

Sing To Retire In May

By Lois Kerr

After serving Sidney Sugars and the community for nearly ten years, Steve Sing, Sidney Sugars General Manager, will retire effective the end of May. During his tenure, Sing has seen many changes at the factory and he has helped initiate and implement goals for the sugar plant to meet.

"We've made changes at the factory in efforts to improve the processing as much as possible," Sing remarks. "We always strive to be more efficient at what we do."

Sing has emphasized safety procedures and training along with quality of the product as his main focus throughout his ten years with the Sidney Sugars factory. "Safety and making sure that we produce a high quality product that gives customers what they are looking for has been my major emphasis," he comments. "Two years ago United Sugar won an award for the sugar they supplied for Ocean Spray Cranberry juice. That sugar all came from this plant, so we look at it as our award, as we supplied the sugar that met the goals of the customer. We also have had no customer complaints for the past seven months from any of our customers; we've met the customer quality parameters and had all the paperwork in order."

He continues, "Three years ago we began producing cordial sugar, which is sold to distillers for making clear liquids. This sugar isn't more pure, but it does have color specifications so we must make sure that all the molasses gets washed off the crystals, making them absolutely white. We've been providing this sugar for three years and every year we have received increased requests for this sugar. Even though we're an older plant, we still can make white sugar."

Safety also has taken top priority with Sing. "Safety has been very important," he remarks. "It is everyone's job to be safe and to do a better job with safety. We've held training sessions on safety issues."

Over the past several years, Sing has seen manpower issues become increasingly more difficult to solve, a problem that likely will not correct itself in the near future. "When I first came, there was no oil boom, but now there is and that has impacted us," Sing says. "Like everyone else, it is a struggle to get help for the factory. We have always experienced problems hiring people for a month at harvest, but now that has carried over into the factory as well."

Sing has witnessed several capital expenditure programs carried out at the factory over the past decade, and he expects the new general manager will oversee more of these expenditures. "We spent \$1.5 million for improvements and added low raw pans from Hereford, Texas that allowed us to boil more efficiently," Sing comments. "There will be a \$2.5 million environmental project coming up this summer to put in an aerobic digestion system in our water treatment system in order to meet new state standards. The water will be cleaner than the river, and we will still use it for irrigation

purposes."

Sing points out that all factory staff deserves credit for any successes that occurred under his leadership. "I didn't accomplish anything on my own," he states. "The reception I got when I came here was great, and people have been excellent to work with. It was difficult for me when I first arrived here as my background was in agriculture, not in the factory, but the people here were outstanding and they knew what to do. Although it was a challenge at first to learn the ropes, it was also fun and I got a lot of help from the staff that was here."

Sing has enjoyed his time in Sidney and appreciates this community. "Sidney is a good town," he says. "Opportunity exists here, and there are always things to do, places to volunteer, and ways to get involved. Sidney is not lacking; we do have a variety. This is a good place and the people are friendly."

Sing has family in Minnesota, so after retirement he expects to spend part of his time in Sidney and part of his time in Minnesota. He also plans to do some traveling. "At this point the plans are to spend summers in Minnesota and winters in Sidney," Sing concludes. "We have family in Minnesota, so the amount of time we spend in either place will depend on family circumstances."



Steve Sing

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Easter Treats

By Lois Kerr

Easter arrives early this year. We will celebrate the occasion on Sunday, April 8, which doesn't leave a lot of time for those who like to plant their potatoes on Good Friday, as one tradition suggests that we do.

The date falls in early April this year because Easter, unlike most of our other holidays, has no specified date; rather, Easter always arrives according to the moon phase. We celebrate Easter the Sunday following the first full moon after the spring equinox. Spring equinox fell on March 20 this year; the first full moon after that date will be April 6, so we will hold Easter this year on April 8th.

Most of us have Easter traditions that we enjoy each year. This includes the foods we always associate with Easter dinner. Some people only will have ham for the Easter meal, others eat turkey, and others still believe an Easter meal must include lamb.

Regardless of how we choose to celebrate Easter, the following recipes can help enhance the special family meal. Rabbit cake looks like you spent a lot of time in preparation, but by following the simple instructions, this cake takes very little work to cut out, assemble, and decorate.

Rabbit Cake

1 cooled 13x9-inch cake, any flavor food coloring

1 to 2 containers white or vanilla frosting

1 package (14 ounces) flaked coconut

Assorted candies, such as jelly beans, gumdrops, marshmallows and licorice strings (for decorating)

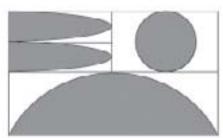
- 1. Cut cake according to diagram. Cut out small circle from scraps for the tail, or use a marshmallow.
- 2. Assemble cake to form a bunny shape. Stir about 7 drops of desired food color into frosting. Spread tinted frosting on cake. Tint coconut the same color as frosting. Gently pat onto frosted cake. Sprinkle green-tinted coconut around bottom of bunny for grass effect. (If desired coconut may be omitted.)
- 3. Use jelly beans, gumdrops and licorice strings for the eye, nose and mouth.

To tint coconut:

For Cake: Place about 2 cups flaked coconut in resealable plastic bag. Squeeze 5 or 6 drops of desired color into bag,

using more or less until desired color is achieved. Shake until color is evenly distributed.

For Grass: Place about 1 cup flaked coconut in resealable plastic bag. Squeeze 5 drops of green Neon Food Color into bag. Shake until color is evenly distributed



Cut the cake according to this diagram, then assemble it in a rabbit shape

For those who don't want to bother with a specialty shaped cake, another cake option might be this red velvet cake.

Red Velvet Cake

1/2 cup unsweetened cocoa powder

2 1/2 cups flour

1 teaspoon baking soda

1/2 teaspoon salt

1 cup (2 sticks) butter, softened

2 cups granulated sugar

4 eggs

1 cup sour cream

1/2 cup milk

1 bottle (1 ounce) red food coloring

2 teaspoons vanilla extract

Vanilla Cream Cheese Frosting:

1 package (8 ounces) cream cheese, softened

1/4 cup (1/2 stick) butter, softened

2 tablespoons sour cream

2 teaspoons vanilla extract

1 box (16 ounces) confectioners' sugar

- 1. Preheat oven to 350°F . Grease and flour 2 (9-inch) round cake pans. Sift flour, cocoa powder, baking soda and salt. Set aside.
- 2. Beat butter and granulated sugar in large bowl with electric mixer on medium speed 5 minutes or until light and fluffy. Beat in eggs, 1 at a time. Mix in sour cream, milk, food color and vanilla. Gradually beat in flour mixture on low speed until just blended. Do not overbeat. Pour batter into prepared pans.
- 3. Bake 35 to 40 minutes or until toothpick inserted in center comes out clean. Cool in pan 10 minutes. Remove from pans; cool completely on wire rack.
- 4. For the Frosting, beat cream cheese, butter, sour cream and vanilla in large bowl until light and fluffy. Gradually beat in confectioners' sugar until smooth. Fill and frost cooled cake with frosting.

This salad works well as an after Easter recipe since it uses leftover hard-cooked eggs and ham.

Easy Layered Salad

4 cups mixed salad greens

2 tomatoes, chopped (about 2 cups)

2 cups (8 ounces) shredded Cheddar cheese, divided

1 cup frozen peas, thawed

3 hard-cooked eggs, sliced

2 cups cubed cooked ham

1/2 cup chopped red onion

1/2 cup mayonnaise

1/2 cup sour cream

1 teaspoon dill weed

1/2 teaspoon ground mustard

DIRECTIONS

- Place salad greens in bottom of large serving bowl. Layer tomatoes, 1 cup of cheese, peas, eggs, ham and onion over greens.
- Mix mayonnaise, sour cream, dill weed and ground mustard in medium bowl until well blended. Spread evenly over salad. Cover.
- 3. Refrigerate at least 1 hour or overnight until ready to serve. Sprinkle with remaining 1 cup cheese just before serving.

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Euthanasia A Tough Part Of Owning Livestock

By Lois Kerr

Most of us, whether we ranch and have large herds of animals or if we only have one or two family pets eventually face the difficult decision of when to terminate an animal's life. The animal may have an incurable disease or injury, or it may no longer be able to lead a normal life due to old age or infirmity. Decisions regarding our animal's life, regardless of the situation, never come easily to anyone. Not only do we need to make tough decisions at certain points in time regarding our animals, but we also need to remember that we need to behave in a fashion that is acceptable to our animals, ourselves, and to others.

Dr. Jesse Vollmer, assistant state veterinarian with the North Dakota Animal Health Division, points out that anyone who euthanizes animals for any reason needs to do the job in a humane way, and they need to remember that someone could be watching their actions. "Euthanizing can present people with some hard choices," he notes. "This may be a personal decision of the owner, or a decision made jointly between the owner and a veterinarian. We always need to do things in a way to minimize suffering and to make it as painless and as quick as possible. It also must be done in a manner that is acceptable to those who watch. This is not easy to do."

Each situation brings its own set of issues into play, and emotions vary depending on circumstances. Shooting a range cow that fell and broke her back does not present the same emotional issues as that of euthanizing a family pet. "Putting an animal down brings with it complicated



The decision to euthanize an animal, whether a beloved family pet or one of the older cows in a herd, never comes easily.

emotions," Vollmer says. "If someone brings a dog in to a vet to be euthanized, the vet has to be cognizant of the attachment that person has for the dog, and why that owner is putting the animal to sleep. Where is the owner in the grieving process?"

He continues, ""If a dog is euthanized because it is old and no longer able to control itself or get around, the owner has come to terms with the situation. However, this is a lot different than if an owner has to put a dog to sleep because it contracted rabies and bit a neighbor. There are a lot of factors involved."

Not only can the decision to euthanize present difficult choices, but the matter of carcass disposal must be dealt with as well. The disposal of a single animal generally doesn't cause too many problems, but owners still need to choose a burial location wisely. When situations arise where multiple animals must be destroyed, disposal becomes a critical issue. "An animal in North Dakota must be buried or rendered within thirty six hours of death," Vollmer says. "The North Dakota State Health Department has carcass disposal forms for use if some catastrophic event has occurred. When many animals are dead, owners need to fill out a form and let the state know where the carcasses are located."

He adds, "People need to use common sense and not bury animals over waterways or in sandy soils."

Above all, Vollmer emphasizes the need for safety when destroying an animal. Emotions can make people react in unsafe ways, so Vollmer advises people to take time to consider all the safety aspects of the situation. "Anytime a person euthanizes an animal, no matter what the reason, he or she should always be cognizant of safety," Vollmer remarks. "If you have to shoot an animal, be careful that you don't shoot something you didn't intend to shoot. People can become excited when they are faced with this situation and whether a cow is down in the barn or you find a horse that fell down a ravine and broke its leg, put safety considerations into overdrive and proceed carefully."

He continues, "People can have so much empathy with animals that they want to stop the suffering as soon as possible, but stop and think, and don't cause unintended consequences. Take care of the animal but personal safety still comes first."

Vollmer offers a few words of advice for those who find themselves in the situation where they must put an animal down. "Be sure, be safe, and know what you are doing," he concludes. "Do the job as quickly and as painlessly as possible and remember that people may be watching. Character is how we act when no one else is looking. Alleviate the suffering as soon as possible, but do it right."



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The Impacts Of Our Challenging Climate Conditions

Weather conditions, such as record flooding, extended periods without significant precipitation, warmer than average winter months and the possibility of drought loom for the growing season of 2012. What will the short- and long-term effects be on our horticultural practices?

"What we do know is that the climate has changed in the past, is changing today and will continue to change in the future," says Ron Smith, North Dakota State University Extension Service horticulturist. "While the scientists argue why the climate is changing, gardeners and growers are being affected by the adverse impact of year-to-year variations in weather."

The concentration of carbon dioxide (CO2) had increased by 1.5 parts per million (ppm) since the Mauna Loa Observatory started doing CO2 measurements in 1960.

While the models contain a great deal of uncertainty on future CO2 concentration amounts, conservative models say the rise will continue and may reach 700 ppm by 2100. The models also assume that humankind will be attempting to slow the rise of CO2 during that time.

"As this is taking place, the greenhouse gases, such as CO2 and water vapor, are absorbing Earth-emitted infrared radiation," says Adnan Akyuz, North Dakota state climatologist and assistant professor of climatology in the NDSU Soil Science Department. "This causes the Earth's temperatures to rise and is the main mechanism of the greenhouse gas effect. However, it is important to note that because of its connection with global warming, the general public has a negative perception about the greenhouse effect. However, without the greenhouse effect, the Earth's average temperature would have been 0 F, or 59 degrees colder than its current temperature."

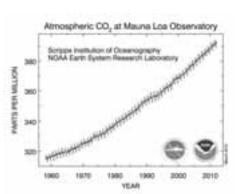
Global temperature increases mean different things for various locations. With the trends not being the same everywhere, some will experience a higher than average increase in temperatures, while others will be less affected.



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While some locations will enjoy the positive impact of climate change, others will have to worry about mitigating the adverse impacts. For example, creases in annual temperature in North Dakota allowed producers to uti-



CO2 Readings at Mauna Loa Observatory

lize 12 longer growing seasons during the last century.

"We may have cooler than normal temperatures during the next couple of summers or a much higher average minimum temperature than previously experienced." Smith says. "With our crops, we can mitigate some of the daytime increase with sprinkler irrigation, misters or shade cloth. However, due to the blocking of infrared radiation into the atmosphere at night, we have no effective way of lowering the night temperatures. These higher minimums will impact fruit maturation, which means crops, such as tomatoes and grapes, can be harvested earlier in the season. While good for annual crops, it may have an impact on meeting the total chilling requirements of some of the perennial fruit crops such as apples."

There are some positives. Higher CO2 levels will allow stomatal pores on plants to close somewhat, which will increase water efficiency by cutting down on evapotranspiration. Because CO2 is a necessary component of photosynthesis, plants should grow better. CO2 "fertilization" is a somewhat common practice in greenhouses at higher elevations, such as the mountain regions of Colorado.

Warmer temperatures also may mean more disease and insect activity in horticultural crops. Up to a point, common maladies, such as powdery mildew, can be expected to show an increase. With milder winter temperatures, woodboring and root-eating insect larvae that were somewhat kept in check with more severe weather, will now flourish and feast on crops.

"Adjustments in landscape management, pest control and the timing of planting and harvesting will have to be implemented during the next decade to maximize our horticultural objectives," Smith says. "What was standard operating procedure in 1990 will not be the same in 2020 if we want to continue growing our favorite horticultural plantings successfully."



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A Little Bit Country

Rotating Herbicides Urged

By Warren Froelich NDSU Extension Agent, Williams County

Our weed control researchers at NDSU keep reminding county extension agents of the growing threats of weed resistance to commonly used herbicides. Those of us in the western part of North Dakota commonly think of weed resistance as a problem for crop growers in the eastern part of our fair state and producers of adjoining states. However, it was in 2009 when resistance of green foxtail to some ACCASE (Group 1) herbicides was first documented in the Minot area. Since then, green foxtail resistance to popular herbicides such as Puma and Axial has been identified throughout most of northwest and some of central North Dakota. It appears other herbicides such as Select and Assure II, also numbers of Group I, still have good activity along with those in Group 2 which are referred to as ALS inhibitor herbicides. These include Everest, Silverado, Rimfire Max, Goldsky and others.

Dr. Richard Zollinger, NDSU Extension weed specialist,

suggests several approaches to combating weed resistance. He emphasizes the benefits of early detection. This usually can be done from the combine. Small weedy spots in the field eventually encompass the whole field.

Rotating the chemistry or groups of a herbicide can be accomplished through crop rotations. For example, a producer could use Roundup or Ignite in Roundup Ready or Liberty Link canola this year and Everest in wheat planted next year.

Another option to combat herbicide resistance is to tank mix herbicides with different modes of action. This is an expensive option for wheat but may be more practical for some of the higher valued crops.

When possible, tillage is another option of reducing the survival of resistant weeds. Burn down herbicides along with late planting can be considered but likely a low priority for crops which grow best under the customary cool conditions for May and June.

If you are looking for more information on herbicide

modes of action and how each herbicide is classified, there is a page in the new NDSU Weed Control Guide which will give answers to your questions. Dr. Zollinger does not foresee new active ingredients on the horizon so it will be important to study all options to prevent weed resistance. Rotating herbicides of different modes of action will be the best and likely the least costly option.

Volunteer Control Program

Fran Bosch, Williston Vector Control District 1 director, recently announced that the district is offering a voluntary control program to townships. The effort would include application of a larvicide along both county and township roads. For more details, you can reach Fran at 577-4563.

Last summer was a great time to experience the outdoors of this area. Although much of the late spring and early summer was very wet, the grass was tall and green and mosquitoes were few. Much credit for the lack of mosquitoes is certainly due to the knowledge and efforts of the people who guide the vector control project. Even though the snowfall this winter has been minimal, there remain many water ponds which will make good habitat for mosquito and black flies (buffalo gnats) propagation. Let's hope Mother Nature and Fran's crew can keep those biting blood suckers at a minimum.





(Sitz Identity 2575 x Vermilion Nebraska L095)

CEO BW WW YW Milk Marb REA Fet

7 1.0 58 113 24 0.36 0.34 0.042

(Sitz Identity 2575 x Hero 6267 of RR 2418) CEO BW WW YW Milk Marb, REA Lot 25 • RA 716 Alliance A61 (Sitz RLS Alliance 7164 x RR Hero 3316)

at CED BW WW YW Milk Marb BEA Fat 57 4 1.6 51 103 28 0.14 -0.31 0.031



Lot 26 • RA 716 Alliance A114 (Sitz RLS Alliance 7164 x RA Klondike P16)

CED BW WW YW Milk Marb REA Fat 5 1.7 56 102 22 0.28 0.08 0.050



Lot 47 • RA X1 Spectre A26 (RA Spectre X1 x Reich Lead On 424)

CEO BW WW YW Milk Marb REA Fat -4 3.1 50 94 26 0.44 0.04 0.019



Lot 60 • RA Justice A100 (GDAR Justice 874 x RA Spectre 4F)

5 1.1 56 97 22 0.37 0.34 0.030

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New Program Offers Conservation Reserve Program Training For Conservation Professionals

The USDA Natural Resources Conservation Service (NRCS) is sponsoring a program to train a group of conservation professionals to provide planning, implementation, and management services for Conservation Reserve Program (CRP) contracts.

A team led by NRCS, the Farm Service Agency, Montana State University, and representatives from NRCS partner agencies and organizations has collaborated to develop the trainings and make them accessible, convenient, and consistent in Montana and the rest of the country. The new initiative is called the Conservation Reserve Program Readi-

ness Initiative.

Participants in the CRP Readiness Initiative will be trained to create, implement and maintain all or parts of CRP plans based on a detailed knowledge of national and state conservation practices.

In the past, NRCS employees and conservation partners have provided most of the technical services to landowners for CRP planning. The CRP Readiness Initiative offers training to a broader range of professionals to assist landowners in developing conservation plans on lands enrolled or to be enrolled in CRP. Independent conservation

professionals, registered technical service providers, members of conservation associations, and employees of organizations with formal connections to NRCS are encouraged to participate.

Participants in the CRP Readiness Initiative will have the opportunity to attend a free two-day training workshop, work directly with a project mentor, participate in online forums and webinars, and sign up for supplemental training courses as needed.

For Montana conservation professionals, training workshops will be held in Great Falls, April 4-5, at the Hampton Inn, 2301 14th St., SW, 406-453-2675, and Dickinson, May 16-17. A block of rooms has been reserved for participants at the Hampton Inn; use "CRP Readiness" when making reservations.

Some of the topics to be covered during the workshops include: understanding the landowner's objectives, developing a CRP plan according to national and state guidelines, and CRP best practices for conservation. During the summer of 2012, the training curriculum will be transitioned to an online format, which will be available for a course fee.

Interested conservation professionals can visit http://conservation-training.uwex.edu/crpworkshops for more information on the program and to sign up for a training workshop.



SATURDAY, APRIL 28, 2012 9:00 A.M. M.S.T.





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AUCTIONEERS NOTE

Toby has decided to liquidate his complete inventory. Many of the items are brand new. All of the equipment is in "ready to use" shape and is of very good quality. This is a sale you will not want to miss! See you April 28th.

Rick



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Exploring Crane Creek Tributaries

By Lois Kerr

Crane Creek has several tributaries that feed it, and the little streams or runoff areas that I walk by on almost a daily basis always seem to call to me, inviting me to splash through the water and see what natural sights may present themselves. I've had a hankering to walk along or through two of these tributaries for the past several years, and this spring I finally made the trek.

The easy stroll I anticipated did not materialize. First of all, I encountered far deeper water in spots than I had expected, and the noisy splashing of my approach alerted any wildlife within the vicinity to disappear into the undergrowth. I see more wildlife walking along the canal road than I saw on my little jaunt along the creek bed, because I make very little noise while walking along the road as opposed to sloshing through ankle deep or higher water.

Secondly, I encountered a lot of nearly impassable undergrowth, so I had to alternate between walking in the water and finding a path to navigate along the bank in my efforts to find a passage along the creek. These banks have a tangle of undergrowth and dead fall that hamper passage. Trying to scramble over, around, or through these bushy jumbles presented difficult obstacles at times.

However, I persevered in my endeavor and did see a few sights I would not have seen had I walked the normal byways along the canal. I did find a new patch of wild asparagus, the location of which shall remain a secret. I also encountered wild roses with the fruit from last year still hang-

ing on the thorny stems. Brushy shrubs and scrub trees grow with abandon, but I took the jaunt too early in the spring to see much new growth. I need to rewalk this route once spring fully arrives in order to appreciate the many plants that grow along the side of the creek.

My noisy wanderings of course negated any chance of seeing wildlife in the vicinity, but I saw numerous signs that animals lurked nearby. Deer paths crisscrossed from bank to bank and led off into what to me looked to be impenetrable trails. I heard pheasants chortling in the underbrush, the meadowlark's melodious trilling made great background music, and of course robins abounded. I did glimpse some sort of raptor soaring high above me, taking full advantage of the updrafts and the brilliant sunshine.

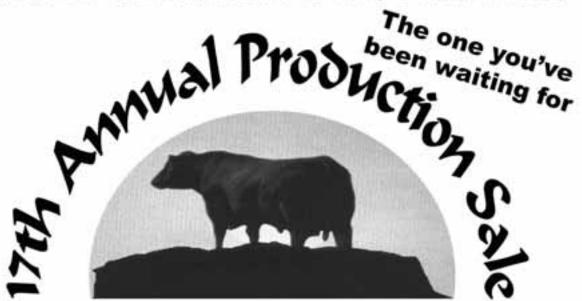
Quiet little pools of water allowed me to take relaxing breaks from my exploring. I would imagine what I consider peaceful havens now will turn into mosquito alley this summer. I am sure ticks would be another distraction later in the season. Fortunately I took my little stroll before the ticks came out in full force.

Although this little trek did not completely satisfy me because of unforeseen troubles with navigating my way along the waterway, I did enjoy my time along the creek and I am extremely grateful that I still have plenty of places to walk in solitude and to appreciate the outdoors and our rural countryside. Peaceful spots and solitary walks along the canal, abandoned roads or fields help keep me complete in body and spirit and in tune with the natural world.



A walk through the Crane Creek tributaries offers a variety of sights as well as obstacles of water of varying depth to wade through and dense underbrush to navigate.

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"Take A Break"

By Lois Kerr

LOOP-A-WORD Found in a Barn

The following words are found within the diagram. Words read forward, backward, up, down, and diagonally.

P	W	E	S	E	L	Α	В	Y	A	Н	S	U	R	В	S
A	1	L	M	R	0	P	E	A	C	Н	A	1	N	S	R
1	R	T	1	E	N	1	W	T	R	U	C	K	1	H	E
L	E	T	C	1	Т	H	В	L	A	N	K	Ε	T	0	P
L	S	0	E	H	S	L	0	0	T	A	C	Н	0	٧	P
Y	L	В	C	F	F	A	C	R	0	S	E	Α	L	E	1
E	L	A	M	S	E	0	0	R	S	Y	R	L	T	L	N
L	T	A	T	L	W	E	R	E	Y	E	1	W	L	В	F
L	Ε	A	D	S	H	A	N	K	R	0	T	A	L	M	0
U	0	D	F	A	X	R	C	A	1	R	1	T	U	0	0
P	A	E	L	S	A	0	M	A	N	U	R	E	В	C	H
S	E	T	T	H	L	L	В	H	G	U	0	R	T	Y	A
D	E	R	0	В	E	A	A	R	E	0	T	Н	E	R	Y
R	A	F	T	E	R	E	M	R	0	T	0	0	В	R	L
W	1	L	D	В	Α	R	F	1	1	0	W	S	T	U	0
N	A	1	A	R	G	R	E	G	N	A	M	E	E	C	F
S	н	E	E	P	S	K	.1	L	L	A	T	S	E	1	T

animals corn horse pulley syringe lariat tie stall barn cat cows rafter blanket curry comb lead shank rags tire bottle feed tools manger rope sack trough box stall goose manure broom halter saddle truck mare brush harness mice salt block twine bull hay bales oats sheep water hose chains hay loft pail shovel wire hoof nippers straw cobweb pitch fork

KEYWORD: To find the keyword, fill in the blanks 1 to 10 with the correct missing letter. Transfer these letters to the correspondingly numbered squares in the diagram. Be careful. More than one letter will complete each word.

1 2 3 4 5 6 7 8 9

1. __OUCH 2. H__TCH 3. BRAW__ 4. S__ING 5. BL__ND 6. GRA_E 7. BE__CH 8. __RAIN 9. BRIN__

CRYPTO-LIST

Crypto list is a list of related words in code. The same code is used throughout. When you have identified a word, use the known letters to decode the other words in the list.

Horse tack

ex: lead shank

PXWQO

OHUUSX

VHSNXP

TSHQDXN

TPWUSX

TWN

ONWPPMF

VHADHRGPX

YWPNV

See answers on page 26.



Rowene Dahl

SATURDAY, MAY 5, 2012 10:00 A.M

LOCATION: From Wolf Point, MT-Take Hwy 13 S turn on Hwy 528 W (right) for 14.2 miles, turn South (left) on Highland Road for 2.6 miles, turn left on Mendenhall Road for 7/10ths of a mile. Roads will be marked. FOR MORE INFORMATION: Dennis (after 7:00 p.m.) 406-525-3669

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- * 1947 Alto Chairners HS7 Crowler.
- Sterry disset 371 w/door (kept insole). 1961 Oliver 1900 diseast Tractor, 540 PTO & *Formhand F235 Front and Loader w/bucket & grapple
- Forebore BR Tractor w/ quick trick
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- + JD 28" Offset Disc. model 360
- Graham Huime 24" Toother
- Morris 30' Rederesiter
 (2) 12' Matron Hos Della, T'apacing.
- del 280 v/Fertilizer attach +364 Bottom Plows
- + 3 piece Nobre Blade

· Surffes.

- +3 pt 2 Bettom Plea
- . JD 3 ut 9" Cultivator
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- 30 #7 Stylde Mower + Damhuser Post Founder









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- * 15" Knophold Start Bas & Hysst
- 1990 Fard F250 Supercals 4o4 Pickup, 6 speed, 351 segina, six 200,000 miles.
- 1973 Fund F100 Zud Phillion, auto
- Gooseneck 18" Dually Bate Havisr Traiter
- . Ironworks 201 Gooseneck Stock Trader

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- · ATV pull type Sprayer w/30 gates
- tank, B&S motor ATV Genter Trailer
- * ATY Humaniade Trailer
- · Picken Bis Italier
- + (2) 500 gallon Fael Santa w/steel
- 500 gallen Fuel Tank (see stand)
- 300 gallon Fiberglass Mater Face.
 1000 gallon Puly Tare.
- + 4" Disctric Drill Fill Augus
- 13) B&S Auger Engines
 Unicoln SP100 Wire Feed Wester &
- Argon bottle + P&H Wolder w/Z by
- · Austyleon Turch & Buttlee
- (7) 1004 Propose Bettles
- · Old Tile Changer
- * Electric Farme Chargers
- Misc Feore Supplies
- + Stydnouble Danks
- Hydraulic Cooper Matic
- · Stravets, Phys. Parks

- · Pipe Fittings, Climin
- Sewer Pipe Fittings Pulleys, Oil Fitters
- +(2) 10' Hairoad Switch Yes
- . Plat Metal Pieces
- + Old fron Wheels.
- Pump locks
 Misc Time
- . Old Farming MAIL
- OR 2 7/9" Delt Blum
- · 2" White Pipe Miss Stock Plants Pipe







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 - + OM DANS

AUCTIONEER'S NOTE:

The family of Rowene has sold the farm and will be offering all of their equipment, shop & livestock items to the public at auction. We could not get a good picture of the stock trailer. The Crawler is in very good condition and there are some new panels. We hope to one you on May 5"!

Hick

Lightning Brings Benefits As Well As Troubles

By Lois Kerr

Spring brings with it the chances for thunderstorms, and often these storms have the potential to produce dangerous lightning strikes. Most of us tend to look at lightning as a harmful side effect of storms, but in reality these bolts of electricity provide benefits to our planet. These benefits include assisting farmers by helping plants grow.

Lightning, generally a negatively charged burst of energy, ziz-zags from cloud to cloud or from cloud to ground. The ground has a positive charge, so the positively charged ground attracts the negative lightning bolt, and when the two meet, it produces a strong electrical current. This reaction helps our earth maintain its electrical balance as lightning helps transfer negative charges back to the earth. Without this exchange, the electrical balance between earth and the atmosphere would disappear in minutes.

Lightning helps fertilize plants. Our atmosphere consists of approximately 70% nitrogen, but this nitrogen exists in a form that plant life cannot use. Lightning strikes help dissolve this unusable nitrogen in water, which then creates a natural fertilizer that plants can absorb through their roots.

Lightning also produces ozone, a vital gas in our atmosphere that helps shield the planet from rays of harmful ultraviolet sunlight.

Almost every single day of the year, lightning strikes the ground somewhere in the United States. Over the course of a year, lightning hits the ground in the continental US over 20 million times, and worldwide, lightning hits the ground 100 times a second, or over eight million times every

Occasionally, lightning strikes are positively charged rather than the usual negatively charged streak of electricity. These positively charged lightning strikes, sometimes called 'bolts from the blue', can occur near the edges of storm clouds and then strike more than ten miles from their origin. They literally seem to appear out of nowhere as they can travel long distances in clear, cloudless skies before angling down and striking the ground.

Lightning of course produces tremendous energy and can heat the air it passes through to extremely high temperatures.

Not all those struck by lightning die, but lightning strikes do kill about 100 people in the US every year. An individual stands a 1 in 3000 chance of being struck by lightning, and yes, lightning can and does strike the same spot repeatedly over the course of time. Records show lightning has struck the same person more than once, with US park ranger Roy Sullivan holding the dubious distinction of having been struck by lightning seven times between 1942 and 1977.

Our thunderstorm season will begin in the near future, with thunder and lightning activity normally increasing through the 4th of July before the storm cycle begins to taper off as summer turns into fall. Remember to respect these storms, and when storms strike,

seek shelter. activity, whether you may be working cows, planting in the field, or working in garden, the should precedence over a thunderstorm. If you can hear thunder, lightning is in the area whether you can see it or not. Find appropriate shelter and remain indoors until the passes.

take

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Summer storms can bring strong lightning and heavy thunder.



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stations during harvest each year and hires ap-proximately 120 seasonal employees to work at the factoryduring the winter months where they produce white sugarfor sale around the country. Winter campaigns generally lastabout four months. Sidney Sugars has 90 year round employees and has120 sugarbeet growers. The company also produces approximately 50,000 tonsof pressed pulp each year and 35,000 tons of molasses forsale. Since 1996, Sidney Sugars has done a lot of renovat-ing to improve sugar production and efficiency. These reno-vations and additions include ten sugar storage silos, a thickjuice tank, lime kiln and slacker modification. and boilerhouse modification.



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Growers Prepare For New Season

By Lois Kerr

What a difference a year can make. Last year at the start of the planting season, sugarbeet growers worried about excessive moisture, a cool spring, flooding, and their ability to get a crop planted in time. This year they face opposite conditions, with unusually warm temperatures and very dry conditions the norm. If these conditions persist into the near future, many growers will begin planting sugarbeets earlier than usual.

"In a normal year, growers start planting by the 20th of April," says Russ Fullmer, Sidney Sugars Agriculture Manager. "However, this year I expect to see early planted fields unless it gets wet very soon. Growers want to get the crop in so they can take advantage of any rain that may fall."

Sidney Sugars agriculturists had not quite completed the contracting process by press time, but Fullmer expects all growers who want contracts will have them signed and in place by early April. "At this point, we think we'll have between 32,000 and 33,000 contracted acres," he remarks. "Last year we had 32,000 contracted acres but with the flooding, we lost acreage."

This year the factory has lost some beet acres in some

areas due to oil activity, but the company has picked up some new acres in other locations. "We're losing ground in the northern area of the district, but we are gaining acres in the south around Powder River and Pleasant View, so we are expecting no net loss due to the oil boom," Fullmer comments.

Over the past few months, Sidney Sugars has conducted grower meetings throughout the district to discuss several issues, including reminding growers who plan to grow Roundup Ready beets that they still need to follow the rules put in place last year. "We've held grower meetings and we went through grower practices, trends, and recommendations at these meetings," Fullmer says. "As far as Roundup Ready beets go, there are still rules in place that we must abide by, so we did some retraining to remind growers what they need to do to stay in compliance."

He adds, "We are hoping for a final decision on Roundup Ready beets this summer."

Fullmer hopes for rain in the near future and he also hopes the season goes well for growers. "I wish everyone luck and that growers all get a good crop this year," he concludes.

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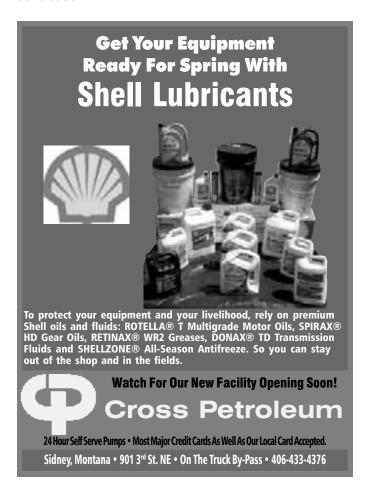
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MSU Researchers Find Protein To Up Yield From Oilseed Crops

MSU News Service

Researchers at Montana State University have developed a protein that can be expressed in oilseed crops to increase the oil yield by as much as 40%, a development that could have an impact on the biodiesel industry. Patents on this technology have been issued and research is ongoing.

Biodiesel is produced from a wide variety of oilseed crops: In Europe, canola is the major biodiesel crop, while in the U.S. soybeans dominate. The MSU technology has been demonstrated in corn and soybeans and is expected to work for a broad range of oilseed plants used for biodiesel and cooking oil.

Seed oil content increases are induced by capitalizing on certain genes contained in oilseed crops, known as puroindoline genes, which promote increased seed size and weight.

The puroindoline technology represents a novel method to increase the seed oil content compared with other ap-

MT Board Of Livestock Temporarily Suspends Brand Recording Policy

The Montana Board of Livestock has temporarily suspended its brand conflict policies, giving brand holders who missed the Dec. 31, rerecord deadline an opportunity to reapply for their brands.

"Out of 55,000 registered brands, we had a handful of ranchers who missed the deadline," said Montana Board of Livestock Chair Jan French, a Hobson cattle rancher. "This suspension will allow those who missed the deadline but actively use their brands to get those brands recorded. In short, they're not going to lose their brands."

Conflict and recording policies will be suspended for owners of brands that expired Jan. 1 under the following two conditions: Brands can only be issued in the same name, species and position as previously held, and brand owners must prove the brand was active during calendar years 2009-2011 through one of the following methods:

Per capita fee payments;

change of ownership inspection;

change of pasture inspection;

lifetime inspection;

annual inspection;

market tally;

hide inspection.

Copies of these documents will be accepted. Department staff may provide duplicates. The cost of any duplicate is \$10 per copy.

As a result of suspending its brand conflict policies, the department will not have a list of expired brands available until after May 15.

The fee for application will be \$100 for recording plus a \$500 late fee. The suspension will remain in effect through Monday, May 14 at 5 p.m. All payments must be received by this time. POSTMARKS WILL NOT BE ACCEPTED.

proaches.

Puroindolines are effective in increasing oil content in both cereal and oilseed crops. An additional benefit is enhanced seed resistance to fungal diseases.

Interested parties can license the new technology by contacting Nick Zelver with the MSU Technology Transfer Office at 406-994 7868, http://tto.montana.edu or by e-mail at nzelver@montana.edu. MSU requests that interest be expressed in writing by April 30, 2012.

MSU currently has 197 licenses on technologies developed by faculty. Of those, 93 licenses are with Montana companies.

Ninth Circuit Court Upholds Montana Wolf Delisting

The Ninth Circuit Court of Appeals has affirmed the constitutionality of Congress' removal of wolves from the federal endangered species list. Montana Outfitters and Guides Association join all the responsible conservation organizations across Montana and the Nation in celebrating this huge victory.

Attorneys representing numerous conservation organizations, supported by MOGA Members hunt donations, supported the Congressional action, wolf delisting and science-based, state-regulated management and control of wolf populations.

"This is a huge win for real wildlife management in the U.S.," said David Allen, RMEF president and CEO. "We're thrilled with the favorable ruling because it upholds the law as well as science and common sense. This decision helps clear the way for continued work by true conservationists to balance wolf populations with other wildlife and human needs."

Of the decision, Ryan Benson, Big Game Forever, said: "The bottom line is that once again, the courts have ruled in favor of wolf delisting. Wolf management will continue in the Northern Rockies by state fish and game agencies including regulated hunting by sportsmen. This is a great victory for healthy wildlife populations and for our outdoor heritage."

Of the Ninth Circuit decision, Mac Minard, Montana Outfitters and Guides Association, said, "We are not often in agreement with the findings of the Ninth Circuit but in this case we are very pleased. The MOGA membership have consistently supported the application of science and proven wildlife management principles in the management of wolves. We have seen first hand the impacts that nearly uncontrolled growth can have on important ungulate populations in isolated areas. This is extremely good news for all sportsmen and Stockgrowers in Montana."

"It was the concerted effort by a number of important Conservation organizations that is responsible for the delisting effort. We must acknowledge that all of them are important and every Sportsman's voice is important as well," said Minard.

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New CRP General Sign-up, Initiatives Provide Opportunities

Producers interested in submitting bids to enroll land in Conservation Reserve Program acres have a deadline of April 6.

Kevin Kading, North Dakota Game and Fish Department private land section leader, said applications received during the current sign-up period are ranked against others according to the Environmental Benefit Index.

"Producers can receive assistance from private land biologists with the Game and Fish Department, Ducks Unlimited and Pheasants Forever," Kading said. "Private land biologists can help producers find the best possible combination of factors that will positively influence their EBI score, and increase their likelihood of being accepted into the program."

The Game and Fish Department also offers addi-

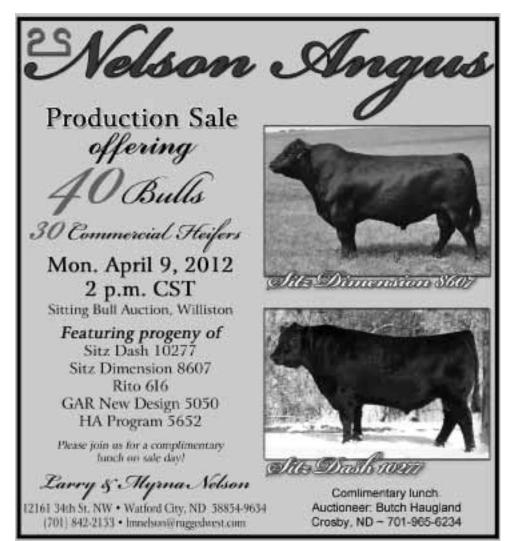
tional incentives and cost-share if producers enroll their CRP acres into the department's Private Land Open To Sportsmen program to allow walk-in access for hunting. "This is an option producers should keep in mind when applying for the CRP," Kading said.

Expired CRP acres, and land currently enrolled in CRP with an expiration date of Sept. 30, 2012 are eligible. In addition, landowners may also offer new acreage into this sign-up if cropping history and other eligibility requirements are met.

In addition, U.S. Department of Agriculture secretary Tom Vilsack announced on March 2 a new CRP initiative that allows producers nationwide to enroll up to one million acres of land in a new CRP initiative to restore grasslands, wetlands and wildlife. This new allocation of acres will be available through a continu-

ous sign-up rather than a general signup. North Dakota has not yet received its allocation of acres for this initiative, but information will soon be available through local county USDA Farm Service Agency offices

Information on how producers can maximize their EBI score is available on the Game and Fish website, gf.nd.gov.



April Puzzle Answers

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Crypto-list: reins, saddle, halter, blanket, bridle, bit, stirrup, hackamore, girth



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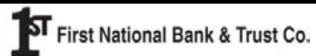




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High Tunnels Offer Diversity, Added Value Opportunities



High tunnel structure in operation.

By Lois Kerr

High tunnels, or large hoop houses that provide seasonal extension for growing plants and herbs, have generated a lot of interest in our region. These tall structures covered with strong weatherproof plastic can extend a growing season an extra two to four months, giving users the opportunity to try diverse crops and to add value to a farming operation.

"These high tunnels are just big hoops covered by plastic," says Bruce Smith, Dawson County extension agent. "These structures can range from 10 to 30 feet wide and a person can grow just about anything in them."

He adds, "They are a way of adding value as family farms can use them to grow herbs or specialty crops and

diversify the risk. Farmers can cut down on food bills as well. With a small 20 by 40 foot tunnel they can produce more than enough food for a family of four and still have a lot left over to sell."

People can not only grow just about anything they want using these structures, but they also can have crops ready for market earlier than normal as well as extend the production of a particular crop long after it would normal quit producing. "High tunnels allow farmers to hit the peak market," Smith explains. "People can start popular items like tomatoes, cucumbers and peppers early and get them to market earlier. They also can produce fruits such as strawberries or raspberries for a longer period of time."

High tunnels sit on a farm field or any appropriate ground.



The larger ones have enough width that a farmer can open both ends and drive through with a tractor to work the soil, and then close the ends back up to capture heat. "These tunnels are labor saving devices as compared to greenhouses," Smith comments. "The plastic retains heat so people don't have heating costs associated with the operation. Just by adding plastic between the plants and the outside, we can gain a zone or two. People living in a zone four growing area can have a zone five or six level inside the high tunnels. On a thirty degree day, the interior of a high tunnel can reach seventy or more degrees."

Smith has experimented with high tunnels and results have amazed him. "We bought two of these hoop houses," Smith comments. "Our first one was a 30 by 90 foot and we grew a variety of vegetables just to see what we could grow. We tried spinach, Chinese vegetables, cucumbers, sweet potatoes, and radishes, and we had amazing results."

He adds, "It can sometimes get too hot inside in summer if you don't roll up the sides, so crops like spinach and lettuce tend to bolt in the heat."

Smith has now moved on to experiment with movable high tunnels. This allows for better rotations and permits a farmer to better control diseases and produce healthy plants. "The most profitable crops are tomatoes, cucumbers, and bell peppers," Smith notes. "However, tomatoes and pep-

pers are in the same family so you can get diseases by using the same ground over and over, even when you rotate the crops within the high tunnel. By moving the high tunnels to fresh ground every few years, you can continue to grow cukes, peppers, and tomatoes every year with rotations."

Smith has also planted asparagus, strawberries, and raspberries to see how they perform in high tunnel situations.

Research demonstrates that high tunnels pay for themselves within one to three years when people use the kits to build the structure. Smith plans to build a high tunnel from scratch in the expectations that this will reduce the payback time. "We plan to build a high tunnel this summer using local materials," Smith says. "We'll see if this helps in the cost."

For those people interested in learning more about the potential high tunnels hold, Smith recommends the book Winter Harvest Handbook written by Eliot Coleman. "This book is the premiere informational bulletin on high tunnels," Smith comments. "Anyone interested in finding out more about these structures should read this booklet."

People may also phone Smith at the Dawson County extension office (406-377-4277) to discuss the possibilities offered by high tunnels.

A Little Bit Country

New Barley Variety Released

By Warren Froelich NDSU Extension Agent, Williams County

Last spring, the North Dakota State University Foundation Seedstocks (NDFSS) and Busch Agricultural Resources, Inc. (BAR) cooperated in releasing a new malting barley named Innovation. The release was made through the North Dakota Crop Improvement Associates and county associations. An allocation was awarded to Hal Hickel, Ray. Despite a very, very late planting Hal was able to harvest 1100 bushels of seed which has met the standard of registered grade, the highest possible. Hal reports the germination test reported by the North Dakota State See Department is 95%.

Innovation is a mid-season, six-rowed malting barley adapted for the Midwest including Minnesota, North Dakota, Montana and Idaho.

It has excellent malting quality and was developed by crossing parents specifically devoted to lowering the deoxynivalenol

(DON) toxin. Innovation has a smooth awn and white aleurone. It is considered a medium maturity variety similar to Tradition, Celebration and Drummond. Straw strength is rated slightly weaker than Tradition and about equal to Celebration and Legacy.

As I review the agronomic data I find it difficult to identify clear-cut advantages for any of the top yielding barley varieties which must include Innovation, Tradition and Stellar-ND. Innovation does look to have a consistent protein average of 13.4% at seven test sites across North Dakota.

For seed of Innovation, contact Hall at 701-570-3469.

Unprecedented Times for The Meat Industry

With prices as they are, the meat industry is indeed in unprecedented times. Cull cows are approaching \$100 per 100 lb. weight. It wasn't too many years ago that cattlemen hoped for that bid value on their fall-weaned calves. The beef industry just might be at the beginning of a long-term economic shift that may

have started a few years ago when corn sold for \$2 per bushel.

With corn values more than three times higher, there is a strong signal that more forage will be used to get feeder cattle to market weight. Some may think this will shift more cattle to grass-fed beef. This may happen to some extent but consumer demand for a grain finished product remains very strong in today's economy and the demand will likely be more positive as the U.S. economy improves and the standard of living improves worldwide.

As we shift to high corn prices and eventual improvement in worldwide economics occur, there will be a greater value for forages and rewards to those who can improve their forage management skills. No doubt feeder cattle will be carried to heavier weights using some kind of foraged based diet rather than grains in backgrounding rations of Northern Plains producers or winter grazing systems practiced by producers in the south.

High grain prices are changing the meat industry and the beef sector will not be excluded. It will need to produce cattle that will reach the coveted USDA Choice grade with less grain and more forage. This likely will mean improvements in the quality of forage and new genetics that will help to produce a quality protein product that U.S. and other consumers have come to appreciate. Everyone in the beef production chain will have skin in the game.





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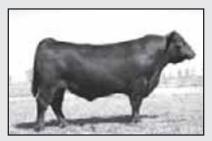
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MSU Ag Technology To Enter Global Biopesticide Market

By Sepp Jannotta MSU News Service

There is a vial of little blue pellets in Barry Jacobsen's lab. Its contents, a bacterium taken from a few healthy leaves in a northeast Montana sugar beet field overrun with disease, could save farmers around the world millions of dollars each year.

Since Jacobsen isolated it in 1994 during a catastrophic Cercospora leaf spot outbreak near Sidney, the bacterium - Bacillus mycoides isolate J, or BmJ - has shown impressive abilities. It has proven effective in fighting a variety of plant diseases caused by fungi, bacteria and viruses. BmJ is a biological control agent, as opposed to an industrial chemical used as a pesticide.

"I'd always been looking to develop a viable biological control product that would be beneficial to people growing a range of crops," said Jacobsen, a professor of plant sciences and plant pathology in MSU's College of Agriculture. "And I always considered that if I could do that, my career would have meant something."

After years of academic research, an initial U.S. patent process and licensing to Missoula-based start-up Montana Microbial Products, Inc., BmJ was recently sublicensed to Certis USA, a top manufacturer of biopesticides worldwide. Based in Columbia, MD, Certis plans to market its BmJ-based products around the globe.

"We think it will be an important tool in the farmer/ grower's tool box," said Certis CEO Jow-Lih Su, who is overseeing work on BmJ at Certis. "And biological disease control that works with systemic acquired resistance represents an area of the market that we are very interested in and we think the trends there are really very good."

Jacobsen agreed that there has been a push for ways to control plant diseases using fewer industrial chemicals in agriculture.

The lack of a biological approach to a particular fungal pathogen - Cercospora leaf spot - was the reason Jacobsen found himself in that Sidney sugar beet field in 1994, where crops had been largely wiped out due to the disease.

Despite spending millions on aerial applications of fungicides, the Sidney-area sugar beet farmers were still losing their crops. To their dismay, growers had found Cercospora leaf spot infections showing the first signs of resistance to the fungicides. Jacobsen knew that resistance was likely to grow. A new solution was needed.

Jacobsen and his fellow researchers at the time had a hunch the solution lay in the very fields so broadly attacked by the leaf spot fungus. Though the disease had done enormous damage, there were still some healthy plants in the field.

Something about those plants helped them fend off the disease. What was it?

The group of researchers isolated more than 300 bacteria found on the healthy leaves. They were looking for one that was special. Jacobsen found it in Bacillus mycoides

isolate J (the J marked its place in the team's A-B-C list of different bacteria).

BmJ did something amazing. It turned on one particular gene - called the NPR1 gene - that is found in most plants. When the NPR1 gene is turned on, it sets in motion a whole range of defenses for the plant, a process called induced resistance.

"Within five minutes of that bacillus spore being on the plant leaf, the plant knows it's there and it starts its defense reactions," Jacobsen said. "It reacts by producing hydrogen peroxide and some other things and this thickens cell walls and makes it more difficult for a pathogen to infect. Within a day it starts to produce enzymes that attack fungi and bacteria. And it's very effective on viruses as well, but so far we don't understand how that happens."

Since the plant exhibits no physical signs that BmJ has permeated its outer tissue, the question of how an immune response gets triggered is mysterious, Jacobsen said. Sprinkle almost any amount of BmJ on any location on a plant and a signal is sent, activating the NPR1 gene throughout the entire plant.

"For any plant that has this NPR1 gene, this bacillus is going to turn it on and we should get some level of disease control." Jacobsen said.

Nina Zidack, MSU Potato Lab director, said BmJ offers a new chapter in biological control because it covers such a variety of crops and diseases, in particular viruses. Zidack was a post-doctoral researcher when she joined the BmJ team shortly after its discovery. She is listed on MSU's patent as a co-inventor of BmJ, along with Jacobsen and former doctoral student Rebecca Bargabus-Larson.

"The ability for potato growers to have another tool in limiting the spread and also the increase of viruses in their crops is really important," Zidack said. "This really is a tool that doesn't exist in the marketplace today."

While the technology is unlikely to be a magic bullet that will eliminate the use of chemical agents, it should have a broad impact for commercial farmers. When used in an integrated approach with other disease-fighting measures, Jacobsen said BmJ should provide protection that is "very stable and predictable."

Jacobsen added that Montana farmers growing potatoes, sugar beets and even wheat could use BmJ in an integrated disease-control program that would save money with reduced use of fungicides and other pesticides.

BmJ is also likely to find a niche with small farmers and home gardeners, Jacobsen said.

"It really does have unique implications because it's naturally occurring, it's never been genetically modified, and it should be labeled as available for organic gardeners," Jacobsen said.

Jacobsen gave a lot of credit to his fellow researchers, many of them doctoral students, who worked on BmJ. He said he derived particular pride in knowing that the team

Continued on next page.

MSU College of **Agriculture Professor Barry** Jacobsen holds a sample of an agricultural disease-fighting technology that could save farmers around the world millions of dollars. MSU research has shown the technology, a naturally occurring bacterium dubbed BmJ, works on a wide array of crops and diseases and initiates an innate immune response by activating a gene found in most plants.



had produced something that would directly benefit farmers.

For Rebecca Mahurin, MSU's Office of Technology Transfer director, that success helps fulfill the university's mission of putting applied science and technology in the hands of Montanans.

As it sits on the cusp of becoming a significant new biological tool in the battle against plant diseases, the 17-year process to develop BmJ's commercial potential illustrates the difficulty of turning a research technology into a marketable product.

"Certainly my first hope was for a Montana company to take it to the finish line," Jacobsen said. "I think it would have been a boost for the state's economy. But because of the size of capital investment needed to cover the final steps of the process it was not possible. So, of course I'm extremely pleased that Certis is involved at this point."

Cliff Bradley, whose company Montana Microbial Products licensed BmJ from the university in 2003, echoed Jacobsen's appreciation that Certis had sublicensed the technology. When BmJ-based products hit the market—no launch date has been announced—MSU and Jacobsen, along with his co-inventors, and Montana Microbial Products, as the original licensee, all will receive royalties based on the global sales Certis generates.

"Because we'd done a lot of work in microbial pest management in agriculture, we were the right company to take Barry Jacobsen's very promising research and turn it to something that can go into a bottle that a farmer can pour into sprayer," Bradley said. "But the next step, by the time you get through the EPA process, well, Certis will probably be into it at close to a million dollars."

Despite receiving a helping hand via a research-and-commercialization grant from the Montana Department of Commerce, Bradley said raising the kind of capital needed to obtain the necessary regulatory registrations in the U.S. and abroad was a stumbling block for Montana Microbial Products, as it tends to be for many small Montana companies.

Mahurin said that Montana Microbial Products is an excellent example of a Montana company picking up MSU's research, while Certis is the best possible company to put BmJ into a global product line.

"Cliff Bradley is serial entrepreneur and he's just the right kind of person to advance this technology," Mahurin said. "He really worked hard and put it in position for someone like Certis to come along."

As for Certis, Mahurin said MSU was fortunate to have such a capable partner moving Jacobsen's invention into the final legs of the commercialization journey.

"This is one of the most exciting technologies we've licensed and MSU is very proud that Certis is involved," Mahurin said. "They are the last piece in the puzzle to get us to the market. And it's great to have a home run for MSU that is an ag technology that will help farmers in our own state - that's icing on the cake."

Jacobsen agreed, saying it meant a lot that all the countless hours of work on BmJ over the years would culminate in putting those little blue pellets where they could help farmers grow better crops.

"You always have to remember what the farmer needs," Jacobsen said.

Contact Barry Jacobsen, 406-994-5161, or uplbj@montana.edu.

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Agriculture Losing Out To Oil Interests

By Lois Kerr

The MonDak has always stood out as an agricultural area, which is the prime reason many of us chose to make this region our home. We liked the farming way of life and preferred the peace of the country to the bustle of commercial centers. Well, our cherished way of life has practically vanished as agriculture and its lifestyle has had to move aside for the oil industry. The oil boom continues to trump agriculture in numerous ways and many area farmers feel that in the coming years, agriculture in our region faces very serious difficulties as it seeks to remain profitable while having to compete with oil interests.

Phil Hurley, who farms in the East Fairview area, has seen tremendous changes already and foresees ever increasing hurdles that agriculture will face. "Things are really changing and it will be a challenge to farm," he says. "Oil came into this beautiful valley and is ripping it up. It is sad to see. Things are happening fast and there is more and more oil activity all the time."

For those who have mineral acres, their loss gets compensated to a certain extent, but not nearly enough to rectify the curtailment or loss of farming activity. "We do have some mineral acres so we do get a piece of the pie," Hurley comments. "However, we have fields with no mineral acres, and in North Dakota, if you don't have mineral rights, an oil company can just come in and put in a well. We have such a well in the corner of a field, and the well takes up four acres. We received some surface damage compensation, and we can still farm around those four acres, but the crop that was in that field at the time was totally destroyed."

He adds, "Now they want to run a pipeline through a field by our house. We already have that field ridged and ready for beets."

Besides oil interests claiming more and more parts of his land, Hurley has experienced other problems in trying to farm, problems that didn't exist a few years ago. "My goal was to expand," he remarks, "but that's at a standstill. There is no way I can buy property because farmland is now selling at commercial rates or above. There is no way farmers can compete with that. I can still farm, but it is on reduced acres."

He continues, "Traffic is terrible. I'm dreading spring work. I need two or three flaggers just to get from farm to farm. During beet harvest last year, the truck traffic on the road was incredible. Most drivers took gravel roads all the way to the beet dump to avoid the traffic. We have some beet acres near Sidney but safety is key to me and to move equipment from here to Sidney is very bad as we need to run on the highway for two of those miles, and I'm concerned about the safety issue."

The rape of the land promises to continue as oil activity shows no signs of slowing down in the near future. Man camps and other non-agricultural uses of the land will continue to escalate, robbing us of precious farmland. "If all the man camps and other activities happen that we are told are coming, you won't recognize Fairview by the time summer arrives," Hurley concludes.

Although other areas of the MonDak may not have the frenetic chaos found around Dore, the region's farmers and ranchers still feel the brunt of increased traffic and experience many problems that hamper agriculture. Dan Thornton, who farms in the Lambert area, sees farm and rangeland around Lambert disappearing under the influx of oil. He expects to encounter serious problems in his ability to grow a crop in the coming months and years. "For the first time I can look out my picture window and see oil wells," Thornton comments. "Each location takes up between five and seven acres and some properties have four oil wells. That adds up to a lot of acres. I see locations marked on the Crane road so more are coming and there will be more encroachments."

"It is hard on farmers who have worked the land and on those who have bought more land," Thornton continues. "When a farmer buys new land, mineral rights don't come with it so farmers with that land can't benefit. The oil companies just take the land away, pay a set amount for easements, and that's it. The farmer doesn't share in the harvest of the minerals."

For many area residents, oil takes precedence. Agriculture continues to lose when it comes up against oil interests. Thornton wonders what people expect future generations will have to eat, as more and more agricultural land gets taken out of production. "For me, the biggest thing is that we have the horse behind the cart," he remarks. "The price of commodities has gone up, but nowhere near as much as the price of oil. Farmers need oil products to run equipment, but input costs like fuel and fertilizer are getting out of hand. People need to decide if they want to eat food or drink oil."

He adds, "With input costs so out of hand, if a farmer has one disaster year, it could be all over for him."

If all farmers received a share of the oil wealth, it would provide some compensation for the loss of land, the inconvenience of farming around oil, the horrendous input costs farmers face just to plant a crop each spring, and for the loss of a way of life. However, that won't happen, and agriculture will continue to lose ground. "Half the people in our area are not profiting," Thornton remarks. "They don't have oil wells and it gets harder and harder to keep up. We are getting to the point where we have the haves and the have nots. Farmers with some oil income will be OK, those without will continue to struggle and get to the point where they will disappear."

The pastoral way of life we have known has gone the way of the tyrannosaurus Rex, a fact that makes many of us weep. "The old way of life is no more," Thornton says. "Oil has taken that away. Many people are leaving, looking for the way of life we had here and that we no longer have. They want it back, and they know they won't find it here."

He concludes, "I have a friend from Oklahoma who witnessed an oil boom in his area. He told me two years before it happened just what would happen here to us, and he was right. He came here to get away and to enjoy our way of life, but now that way is gone. This used to be frontier, the way we liked it. Now we are just an oil hot spot."

About The Ag Roundup



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