of the recommendation were studied and timing varied between all at planting; two-thirds at planting and one-third at spring topdress; and one-third at planting and two-thirds at spring topdress. Figure 1, with results from crop year 2009, illustrates the typical responses. In general, researchers found that yields are best at the recommended rate (7 lb N/100 lb expected grain yield) when all nitrogen is applied at planting or split with 2/3 at planting and 1/3 at topdress. Precipitation was below average for the crop year and spring growing period, but spring topdress allowed the opportunity for adjusting nitrogen amounts when more was known about the precipitation outlook.

Fig. 1: Yield Response of Winter Canola to Timing and Rate of Nitrogen Application

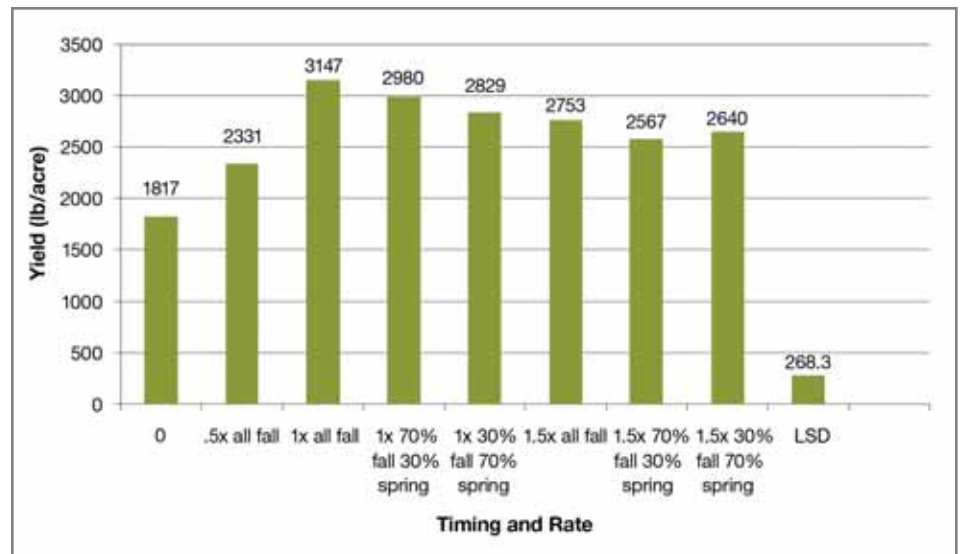
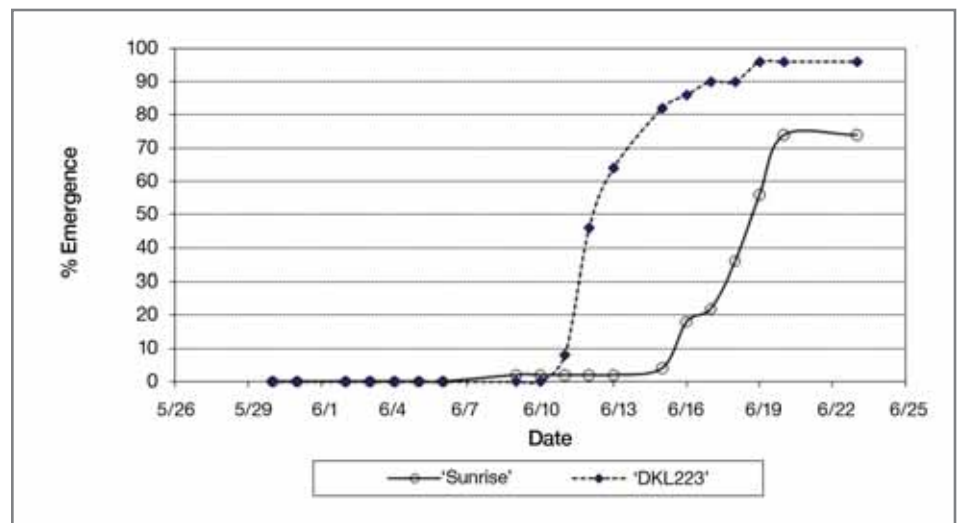


Fig. 2: Winter Canola Seedling Emergence



Studies on Seeding Date

In Montana and other semi-arid regions of the Pacific Northwest, dryland canola production is often constrained by hot, dry summers and a short growing season. Heat stress at the flowering stage can prevent blooming and reduce seed yields. A change in seeding date can alter the timing of plant growth and development as well as prevent the negative impacts of heat and drought stress at critical growth stages. A seeding date study conducted at Moccasin and Conrad, Mont., showed that late March seeded canola had yields up to 5 percent greater than those resulting from mid-April and later seeding. Delayed seeding from mid-April to mid-May resulted in a 43-63 percent yield reduction.

To make early spring seeding feasible, suitable canola cultivars must be selected. Such cultivars must have quick germination, emergence and establishment at low temperatures and seedlings must be tolerant to early spring freezing and thawing. Field and growth chamber studies were conducted at the Central Agricultural Research Center of Montana State University at Moccasin, Mont., to determine the minimum temperature or base temperature (T_b) for germination and heat units or growing degree days to 50 percent emergence (GDD_{50}). The T_b for germination was less than 4 °C and the GDD_{50} were 42-81. Different cultivars exhibited different heat unit requirements for emergence both in the growth chamber and field (see Figure 2).



Two canola cultivars seeded on April 16 in Montana were blooming and producing pods.

Photos courtesy of Dr. Chengci Chen of Montana State University's Central Agricultural Research Center.

Field studies also showed that canola biomass and grain yields were negatively correlated to the GDD50. Part of this research was published by Chen et al. in 2005 (*Agronomy Journal* 97:1252-1262).

Canola breeding projects continue to be at the forefront of NCRP research in the Pacific Northwest, including research on canola quality, herbicide tolerance and disease resistance, creating canola cultivars

specialized for cooking oil, biodiesel and overall superior growth in the region. ❖

Tom Chastain, Ph.D., is a crop physiologist at Oregon State University in Corvallis. Chengci Chen, Ph.D., is associate professor of agronomy at Montana State University's Central Agricultural Research Center in Moccasin. Grant Jackson, Ph.D., is professor of soil science at Montana State University's Western Triangle Agricultural Research Center in Conrad. Don Wysocki, Ph.D., is an extension soil scientist at Oregon State University's Columbia Basin Agricultural Research Center in Pendleton.

Canola Acreage Small but Mighty in the Midwest

Michael Schmidt, Ph.D.

Though weather was a menace in the Midwest in recent growing seasons, research through the NCRP still yielded promising results. The region includes Illinois, the research hub, along with Kentucky, Indiana, Ohio, Virginia and Michigan.

Winter canola is a young crop in the region, with only about 1,000 acres planted in the 2008-09 growing season. Objectives of the NCRP in the Midwest include variety development through university breeding programs; variety testing for new lines with high yield potential, winter hardiness and resistance to shattering and disease; and establishment of regional best practices for planting date, seeding rate, pest control and fertility requirements. In addition, researchers evaluate the effects of including canola in the traditional Midwest cropping system, which includes corn and soybeans. Eight canola producers in southern Illinois have consistently reported high yields and satisfaction with the crop, but the limitation remains that farmers lack nearby locations to sell their seed.

Breed to Succeed

The availability of high-yielding varieties is critical to the adoption of winter canola in the Midwest, so hybrid development and testing is a top research priority for the region. Southern Illinois University at Carbondale, the epicenter of the NCRP in the Midwest, collaborated with Purdue, Ohio State, Michigan State and Virginia Tech Universities in 2008-09 to test varieties released by breeding programs at the University of Idaho, Kansas State University and the University of Arkansas. The best-performing lines in this study being tested further in the 2009-10 growing season.

The Midwest participated in the National Winter Canola Variety Trial with trial plots in Illinois, Indiana, Ohio, Michigan and Virginia. For the 2008-09 growing season, a total of 52 plots were entered, and 40 plots for the 2009-10 growing season. Plots are evaluated on criteria such as fall stand, spring stand, plant height, bloom date and harvest maturity date. They are also observed for disease and insect damage. However, a severe storm in Carbondale during the 2008 growing season destroyed trial plots and prompted declaration of an official national disaster area. In addition, plots in Belleview, Ill., were destroyed by two hail events related to the storm in Carbondale. The severe weather stripped the seed pods from canola plants and no crops were

harvested at either location. Prior to the storm, average yields were expected to top 50 bushels per acre and yield data has previously shown potential for yields of 3,000 pounds or 60 bushels per acre. Data is not yet available for the 2009-10 harvest.

Rotational Benefits

From 2005 to 2008, Midwestern researchers studied the profitability of winter canola compared to winter wheat following corn and soybeans in both reduced-till and no-till systems. Results indicated that the difference in canola yields following a crop of corn versus soybean was insignificant and that canola can be grown profitably after either crop. There was also no significant difference in tillage systems in terms of yield, but establishing a canola stand appeared more difficult in a no-till system. Researchers also found that canola brought in about 25 percent greater revenue per hectare than wheat. This was based on crop values at the time of harvest each growing season and on the cost differential for growing each crop.

Despite the challenges of introducing a new crop to the Midwest, data shows that canola can have a bright (yellow) future in the region with continued research. ❖

Michael Schmidt, Ph.D., is associate professor of plant breeding and genetics at Southern Illinois University in Carbondale.

New Varieties Breed Success in Southeast

Robert Bacon, Ph.D.

Canola has potential to greatly increase acreage in the next few years in the southeast, including Arkansas, Georgia and Alabama. There is a strong demand for its high quality oil for food use and a rapidly increasing demand for oil to satisfy the feedstock needs in biodiesel production. Canola fits into southern cropping systems as a winter crop with a higher profit potential than small grains and can be double-cropped with soybeans or cotton. The NCRP southeast program is dedicated to developing superior winter cultivars and learning how to manage them. Since its inception in 1994, the breeding program at the University of Arkansas, with the objective is to develop regionally adapted winter genotypes, has released two germplasm lines and one variety. The breeding program is concentrating on high yield potential, winter hardiness and canola quality parameters.

New Variety Development

Like most breeding efforts, there are lines in various stages of development each year. The early generation (F_2 - F_5) populations were advanced for future selection. Single plant selections will be made among the F_5 populations to obtain lines for future testing in field trials. Single crosses were made in the greenhouse, emphasizing some of the experimental lines and cultivars from the University of Arkansas screening effort that have performed well in the southeast. The most advanced lines (35) along with five check varieties were tested at two locations. Five of the 35 experimental lines yielded as high or higher than all of the check varieties at both locations.

In addition to lines developed at the University of Arkansas, varieties in the National Winter Canola Variety Trial were evaluated at two locations. Yields ranged from 500 to 2,500 lb/A on a sandy loam and between 1,000 and 2,800 lb/A on a silt loam soil.

Field Trials and Fertilization

Field trials evaluating canola response to nitrogen, sulfur, phosphorus, potassium



Harvesting canola in Stuttgart, Ark. Photo courtesy of Dr. Robert Bacon of the University of Arkansas.

and micronutrient (zinc and boron) fertilization were conducted on silt loam soils at three sites in Arkansas – one following soybean, one following rice and one following summer fallow. The winter cultivar 'AR377' was seeded in October 2009 in all locations. Seeding at most sites was delayed due to late harvest of summer crops and wet soil conditions during September. The uppermost, mature leaves (20) were collected from selected plots and trials at the late growth stage (3.3) and tissue was analyzed in the University of Arkansas Fayetteville diagnostic laboratory.

The fertility requirements of winter canola in Arkansas appear to be similar to those of soft red winter wheat grown on similar soils and following the same previous crop. Averaged across three sites following summer fallow, canola has required 90 lb N/acre to achieve 95 percent of maximum yield potential. Field research on silt loam soils in Arkansas has shown no yield benefit from sulfur fertilization of canola and positive yield increases on soils that test less than 30 parts per million. Although additional research is needed to better characterize the fertilizer requirements of canola following different summer crops, preliminary data provides strong evidence suggesting nitrogen, phosphorus, potassium and sulfur recommendations currently made for winter wheat would also be sufficient for winter canola.

Disease and Insect Resistance

Blackleg resistance is critical for canola production in the humid south.

The University of Georgia is involved in screening breeding lines as well as evaluating the National Winter Canola Variety Trial line for reaction to blackleg. Genotypes were planted in the fall in three Georgia nurseries for evaluation and were inoculated with blackleg using soybean debris. The two northern locations were both lost to a late freeze, but the southern location had excellent disease resistance with 'Cyclone' and 'Westar,' rated seven on a nine-point disease scale. The evaluations were done March 25 at full-bloom stage and data is currently being compiled.

Insect pressures on canola can be significant and their impact must also be evaluated for agronomically superior varieties. Because canola is a new crop in the southeast, little information exists on insects affecting domestic canola. Alabama A&M University has evaluated test plots at the rosette stage for insect infestation and used sticky traps in the spring to determine if insects migrated early into canola plots. Several species were observed. Cabbage seedpod weevil and flies were the most prevalent. The weevil inflicts direct damage on canola by feeding on the seeds.

Alabama A&M researchers are also evaluating very early-maturing canola germplasm that will be better adapted to southern cropping systems. The results of all canola research projects in the southeast should speed expansion of the crop. ❖

Robert Bacon, Ph.D., is a professor and department head for the Division of Agriculture at the University of Arkansas in Fayetteville.

Trial by Field

◀ Continued from page 10

“The NWCVT is a very important tool, not only for screening new genetics, but for allowing DL Seeds to make real commercial business decisions on what new varieties to bring to the marketplace in the United States,” he said.

For some domestic and overseas canola breeding and marketing groups, the NWCVT serves a critical role as the only canola yield testing program available to them.

“It’s really the only complete trialing system that allows a canola developer, like our company, to test new winter canola hybrids across different growing regions,” McCallum noted.

The NWCVT permits testing of commercial cultivars and advanced germplasm in the widest set of geographic settings possible, which helps determine where these varieties are best adapted. Dr. Michael Schmidt of Southern Illinois University has seen the regional benefit of NWCVT data, noting how valuable it

is in showing winter canola’s potential in the Midwest. The data generated by the NWCVT also shows genetic gain in new varieties, according to Schmidt.

“Having a continuous flow of yield data across the years has proven the advances in canola variety development,” he said. “Yields have greatly improved and winter hardiness is no longer the problem that it once was when winter canola was first introduced.”

A National Impact

When winter canola was first grown in the U.S., it was important that the varieties performed in a wide range of environments because there weren’t many varieties available. Because of the NWCVT, researchers know that certain genetics are more adapted to specific areas of the U.S., and the trial identifies those areas for seed developers and growers.

“DL Seeds will continue to support the NWCVT with new, higher-yielding winter canola hybrids in the future,” McCallum said. “We have seen in the trial that there are performance differences from region to

region with new varieties.”

Winter canola production is still in its infancy across many canola-growing regions in the United States. Thus, coordination of the NWCVT is one of the most significant activities for the canola program stationed at KSU. The NWCVT is a multi-state, collaborative research effort with national impact.

“As an increasing number of commercial farming operations look toward including winter canola in their rotations, the database on geographic adaptation of diverse winter canola genetics [from the NWCVT] is an invaluable resource, enabling growers and agronomists to commercialize this crop,” said Brian Caldbeck of Caldbeck Consulting LLC. “Multiple-year data on winter canola genetics allows producers to confidently focus on resolving regional production challenges against the backdrop of stable genetics.” ❀

Michael Stamm, M.S., is a canola breeder at Kansas State University in Manhattan.

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Hooray for Harvest

Yields Look Promising at End of Great Plains Growing Season

Heath Sanders and Jeff Scott

The 2010 winter canola crop season in the southern Great Plains is starting to come to an end. Growers are cautiously monitoring weather conditions and continue planning for the canola harvest to maximize yield and profits. Harvest can sometimes be a challenge in the region due to the unpredictable weather, so farmers are anxious to get their crop in the bin. Much of the canola in the southern Great Plains looks good and growers are cautiously optimistic. Beyond wheat prices remaining about \$4 per bushel and canola around \$7.50 per bushel, canola is attractive to growers as a winter broadleaf rotational crop. As interest in winter canola increases, so does the prospect of more planted acres this fall.

Winter Canola Field Day

On April 22, Oklahoma State University (OSU) hosted its first annual Winter Canola Field Day at the North Central Research Station near Lahoma, Okla. About 150 people attended to learn more about this year's crop and get new ideas for next year. The morning began with field stops regarding winter canola variety trials, canola fertility, breeding program and plots, and pest management. The indoor portion of the tour pertained to harvest preparation and management and Producers Cooperative Oil Mill presented on handling and canola delivery points for this year's harvest. Growers, both new and experienced, were also able to learn cutting-edge information from OSU researchers and make last-minute harvesting arrangements with custom operators. These networking opportunities were especially vital for new growers as they were able to get all their questions answered before harvest.



Field stops during the Great Plains' first Winter Canola Field Day in Lahoma, Okla. Photo courtesy of the Oklahoma Department of Agriculture, Food, and Forestry Public Information Division.

Oklahoma Oilseed Commission

One recent step toward the expansion of oilseed production in the Great Plains was the formation of the Oklahoma Oilseed Commission, a committee with representatives who are involved in oilseed production from each of five Oklahoma districts. Committee members are Chair Brent Rendel of Miami; Vice Chair Kelly Chain of Canton; Secretary/Treasurer Alan Mindemann of Apache; Lee Leeper of Alva; and Brent Thompson of Pauls Valley. The Oklahoma Oilseed Commission conducted its second public meeting on April 22 to determine rates for the oilseed check-off program. Check-off money will serve as the commission's budget to help fund research, education and related initiatives. After much input from producers and Great Plains Canola Association (GPCA) representatives, the rate was set at 0.5 percent of crop value per bushel. These rates will take effect upon delivery of this year's winter canola crop.

GPCA Activities

The GPCA staff and board have been busy this spring working on critical issues such as crop insurance. The association is pleased to announce a tentative approval for a multi-peril crop insurance policy. This pilot program will add Woods, Alfalfa, Grant, Major, Garfield, Blaine, Kingfisher, Custer and Caddo counties in Oklahoma. Final approval for this policy should be in place for the 2010-11 crop year.

The GPCA is continuing to petition the Environmental Protection Agency for a section 18 exemption for the use of Reglone® (diquat bromide) as a pre-harvest desiccant in winter canola. This will be a great tool for producers who have limited acres or wish to straight-cut some or all of their acres.

In April, the GPCA wrapped up its final series of teleconferences for farmers to better prepare them for the upcoming harvest. The association intends to continue such tele-tutorials in the next growing season.

Upcoming Events

OSU and the GPCA will host the sixth annual Winter Canola Conference on July 20 in Enid, Okla., followed by the GPCA annual meeting. For more information, go to www.greatplainscanola.org. ❖

Heath Sanders is an extension assistant for winter canola in Enid, Okla. Jeff Scott is president of the Great Plains Canola Association in Pond Creek, Okla.

Summer *Lovin'*

Kristyn Schiavone



It's rare to go an entire summer without once eating barbecue, potato salad or veggies and dip. And who would want to? These picnic and pool party favorites are all-American crowd pleasers and of course, personal loves of mine. But there's no reason to stick with the same versions of these dishes each summer, especially when they could be healthier and more flavorful with a little canola oil.

Take barbecue, for example. In my hometown of St. Louis, we love our ribs, but one thing I don't love is being covered in barbecue sauce for the rest of the evening. Pork ribs are also loaded with saturated fat, which is fine once in a while, but barbecue is as common as sunscreen during the summer months. This delicious (and fork-friendly!) recipe for Honolulu Barbecue Chicken is a unique twist on standard barbecue and has only 1 gram of saturated fat per serving. That's due to the canola oil-based marinade (canola oil has the least saturated fat of all cooking oils) and the lean boneless, skinless chicken breasts.

For me, potato salad is a can't-miss

summer dish, but since it's mayonnaise-based and has to be refrigerated, I am very particular about the circumstances under which I eat it. (It cannot sit for three hours on a picnic table in 107 °F heat!) Southwestern Potato Salad is a tasty take that uses simple canola oil vinaigrette and veggies to complement the red potatoes. It's much better at beating the heat at a picnic, lighter for summer and a creative way to do potatoes.

And who could forget the veggie tray? Instead of less healthy, store-bought French onion dip, make your own version with just four ingredients, some or all of which are already in your pantry. Combining canola mayo with light sour cream reduces the saturated and total fat in this Garlic Chive Dip, but it still gives that burst of flavor with raw veggies.

Using a little creativity and canola oil, you can get your summer food fix with more flavor and less guilt. Happy barbecuing and picnicking! ❀

Kristyn Schiavone is associate editor of U.S. Canola Digest.

Honolulu Barbecue Chicken

- 1 knob fresh ginger (about 4 inches long)
- 1½ cups pineapple juice
- ⅓ cup low sodium soy sauce
- 2 Tbsp dark brown sugar, packed
- 2 Tbsp canola oil
- ¼ tsp kosher salt or to taste
- 4 boneless skinless chicken breasts (6 ounces each), trimmed
- 2 Tbsp very thinly sliced green onions for garnish

1. Grate unpeeled ginger on large holes of a grater. Gather grated ginger and squeeze juice into a small bowl. Measure out 1 Tbsp ginger juice. Discard grated pulp.

2. In a medium bowl, whisk together measured ginger juice, pineapple juice, soy sauce, brown sugar, canola oil and salt. Place half of the mixture in an airtight container and refrigerate; reserve for sauce. Place chicken breasts in a resealable plastic bag; add remaining marinade and squeeze out excess air. Marinate in refrigerator overnight and turn as needed to evenly coat.

3. To make sauce, remove reserved marinade from refrigerator and boil in a small

saucepan over high heat until slightly thickened, about 3 to 5 minutes; set aside.

4. Preheat grill to medium. Clean it with a stiff brush, then rub with canola oil. Remove chicken from marinade and shake off excess. Discard marinade.

5. Grill until cooked through, about 4 minutes per side or until internal temperature registers 160 °F on an instant-read thermometer inserted into thickest part of breast. Spoon sauce over chicken, and sprinkle with green onions; serve hot or at room temperature.

Yield: 4 servings

Southwest Potato Salad

- 1 roasted red pepper
- 1 roasted orange pepper
- 1½ cups corn kernels, cooked
- 2 cups seeded tomatoes, diced
- 3 green onions, thinly sliced
- 2 Tbsp finely chopped jalapeño pepper
- 1 lb small red potatoes, peeled, cut in half and halves cut into thick slices
- 2 garlic cloves, minced
- 3 Tbsp canola oil
- 2-3 Tbsp lime juice
- Salt and pepper to taste

1. In a small bowl, combine peppers, corn, tomatoes, green onions and jalapeño.

2. Meanwhile, cook potatoes and garlic in a large pot of salted water until potatoes are tender. Drain and rinse under cold water. Mix potatoes and garlic with vegetables.

3. Whisk canola oil, lime juice and salt and pepper. Pour over potatoes and vegetables. Toss lightly. Serve.

Yield: 6-8 servings

Garlic Chive Dip

- ½ cup canola mayonnaise
- ½ cup light sour cream
- 1 tsp garlic powder
- 2 Tbsp dried chives

1. In a small bowl, combine all ingredients. Blend well. Cover and refrigerate overnight before serving.

Yield: 1 cup

All recipes and photo courtesy of CanolaInfo from www.canola.info.org.



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