North 40 Ag, an agronomy and soil health consulting company based in Ballantine, Montana, will host 12 soil health & cover crop field days across Montana, northern Wyoming, and western North Dakota in August and September. Topics include the benefits of implementing soil health practices such as no-till, crop rotation, cover crops, and incorporating cover crops into grazing systems.

“Field days are a great opportunity to learn about cover crops and soil health practices firsthand” said Kate Vogel, agronomist with North 40 Ag. “Each event is tailored to the unique agronomic conditions in the area and allows us to learn from the successes and challenges of other producers.”

Field days will be held at the following locations:

Stevensville, Montana: August 14 @ 9am- 1506 Wheelbarrow Creed Rd, Stevensville, Montana 59870

Baker, Montana: August 27 @ 1pm- 12 miles North of Baker on Hwy 7. Turn east on 1 Big Hill Rd. Field on north side of road.

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Field day is August 23 in Garden City

By K-State Research and Extension News

Kansas State University’s Southwestern Research-Extension Center will host its Field Day 2018 on Thursday, August 23 at 4500 E. Mary St. in Garden City. The day features field tours, indoor seminars and seed, implement and farm supply company displays.

Registration and vendor exhibits open at 8 a.m. with the program, showcasing K-State research updates at 9:15 a.m. A complimentary lunch will be provided.

Field tours include:
- Weed control in irrigated corn
- Weed control in irrigated grain sorghum
- Update on mobile drip irrigation
- Diversified annual forage crop rotations
- Perspectives on Forbs in Kansas grasslands: Who they are, what they do, and why they’re important

Seminars include:
- Insect research update
- Pesticide safety update
- 2.5 hours available plus core hour for continuing education credits

For more information, contact Kiser at breana.s.kiser@ksu.edu.

Grazing School set for September 5-7

By NDSU Extension Service

Livestock producers will have an opportunity to learn about the principles of range management and how to incorporate them into livestock operations during the 2018 North Dakota Grazing School set for September 5-7 at the North Dakota 4-H Camp near Washburn.

North Dakota State University (NDSU) Extension, the North Dakota Chapter of the Society for Range Management, North Dakota Natural Resources Conservation Service (NRCS) and North Dakota Grazing Lands Coalition are hosting the event.

“One-day school will include ranch tours, presentations from livestock producers, and sessions on soil and ecological sites, plant identification, proper stocking rate, grazing management, infiltration and range improvements,” says Miranda Meehan, NDSU Extension livestock environmental stewardship specialist.

“At the end of the school, producers will have a completed grazing management plan they can incorporate into their operation,” says Breana Kiser, NDSU Extension’s agriculture and natural resources agent inDickey County. “Each operation also will receive a range monitoring kit.”

The registration fee is $150 for the first person and $75 for each additional person in the same operation if paid by August 1.

After that, the fee is $200 for the first person and $100 for each additional person. Registration is limited to 20 operations. Meals and lodging are included in the registration fee, and camper hookups are available.

Students can attend for a reduced registration fee of $75 prior to August 1 and $100 after that date.

Register for the school online at https://tinyurl.com/NDGrazingSchool. For more information, contact Kiser at breana.s.kiser@ndsu.edu or 701-541-7050, or your local county Extension or NRCS office.

This event is sponsored by the North Dakota Rural Rehabilitation Corporation, Farm Credit Services of Mandan, Agassiz Seed & Supply, North Dakota Natural Resources Trust and North Dakota Sustainable Agriculture Research and Education program.

Dr. Mike Giroix, Processor of Durum Wheat Breeding Program at MSU-Bozeman along with his PhD student Justin Vetch discuss research projects at Western Triangle Ag Research Center Field Day.
Montana Department of Agriculture 2018 Pesticide Disposal Program

If you have any old pesticides - insecticides, herbicides, rodent poison or fungicides - laying around unused, the Montana Department of Agriculture will take them off your hands. The agency will hold waste pesticide collections in central Montana in September. The collections are scheduled in Havre on September 18; Great Falls on September 19; Bozeman on September 20; and in Columbus on September 21. The disposal program is a non-regulatory, service program that offers pesticide users the opportunity to dispose of unwanted and unusable pesticides in a safe and legal way that is economical and convenient. Disposal costs are free for the first 200 pounds and 50 cents per pound for additional amounts over 200 pounds. Disposal by other services can cost 5 to 10 times more. Additional information and the required pre-registration forms are available by contacting Carl Lofing in Larson at (406) 465-0531; mail to Dept. of Agriculture, Pesticide Disposal Program, 54 East Larson Road, Larson, MT 59244; email clofing@mt.gov; website http://agr.mt.gov/pesticide-waste-disposal.

WTARC Farmers Field Day

By Gadi V.P. Reddy, Anamika Sharma, John H. Miller and Govinda Shrestha, Montana State University, Western Triangle Agricultural Research Center, Conrad, MT

On 26 June 2018, Montana State University Western Triangle Ag Research Center’s (WTARC) staff members organized a field day at their research center. An enthusiastic crowd of more than 150 individuals (farmers, extension agents, crop consultants and members from other MSU research centers) welcomed important information on Montana small grains breeding and genomic programs, varietal testing program of quinoa, winter pea and canola, crop diseases, weed and insect management of Montana field crops. There were 16 speakers and additional information about the speakers is available at the WTARC link, http://agresearch.montana.edu/wtarc/fielddays.html. Lunch and drinks were generously sponsored by Stockman Bank of Montana, Centrol Crop Consulting, Anheuser-Busch and CHS Inc. In this brief press release, we are briefly summarizing the field day activities and key notes from each speaker.

Registration started at 11:30 PM, which followed by lunch at 12:30 PM. Dr. Darvin Boss (MSU Research Center’s Dept. Head/Superintendent, NARC, WTARC), welcomed everyone with his opening remarks and thanked all the sponsors. He appreciated the efforts put in by WTARC team to organize the event. Julie Orcutt, Admin Associate and Shad Chrisman, Farm Mechanic and Safety Coordinator along with other staff members worked hard and were part of the event. Dr. Gadi V.P. Reddy briefly outlined the afternoon’s schedule to the attendees and invited them to board the wagons to travel to the research fields.

Doug Holen (Manager, Montana Foundation Seed) provided a quick update on recent activities of MSU foundation seed, where he mentioned about efforts made in finding an alternative to the winter wheat “Yellowstone” variety. Doug Holen also covered the MSU Foundation Seed program that provides foundation seed to statewide producer partners, primarily from the university’s spring and winter wheat and barley breeding programs in addition to oats, safflower, peas and lentils. His talk also included MSU’s breeding program goal to increase recommended varieties with the assurance of genetic purity and high quality standards.

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From actual Church Bulletins…….

• This afternoon there will be a meeting in the north and south ends of the church. Children will be baptized at both ends.

• Please join us as we show our support for Amy and Alan in preparing for the girth of their first child.

The Babe Ruth bar was created in 1920 by the Curtiss Candy Company. It was named after the famous baseball player.

In Hershey, Pennsylvania, the street lights on “Chocolate Avenue” are in the shape of Hershey Kisses. “You just gotta see it!”
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Cowmen: Consider Sheep

Work at Dickinson Research Extension Center found one ewe could be added per cow without a reduction in cow numbers because sheep and cows tend to eat different plants.

• 5 ewes = 1 animal unit
• 150% lamb crop 100 lb. weaning wt x 5 @ $1.69/lb = $962.50
• The annual operating cost/ewe = $150 x 5 = $750

Profit per animal unit = $517.50

For example, a 1031 exchange to sell a farm valued at $2,000,000 can create a tax savings of approximately $250,000; this tax savings can be used to purchase substantially more replacement property.

Cowmen: Consider Sheep

Jim Berg, (Research Associate, Winter Wheat Breeding Program, MSU-Bozeman), thanked Montana Wheat and Barley Committee for all their support and talked about winter wheat cultivars for North Central Montana. Jim mentioned that attendees about four major wheat varieties being developed in Montana, namely, Colter, Keldin, SY Wolf, SY Clearstone. He discussed yield variation and importance of herbicide and sawfly resistance in wheat varieties. The topic covered developing improved winter wheat cultivars adapted to Montana while developing production strategies to maximize wheat quality consistency. It will eventually enhance wheat marketability, environmental, genetic and management factors that influence wheat productivity and end-use quality.

Dr. Mike Giroux and who is a Professor of Durum Wheat Breeding Program at MSU-Bozeman. He explained more about his experience with new Durum varieties in Montana and specific important characteristics of varieties that include good yield, good root growth, low cadmium, and firmness traits. Further his PhD student, Justin Vetch briefly described about importance of pre-harvesting sprouting characteristic in spring and winter wheat and barley varieties. Justin’s talk also covered other current research projects including testing the impact of variation in genes on overall plant growth and development.

Dr. Luther Talbert, Professor of Spring Wheat Breeding Program at MSU-Bozeman, talked about recent advancement in spring wheat breeding and also some broad and specific issues that breeders are currently dealing with. As a global issue, breeders are dealing with the elevated CO2 level, which although may enhances yield, but may change planting time because of a shift in environmental conditions. Breeders target to improve protein and gluten strength. While dealing with specific issue for Montana, breeders are looking at ways to minimize losses caused by wheat stem sawfly. To do this, breeders are trying to integrate genes for early stem solidness. The topic also included the development of spring wheat varieties for Montana farmers and research programs focuses on experi-
Dr. Jamie Sherman, (Assistant Professor, Barley Breeding Program, MSU-Bozeman) spoke about improving barley varieties for Montana, such as ‘Hockett’, ‘Genie’ and ‘Odyssey’ with low protein gene, and high yields. Breeders are working on varieties for irrigated lands with good root system, to develop good malt barley. Growers are requesting lines that will make malt under dryland production and would like to have a stable market for their malting barley.

Further Dr. Hikmet Budak, (Professor, Winifred Asbjornson Plant Sciences Chair, MSU-Bozeman) spoke about new technologies to improve wheat and barley varieties in Montana. He emphatically talked about necessity of higher yielding varieties. Dr. Hikmet updated attendees on the work being done at MSU including genome editing and greenhouse and field experiments to improve yields and provide insect resistance. His talk gave attendee’s a better understanding of gene transmission and silencing. He also highlighted a new program, ‘Voice of Montana Farmers’ where farmers can talk about their concerns and experiences. It will start again this September at MSU, Bozeman.

Dr. Prashant Jha, (Associate Professor, Weed Science, MSU- SARC, Huntley), spoke extensively about the need of development of multi-tactic methods for herbicide resistance in Montana. Herbicide resistance is becoming prominent in Montana, especially glyphosate resistance. He spoke about necessity of managing weed seed banks, managing fallow land using fall-applied soil residual herbicides, effective crop rotation, and strategic tillage to combat problem of glyphosate-resistant Kochia and Russian thistle. He specifically talked about wheat, pulses, sugar beet cropping system, and weed management strategies in these cropping system. Growers do not usually notice resistant plants during the first few years of their appearance, or attribute them to application problems. However, by repeatedly using the same herbicide mode of action over time, you remove all susceptible individuals and select for the resistant plants. Dr. Jha’s talk was informative and can give some management tips to deal with this problem.
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WTARC Farmers Field Day
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Dr. Govinda Shrestha, (Postdoctoral Researcher, Entomology/Insect Ecology, MSU-WTARC, Conrad) talked about wheat midge, its biology and its natural biological control agents. He spoke about active monitoring of wheat midge and its parasitoids and the impact of changing moisture conditions on both wheat midge and parasitoids in Montana. Later he also mentioned about integrated pest management of alfalfa weevil by using parasitic wasp and Bacillus thurengiensis (Beetle Gone). Further, Dr. Reddy thanked the Montana Wheat and Barley Committee for funding to carry out this research work. Further, he mentioned that parasitic wasps such as Macroglenes penetrans and Platygaster tuberosula are known to be present in the Golden Triangle, Montana. Efforts are underway to introduce an additional parasitic wasp species of Euxestonotus error from Saskatchewan to Golden Triangle area of Montana.

Dr. Anamika Sharma, (Postdoctoral Researcher, Entomology/Insect Ecology, MSU-WTARC, Conrad) spoke about monitoring of wireworms in Montana. She also spoke about experiments regarding cultural and biological control of wireworms by using trap crops and entomopathogenic fungus. Later she also spoke about testing of bio-pesticides for use against canola pests, flea beetle, cabbage seed pod weevil and lygus bug. Dr. Reddy mentioned further research work will be planned to identify the attractants for canola pests under the funding from USDA-NIFA.

Dr. Patrick Carr, (Superintendent/Associate Professor, Cropping Systems, MSU-CARC, Moccasin) talked about Canola production in Montana. He explained that Canola as a good rotational crop, if ideal climatic conditions prevail. Canola is a significant crop of the Canadian Prairies and has been grown there for quite some time. He also spoke about importance of soil testing for canola cropping. For many irrigators in the cooler parts of Montana, canola has become a significant cash crop in a very traditional cereal grain rotation.

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Dr. Anamika Sharma speaks about experiments regarding cultural and biological control of wireworms by using trap crops and entomopathogenic fungus.
Dr. Chengci Chen, (Superintendent/Professor of Agronomy, MSU-EARC, Sydney) spoke about pulse crop variety performance in different environments in Montana. He spoke about different varieties and their performance in 2017. He mentioned, although Desi peas are not in high demand, Desi are more heat and dryness tolerant. In order to enhance yield and quality, information on varietal testing and improved agronomic management practices are needed. The Eastern Agricultural Research Center (EARC) of Montana State University (MSU) is currently coordinating a series of statewide dry pea, lentil and chickpea variety evaluation projects across Montana.

Dr. Gadi V.P. Reddy, (Professor and Head of Entomology/Insect Ecology Program Unit, MSU-WTARC, Conrad) talked about the different entomology programs for pulse crop insect pests, particularly a new pest pea weevil. He also mentioned about importance of faba beans as trap crop for pea leaf weevil management. Growers are looking forward to having information on how to solve these insect pests’ problems in their fields. In the meantime, Dr. Reddy introduced other team members Debra Miller, Rama Gadi and Ramandeep Kaur Sandhi, who are working on pheromone trapping of pea leaf weevil, survey of pea weevil and predatory nematodes for biological control of wireworms respectively. Dr. Reddy also thanked USDA-Montana Specialty Block Grant and US Dry and Lentils Council for funding the research work.

Dr. Frankie Crutcher, (Assistant Professor, Plant Pathology, MSU-EARC, Sydney), talked about disease management in cereals and legumes. She mentioned about Fusarium and importance of working with breeders to improve the variety to make them disease resistance. She briefly explained about the procedure followed to test disease resistance. She mentioned about root rot in peas and lentils and progress in trials to test for Fusarium resistance. Growers are looking for information on disease management practices and Dr. Crutcher talks on the need for information to cereal growers and participants in general.
WTARC Farmers Field Day

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John H. Miller, (Research Scientist, MSU-WTARC, Conrad) spoke about quinoa variety trials in Montana. He mentioned about last year’s climatic conditions, and how it decreased the seed size. Weather parameters play a major role in growing quinoa and cooler temperatures and higher moisture are good for quinoa yields. He mentioned the characteristics of different varieties of quinoa and suggested growers test it on a small scale before trying it on a large scale.

Dr. Rebecca McGee, (ARS-USDA, Pullman, WA), spoke about varieties of winter peas. She mentioned that breeders are concentrating on food quality peas with improved cold tolerance and disease resistance. John H. Miller discussed the new and existing winter pea lines in Northcentral Montana cropping systems.

At the end, Dr. Charles Boyer, (Vice President and Dean/ Director of Agriculture) thanked farmers, collaborators and advisory committee for all their efforts to improve the various agricultural programs within Montana State University.