University of Nebraska–Lincoln Extension
Connect, August 2005

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If you haven’t actually seen soybean rust, it can easily be missed or misdiagnosed. Loren Giesler knows this disease. The University of Nebraska–Lincoln Extension plant pathologist spent three weeks in Brazil last year studying it.

Giesler leads the Nebraska Rust Work Group, composed of state and USDA entities, to help develop educational materials to prepare producers to identify and manage the disease when and if it comes. He writes extension education publications, delivers educational workshops and presentations in the United States and Canada, coordinates the soybeanrust.unl.edu Web site, and is the voice callers hear on the state soybean rust hotline.

Nevertheless, Giesler said, “We’re all still learning about rust in the United States.”

Soybean rust is caused by a fungus spread by wind-borne spores, which migrated from Asia to Africa to South America. Last year it reached the southern United States. Infected plants have tan to reddish-brown lesions that first form on lower leaves and may resemble downy mildew, brown spot or other diseases. The fungus can rapidly defoliate plants.

Several fungicides are approved to treat infected fields, Giesler said, but the treatment of $15 to $20 per acre is too expensive to apply without good reason. He said infected, untreated fields could suffer yield losses ranging from 10 percent to 80 percent.

USDA ranks Nebraska among the 11 key soybean producing states in the nation. Nearly 74 million acres of soybeans were expected to be planted in 2005; 4.8 million are in Nebraska.

Steve Johnson is state plant health director with USDA’s Animal and Plant Health Inspection Service (APHIS). He said extension has done a great job learning about the disease and informing producers about it in Nebraska and elsewhere.

In a national survey taken this spring, Giesler said Nebraska producers ranked third nationally in awareness of soybean rust.

In Nebraska as elsewhere, early-planted sentinel plots serve as an early warning system. If and when rust comes, it should be first detected in the more mature plants.

Nebraska’s 48 sentinel plots are funded by APHIS and soybean checkoff dollars. They’re monitored at least weekly by extension educators and others so rust can be detected and treated before it hits producer fields.

Producers are willing to offer field space for sentinel and regular surveillance plots, checked for any type of pest, said John Wilson, extension educator based in Tekamah.

“They’re interested in their own information and having it in their own backyard,” Wilson said.

Alan Kjeldgaard, who farms near Tekamah, offered six acres for extension plots because he wants first-hand information, and he wants it quickly.

“I may know a day or two ahead of anyone else if soybean rust does come,” Kjeldgaard said.

The Nebraska Soybean Board funds the toll-free Soybean Rust hotline at 877-632-7878, said Victor Bohuslavsky, executive director.

Bohuslavsky said the soybean board works through extension because its educational programs help keep producers up-to-date and knowledgeable.

“The board expects a lot from extension,” Bohuslavsky said. “We rely on extension to get the job done.”

— Cheryl Alberts

Giesler can be contacted at (402) 472-2559.
Dean’s comments

University of Nebraska–Lincoln Extension is vibrant, attuned and committed to our state.

Extension constantly evaluates and improves on how to teach educational programs that benefit you, your family, friends and neighbors.

We strive in multiple ways to help make positive changes for better living and greater profitability in today’s society. Our commitment to quality programming is backed by the best research available for significant impact on local and national needs.

Take, for example, our soybean rust extension education for agricultural producers. UNL Extension has worked vigorously to learn about this disease and to share our knowledge with our partners and constituents. If and when soybean rust arrives in Nebraska, our producers will be armed with the knowledge they need to identify and treat the disease.

We continually assess needs of our constituents. When such assessment brought forth an educational thrust about today’s methamphetamine problem, extension was there. Working with such partners as Rep. Tom Osborne’s office, extension now educates community leaders, parents, roadside clean-up crews and many more on the awareness and dangers of manufacturing and using this illegal drug, and the contaminated waste it often leaves behind.

Youth is another area in which extension continually develops new programming. Extension is committed to helping youth learn skills that will help them be successful in the 21st century workplace. They learn these skills through participation in 4-H clubs, school enrichment projects and through a variety of out-of-school educational activities.

Did you know in Nebraska we also offer many other educational programs for youth, many of which are right here on the University of Nebraska–Lincoln campus? Each year teens thrive and learn in our Big Red Summer Camps. Not only do the camps make education fun, they provide interaction with university faculty. Students discover and hone their skills in areas of interest to them, such as movie-making, child care, Culinology and more.

Teens also come to campus for PASE/Life Challenge. The Premier Animal Science Events livestock judging contest has grown into a major event, with hundreds of teens benefiting from their campus experiences and important student-faculty interaction. Life Challenge provides 4-H’ers the opportunity to work as teams to make decisions about wise use of their time, money and talents.

In addition, extension continues long-standing programs in such areas as agriculture and family, meeting our constituents’ contemporary needs. In whatever we do, we adhere to developing and teaching our programs with integrity and efficiency. We are true to our roots. We are extension.

Elbert Dickey
Dean and Director
University of Nebraska–Lincoln Extension
Youth-adult LEAP partnership gives new voice

A group of Hartington teenagers has joined the city council, plus the library, chamber of commerce and economic development boards. For these civic-minded young people, it’s just the beginning.

The approximately two dozen high school students plan to pursue community leadership as adults, said Jane Armstrong, University of Nebraska-Lincoln Extension educator based in Hartington and facilitator of Hartington LEAP (Leaders Energizing Activities in Partnership).

“They’re learning the process for making things happen,” Armstrong said. “They’re learning the community values them and that their opinions are important.”

Hartington LEAP is a group of youth and adult leaders working together to improve leadership skills to benefit their community. In its second year, the program has involved the teens in a community project and in local government.

The program was made possible by a youth-adult partnership grant to extension from the National 4-H Youth Council and the Land O’ Lakes Foundation. Grants for LEAP programs were given to the communities of Hartington, Hayes Center, Stromsburg and Wakefield.

In Hartington, Armstrong said the city council and various community boards changed their rules to allow teens to serve.

The teens got approval from the council to spruce up East Park. They landscaped, cleaned, painted the shelter and its restrooms, and helped in the purchase of new playground equipment.

— Lori McGinnis

Armstrong can be contacted at (402) 254-6821.

What to plant? Water Optimizer can help

The Water Optimizer may be the next best thing to a producer’s crystal ball.

The computerized decision-support tool helps producers better decide which crops to plant for the most yield when water is limited.

The Water Optimizer, which uses a spreadsheet format for various inputs such as soil type and available water for dryland and irrigated crops, was developed by University of Nebraska-Lincoln (UNL) professors Derrel Martin and Ray Supalla. UNL Extension is helping producers put it to work.

“Producers will be in a reoccurring decision mode to maximize the water they have,” especially if rain shortfalls continue, Martin said.

Dry conditions over several years in Nebraska have resulted in less water in lakes, rivers and under ground, reducing irrigation and causing “great consternation” to the rural economy, Supalla added.

The Water Optimizer was developed in response to recent outcomes from interstate water rights litigation, as well as several years of drought, and is based on research collected the past 20 years.

“Now there is a real need, a teachable moment to apply it,” Supalla said.

The Water Optimizer concept was explained during extension winter meetings and released this spring.

Steve Melvin and Chuck Burr, UNL Extension educators based in Curtis and Holdrege, respectively, said some producers using the program discovered irrigated corn or corn-soybean rotation would provide the best return over other crops, when strategic irrigation timing and amounts were used.

— Cheryl Alberts

Burr can be contacted at (308) 995-4222; Melvin at (308) 367-4424.

Yard waste turned into valued compost

Several years ago the Lincoln mayor wanted to reduce the amount of yard waste taken to the landfill, and called on University of Nebraska-Lincoln Extension to develop an educational composting program.

The result was Be Yard Smart. Now extension workshops, demonstrations and newspaper inserts teach homeowners about composting and the benefits of using organic materials in yards and gardens.

Composting is easier than most people expect, said Don Janssen, extension educator based in Lincoln who helped develop the program.

Be Yard Smart participants also discover that composting and mulching grass clippings can save money for them and the city.

“Usually one less application of nitrogen will need to be applied each season, and they save the cost of grass and leaf pickup,” Janssen said.

Since 1995, the workshops have attracted more than 1,400 participants.

Homeowners are encouraged to make and use their own compost, but they also can use compost made available through the city’s LinGro program, Janssen said.

Lincoln annually diverts 20,000 tons of grass, leaves and brush from the landfill. Those materials are mixed and composted, a process that takes nine to 12 months. When ready, the compost is made available to the public.

Since LinGro and Be Yard Smart were implemented 10 years ago, city officials estimate three years have been added to the life of the landfill, and saved taxpayers $557,000.

— Marcia Oetjen

Janssen can be contacted at (402) 441-7180.
HACCP reducing meat, poultry food-borne illnesses

The sizzle of a juicy hamburger cooking on the grill can make your mouth water. Now more than ever before, consumers can be assured their hamburgers and other meats are safer, thanks to HACCP.

The Hazard Analysis and Critical Control Point food safety system is designed to protect consumers from food-borne illnesses caused by bacteria. And it’s working.

“We truly are making progress in reducing food-borne illnesses,” said Dennis Burson, University of Nebraska–Lincoln meat specialist.

All USDA-inspected meat and poultry processing plants have been required by federal regulations published in 1996 to adopt a HACCP system of procedures and controls to reduce harmful bacteria, chemicals and physical material contamination. Failure to meet the requirements could put plants at risk of being shut down.

UNL Extension, foreseeing the federal regulations, began teaching HACCP in 1992. Interest has boomed in the last couple years.

“Last year and this year we’re filling up all our workshops,” Burson said. “We even have to stop enrollment so we can manage the size of the workshops.”

Currently two to three workshops are held annually in Omaha and Lincoln, each drawing 30 to 35 people.

Harshavardhan Thippareddi, food safety specialist, said food processors attending the 2 ½-day workshops are taught to develop their own HACCP plans.

“It entails making them aware of what the issues in food safety are,” Thippareddi said.

The issues are preventing pathogens such as Listeria monocytogenes and E. coli 0157:H7 that can lead to potentially deadly food-borne illnesses. Discovery of these bacteria often leads to meat recalls.

“Yet we still see a pretty high level of interest in food safety and improving food processing and production,” Burson said.

A report released this spring by the Centers for Disease Control and Prevention showed that from 1996 to 2004, the incidence of E. coli 0157:H7 infections decreased 42 percent. That decline largely can be attributed to HACCP, Burson said.

Burson and Thippareddi are expanding the workshops. They recently held a pilot workshop for small processors of ready-to-eat meats to teach how to avoid Listeria monocytogenes contamination. Adding organic acid salts to hot dogs and deli meats will inhibit Listeria growth, Thippareddi said, yet some processors fear it may affect taste.

“Our objective is to train them to use these ingredients and still maintain quality,” Thippareddi said.

Butch Johnson, owner of SteakMaster Inc. in Elwood, took the HACCP workshop in 2000. His son, who just entered the business, took it this spring. Now they more closely scrutinize their processing and keep better records.

“HACCP has really made us aware of what we have to make sure we don’t end up with these problems,” he said.

— Lori McGinnis

Burson can be contacted at (402) 472-6457; Thippareddi at (402) 472-3403.

Would you like to treat a friend?

Do you know someone who would like to receive UNL Extension Connect who isn’t currently receiving a copy? Please send the name and address to: Editor, UNL Extension Connect, P.O. Box 830918, University of Nebraska–Lincoln, Lincoln, NE 68583-0918. We’ll do the rest. Thanks.
Market Journal presents profitable options for Nebraska ag producers

Doug Jose often gets comments at meetings, grocery stores and other places from total strangers who indicate they know him.

Chances are they’ve seen Jose as host of Market Journal, University of Nebraska–Lincoln Extension’s weekly agriculture television program.

Market Journal specializes in education on agricultural topics and issues specific to Nebraska, and profitable options for producers.

“I try to get to the dollars and cents aspects of things,” said Jose, an extension farm management specialist. “Given this set of conditions, here is a set of strategies.”

Jose regularly interviews managers of farms, livestock operations and grain cooperatives, as well as university faculty. The program also features experts on agricultural policy and ag-related weather outlooks.

Market Journal topic ideas are discussed during weekly production meetings led by Jim Randall, electronic media communications specialist and program producer. Topics are timely and relate to crop and livestock production and marketing, employee management, tax management, business planning and, occasionally, rural economic development.

The current 30-minute program is available at marketjournal.unl.edu, as well as Nebraska Educational Telecommunications NET 1 at 6:30 a.m. Saturdays, and other times and channels, including Channel 9411 on the DISH Network.

NET ratings indicate at least 12,000 households watch Market Journal each week, Randall said, and during Husker Harvest Days last year, 66 percent of people who attended the educational programs in the Market Journal tent said they watched the program.

Dillon Feuz, extension agricultural marketing specialist, said Market Journal is an effective way of getting the message out to large numbers of people, especially when a situation is urgent.

Two years ago during a severe drought in western Nebraska, Feuz and other Panhandle experts looked to Market Journal as a way to inform livestock producers of grazing, dry lot feeding and weaning options to save their pastures. Feuz said some people saved their herds by following the options.

DeWitt producer Ed Runty, who grows corn, soybeans, pasture and hay, and has a small cow herd, is a Market Journal viewer.

Runty said he appreciates the program and comments and forecasts by Al Dutcher, UNL agricultural meteorologist.

“I know what the weather’s going to do for the longer term,” Runty said.

At the end of each Market Journal program, Jose recaps the program topics in short bullets of information for viewers, another part of the program Runty appreciates.

Randall noted Market Journal programs can be recorded in the field from a mobile production van filled with cameras and other equipment. Technology in the van allows for delivery of meetings and workshops live on the Market Journal Web site.

“If it’s important to production agriculture, we’re doing it,” Randall said.

— Cheryl Alberts

Jose can be contacted at (402) 472-1749; Randall at (402) 472-3035.

Check out Extension’s Web site at: http://extension.unl.edu
Tons of produce stem from half-acre Omaha garden

Tending a half-acre garden is a big job. But volunteers who put in multiple hours growing up to two tons of produce to give away in the state’s largest city say it’s worth the effort.

University of Nebraska–Lincoln Extension’s Growing H.O.P.E. (Helping Omaha’s People Eat) Hunger Prevention Project is in its second year.

All the garden produce is donated to food banks in Douglas and Sarpy counties, and used to teach low-resource residents how to use vegetables to stretch their food dollars and eat healthier.

“This is an outreach mission to me,” said Irene Ecklund, who heads a team of about a dozen extension Master Gardeners on the project.

In May the Master Gardeners planted 250 tomato plants, as well as dozens of pepper and zucchini, and “tons and tons” of seed, Ecklund said.

They also donate their time to till, weed, water and harvest the garden.

Last year, the garden yielded two tons of produce valued at $10,000, said Mark Simmons, extension educator based in Omaha and project coordinator. A portion of the produce was used for extension Nutrition Education Program courses, but most was donated to five area food banks, he said.

“They were so thrilled last year with all the different donations,” Simmons said.

The garden site is at 165th Street and West Center Road, on property owned by Faithful Shepherd Presbyterian Church. The Rev. Darin Seaman said the congregation views the site as a way to help meet a community need.

“It’s a wonderful project,” Seaman said.

“Volunteering at a community garden in Omaha are UNL Extension master gardeners Eileen Slane, left, and Marjie Westphal. Produce from the half-acre garden goes for extension’s Growing H.O.P.E. (Helping Omaha’s People Eat) Hunger Prevention Project.”
Clinic network diagnoses crop, garden insect and disease pests

Few, if any, plant pests and diseases remain secret in Nebraska — at least not if the University of Nebraska–Lincoln Extension Plant and Pest Diagnostic Clinic has anything to say about it.

Using networked equipment, the clinic’s staff instantly can send and receive detailed pictures and other information to and from diagnostic clinics in other states, said Jennifer Chaky, clinic coordinator.

The equipment, plus a technician specially trained in biochemical testing, were federally funded by Homeland Security and USDA, Chaky said.

The equipment includes a digital camera connected to a microscope that allows experts in the nine-state Great Plains Diagnostic Network, of which Nebraska is a part, to see the same image. Diagnosing any plant pest is key to quick follow-up treatment and preventing its spread, Chaky said.

Extension educators throughout Nebraska monitor assigned crop fields. They are trained to detect anything out of the ordinary and to quickly send proper samples to the UNL clinic for analysis.

Soybean rust is one disease widely discussed and closely watched, Chaky said. If it comes to Nebraska, the diagnostic clinic quickly will spread the word so producers can treat for it.

The clinic analyzes about 1,000 samples per year, typically for crop diseases such as wheat stripe rust, wheat streak mosaic, grey leaf spot in corn, and yard and garden pests, Chaky said.

— Cheryl Alberts
Chaky can be contacted at (402) 472-2559.

Itch mite alert in the waiting; first outbreaks in 2004

Deb Schellhorn of Lincoln couldn’t understand why her skin itched so much. She realized why after hearing reports last October about a massive outbreak of itch mites, which multiply primarily in pin and red oak trees.

“We’re surrounded by pin oaks,” she said, which explains the bites she received on her arms, neck and back. “It itched more than anything I felt in my life.”

Last year’s outbreak has University of Nebraska–Lincoln Extension on guard for a similar outbreak this year, said Dave Keith, longtime extension entomologist.

Extension in April began taking leaf samples in three residential areas in Lincoln to watch for the development of the mites, which prey on the larvae of the gall midge, a tiny fly. The mites grow inside unusual insect-produced galls, or growths, on the edges of pin oak leaves.

Last year, hundreds of people in Lincoln and other areas in southeast Nebraska were bitten by itch mites, Keith said. Outbreaks also occurred in Kansas, Missouri and Texas; all were the first directly reported outbreaks of the new pest in North America.

After calls flooded in, extension insect diagnostician James Kalisch examined the tree galls and discovered the mites. While the mite already has been found this summer in galls, the numbers were small.

Extension will issue alerts if another outbreak occurs, Keith said.

Itch mite bites cause a red welt with a hard pimple in the middle. They can itch for more than a week but should not be scratched; ointments can help heal bites. Reduce bites before exposure with an insect repellant containing DEET, but avoid using DEET on small children. After exposure, a shower or change of clothing can help.

— Lori McGinnis
Kalisch can be contacted (402) 472-8691.
Preschoolers taught to positively resolve their own conflicts

It’s a common occurrence in a child-care setting — two young children arguing over a toy.

The initial response of a child-care provider might be to separate the children and take away the toy. University of Nebraska–Lincoln Extension is teaching child-care providers a new, more productive way to settle these squabbles.

Extension conferences teach child-care providers how to help preschool children learn to resolve their own conflicts.

“It helps children develop problem-solving skills so they can learn to be assertive in a good way, brainstorm possible solutions and not look to adults to solve all their problems for them,” said Mary Nelson, extension educator based in Omaha.

Helping children resolve conflict is a practice brought to extension by Marjorie Kostelnik, dean of the UNL College of Education and Human Sciences. Kostelnik has researched children’s social behavior and has taught the concept for many years.

“We found that when using methods of conflict mediation over time, within four to five weeks children improved in their ability to solve problems,” Kostelnik said.

The practice runs counter to what adults typically might do when hearing an argument between two young children — separate them or take the toy away.

“While these strategies stop the fight it doesn’t give the children the skills they need to resolve conflicts more productively and improve their skills,” Kostelnik said.

Statewide in 2004, extension held 16 conferences attended by 2,550 child-care professionals, educators, foster parents and teachers. Participants learned how to recognize the appropriate situations to mediate conflicts between children.

“If it’s a fight over a possession or territory, then it’s a good time to teach conflict resolution with kids,” said Janet Hanna, extension educator based in Burwell. Conflict resolution would not be used if one child is bullying or physically hurting the other, she said.

Mediation requires the teacher to calmly get each child’s story, ask them what alternatives there are to settle the dispute and help them to agree on a mutually satisfying solution.

“It’s teaching the kids they have power over their own lives,” Hanna said.

Brenda Stupka, a family consultant with Head Start in Broken Bow who attended extension’s conference, said it gave her ideas on how to help families settle conflicts with children.

“A lot of parents yell at the kids,” she said. “I tell them from the start they have to learn that children learn from us and yelling doesn’t get us anywhere.”

— Lori McGinnis

Nelson can be contacted at (402) 444-7804; Hanna at (308) 346-4200.