

The Germinator

WINTER 2025

VOL. 45 NO. 1

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2025

FOOD & FARMING
CONFERENCE

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WOOFING:

A HANDS-ON
EDUCATION IN
ORGANIC FARMING

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THE UNEXPECTED
EXPERTISE OF

ORGANIC INSPECTORS



Photo by Krysti Mikkonen

Cover Credits

This cover photo is a barn from the Mikkonen Organic farm in Frederick, SD. The traditionally painted red barn makes a stunning backdrop to the white snow. The serene scene is a perfect view for reflection on where we've been and where we hope to go in the year ahead. Take the time in these slower winter months to learn, grow, plan, and explore. Cheers to making 2025 the best year yet!



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ALBERT EINSTEIN

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Mission Statement

Northern Plains Sustainable Agriculture Society promotes sustainable food systems through education, advocacy, and research.

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NPSAS occasionally includes guest articles and opinions. The opinions in these articles may not reflect the opinions or policy of the Northern Plains Sustainable Agriculture Society or its Board of Directors.



President Martin Goter

From the President

With our focus on education in this issue, I want to take this opportunity to provide some of my educational resources and invite you to explore these and search for additional resources that can help enhance your farming education and refine your practices. Myself, I enjoy listening to podcasts and reading books to get information and the inspiration to try new things in my farming practices. Here are some of my favorites:

Podcasts:

- Nutrition Farming
- Acres USA: Tractor Time
- Regenerative Agriculture Podcast

Books:

- The One-Straw Revolution by Masanobu Fukuoka
- Teaming with Microbes by Jeff Lowenfels and Wayne Lewis (Highlighted on pg 27)
- The Anatomy of Life & Energy in Agriculture by Arden Andersen (Highlighted on pg 27)

These resources offer beneficial insights into soil health, crop production, regenerative practices, and more. I also have been using ChatGPT to provide efficient information that is tailored to me using what it knows about me by the multitude of sources I have uploaded and provided to it regarding my farming practices and other interests.

Being a member of the Northern Plains Agricultural Society (NPSAS) also offers invaluable benefits for farmers seeking to improve their knowledge and refine their operations. With our Annual Winter Conference and multiple summer field days, there are many opportunities where our members can connect with like-minded individuals and learn from experts in the field. For those just starting out, these events provide a solid foundation of knowledge and skills. The relationships built within NPSAS have proven to be some of the most valuable assets in my farming journey, offering practical advice, new insights, and good friends. I would be remiss if I did not finish by asking you to spread the word about our conference and the value that NPSAS has brought to you, it is with the help of our members that we continue to grow and provide resources and education as we move towards a better farming future!


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NPSAS Opportunities for Education

This issue of The Germinator is all 'about education. A significant portion of the NPSAS staff's time is directed toward education. It is so easy to say, I'm too busy to take in these events. However, you will find significantly more success in your operation by taking time to grow and learn from others and allowing yourself to be inspired by what others are doing while simultaneously inspiring others with your shared ideas.

In addition to reading, podcasts, YouTube, social media, and farm shows, there are great events NPSAS provides that can re-energize you. We provide three primary education delivery modes, and if they fall within the budget, we'd love to add more opportunities..

The Food and Farming Conference: This annual event brings in speakers, ideas, and networking opportunities that provide priceless knowledge. If you haven't attended a conference in a while, you should make time for the 2025 Conference in Aberdeen, 23-25th. It reinvigorates the soul

to continue the work in this industry. Get ready to get pumped up with ideas and inspiration that make you grateful to do what you do.

The Germinator - This magazine you're reading right now is designed to provide education, insight, and inspiration. We've navigated to providing the content thematically so that each issue has a focus. In this issue, it's appropriate, with the upcoming conference all about education.

Field Days - These in-person events are a great way to see how others farm and ranch. It's an excellent opportunity to network with like-minded individuals with boots in the dirt looking at what's working and not working with insight that you can take back to your operation and see how and where you can apply what you learned.

We are open to suggestions and ideas on speakers for events and conferences as well as articles and ideas to feature in The Germinator. Keep in touch and let us know what you'd like to see.



Executive Director Krysti Mikkonen

An advertisement for Viking & Blue River Organic Seed. The background is a black and white photo of a tractor in a field. At the top, there are two logos: 'VIKING' with a seed icon and 'Blue River Organic Seed'. Below the logos, the text reads 'NOW INTEGRATED TO OFFER YOU THE STRONGEST ORGANIC LINEUP OF CORN AND SOYBEAN SEED IN THE U.S.'. At the bottom, there is a logo for 'ALBERT LEA SEED EST. 1923' and the contact information '800.370.7979 | VIKINGBLUERIVER.COM'.

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USDA Announces Final \$300 Million in Automatic Assistance for Distressed Farm Loan Borrowers

The U.S. Department of Agriculture (USDA) announced the final approximately \$300 million in assistance to distressed direct and guaranteed farm loan borrowers under Section 22006 of the Inflation Reduction Act. Over the past two years, USDA acted swiftly to assist distressed borrowers in retaining their land and continuing their agricultural operations. Since President Biden signed the Inflation Reduction Act into law in August 2022, USDA has provided approximately \$2.5 billion in assistance to more than 47,800 distressed borrowers.

The assistance announced today is expected to provide \$300 million in assistance to over 12,800 distressed direct and guaranteed Farm Loan Programs (FLP) borrowers.

"USDA has always been committed to standing by our nation's farmers and ranchers, especially in their most challenging times," said Agriculture Secretary Tom Vilsack. "The final round of payments announced today under President Biden's Inflation Reduction Act provides much-needed relief to more than 12,800 producers, helping them stay on their land and continue farming. At USDA, we are not only addressing immediate financial challenges but also working every day to build a stronger, more supportive loan system that ensures farmers have the tools they need to succeed now and into the future."

This round of automatic assistance includes approximately:

\$168.5 million for payments in the amount of any outstanding delinquencies on qualifying direct loans as of Nov. 30, 2024, for direct borrowers one or more days delinquent as of that date, and in the amount of any outstanding delinquencies, as of Sept. 30, 2024, on qualifying guaranteed loans of guaranteed borrowers one or more days delinquent or flagged for liquidation on a qualifying loan as of that date (including those who received prior IRA 22006 assistance).

\$5 million for payments in the amount of any outstanding delinquencies on qualifying guaranteed loans as of Sept. 30, 2024, for guaranteed borrowers who were delinquent as of Sept. 30, 2024, on a qualifying loan but by fewer than 30 days and were therefore not eligible for the assistance announced on Oct. 7, 2024.

\$67.3 million for payment of the next installment due on all FLP direct loans for borrowers that received direct borrower delinquency assistance under IRA 22006 announced on Oct. 7, 2024, not to exceed the remaining balance.

\$35 million for payment in the amount of the next installment due on qualifying direct loans for borrowers that restructured or who have accepted an offer to restructure, a qualifying direct loan between March 27, 2023, and today through primary loan servicing available through FSA. This assistance will be equal to the amount of the next installment (first applied toward any delinquency) for all qualifying direct loans held by the borrower, not to exceed the remaining balance. For any borrowers who have accepted an offer to restructure, payment will be equal to the next installment for all qualifying direct loans post-restructure, not to exceed the remaining balance.

\$9 million for the payment of outstanding direct Emergency Loans as of Nov. 30, 2024.

\$4.1 million in assistance for borrowers of qualifying direct loans with protective advances outstanding as of Nov. 30, 2024, and borrowers of qualifying guaranteed loans with protective or emergency advances as of Sept. 30, 2024. Protective advances are defined in 7 C.F.R. 761.2 and are those made consistent with 7 C.F.R. 765.203 or 762.149; emergency advances are those made consistent with 7 C.F.R. 762.146(a) (3). For direct loan borrowers, payments will be in the amount of the outstanding protective advance as of Nov. 30, 2024, where possible based on the structure of the account. For guaranteed loan borrowers, payments will be in the amount of the outstanding protective or emergency advance balance as of Sept. 30, 2024, where possible based on the structure of the account.

\$3.9 million for payment of outstanding interest for direct borrowers whose interest exceeds their principal debt owed as of Nov. 30, 2024.

\$1.8 million for payment of outstanding Economic Emergency (EE) loans for borrowers who have both EE loans and qualifying Consolidated Farm and Rural Development Act loans as of Nov. 30, 2024.

\$109,000 for the payment of outstanding non-capitalized interest for all direct borrowers as of Nov. 30, 2024.

Continued on page 11

Food insecurity prompts ND advocates to eye universal school meals

North Dakota is expected to rejoin the debate over whether all school children, regardless of their family income, should have access to no-cost meals.

Universal lunch programs have been adopted by nearly 10 states, including neighboring Minnesota. A broad coalition of organizations gathered Thursday to push for adding North Dakota to the list. The federal government funds free or reduced-cost meals to income-eligible students. States with universal policies cover the remaining expenses so all kids eat free.

Michelle Wagner, child nutrition director for Bismarck Public Schools and legislative chair for the North Dakota School Nutrition Association, said working in a school cafeteria has opened her eyes about the need.

"As a food service director, we see firsthand that many of these students depend on school meals as their primary

source of nutrition," Wagner explained.

The coalition said one in three North Dakota children relies on the Great Plains Food Bank, and many do not meet school meal eligibility requirements. North Dakota lawmakers temporarily boosted meal eligibility last session but advocates said wider permanent access is needed. A likely bill sponsor said there appears to be bipartisan support but expects pushback over cost concerns, even with a budget surplus.

Coalition members argued this type of move works as a tax cut, estimating North Dakota families would save more than \$850 per child each year.

Robin Nelson, CEO of the Boys & Girls Club of the Red River Valley, said

by putting kids in a better position to learn, the state would also be able to address workforce shortages down the road.

"If I were a company that was trying to recruit employees, I would use this for anybody to move to the state," Nelson suggested.

Statewide polling in North Dakota has shown strong public support for expanded school meals. In Minnesota, policy observers said the state's program, approved in 2023, is proving to be popular but demand has been strong, elevating costs. Those behind North Dakota's effort said they hope lawmakers get a full scope of what is needed when they begin debating the issue.



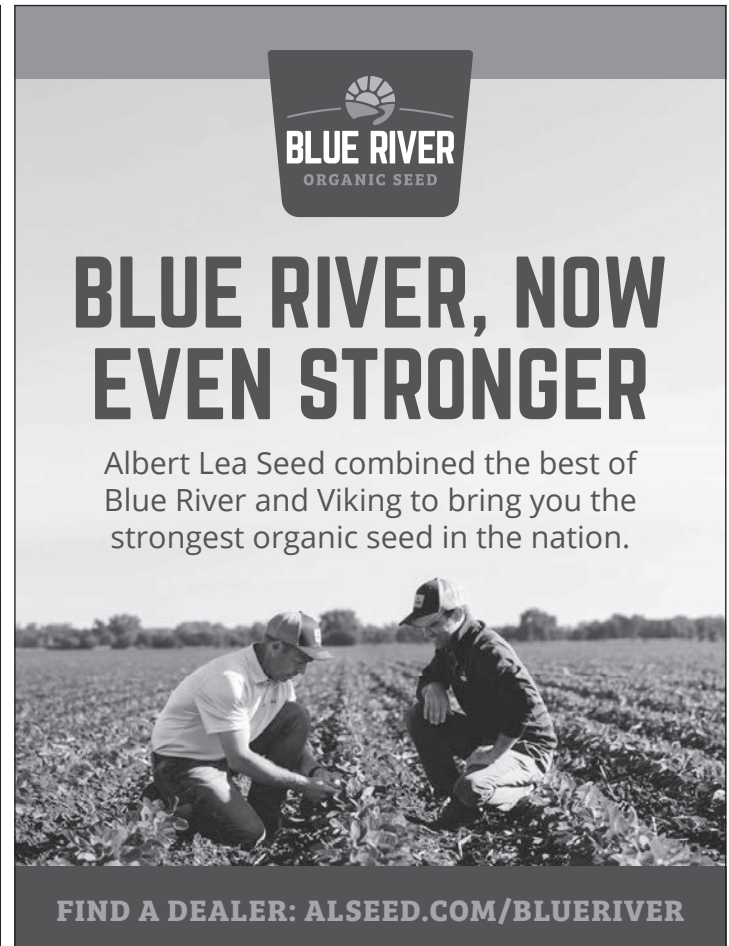
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A New Dawn for Agricultural Education: From Chemical to Holistic

The landscape of agricultural education has undergone a significant transformation in recent decades. Historically, this field was heavily influenced by chemical companies, promoting a paradigm centered on synthetic fertilizers and pesticides. However, a growing awareness of environmental concerns, coupled with a resurgence of interest in sustainable farming practices, has prompted a shift towards more holistic and regenerative approaches.

For much of the 20th century, agricultural education was largely shaped by the interests of chemical companies. These corporations invested heavily in research and development, promoting the use of synthetic inputs as a means to increase crop yields and control pests. Universities and agricultural colleges, often supported by industry funding, incorporated this chemical-centric approach into their curricula. This led to a generation of farmers who relied heavily on these products. The excitement for the increasing yields and the science behind the changes, and more research led to long-term consequences for soil health and environmental sustainability.

In the latter part of the 20th century, a growing movement emerged advocating for more sustainable and environmentally friendly farming practices. Organic and regenerative agriculture gained traction, emphasizing the importance of soil health, biodiversity, and natural processes. This shift in thinking challenged the conventional wisdom of the chemical era and sparked a renewed interest in traditional farming methods.

As public awareness of the environmental and health risks associated with chemical agriculture grew, a demand arose for education and training in alternative approaches.

In recent years, universities and colleges began to offer courses and programs focused on organic and regenerative farming, covering topics such as soil microbiology, crop rotation, cover cropping, and natural pest control. Agricultural education has become increasingly innovative, incorporating cutting-edge technologies



Field days like this one, with research on organic agriculture, are held each year at area land grant universities

and interdisciplinary approaches.

Despite these positive developments, challenges remain in the field of agricultural education. One major hurdle is the continued influence of the chemical industry, which often promotes its products through aggressive marketing campaigns and lobbying efforts. Additionally, many universities and colleges still rely on industry funding, which can create conflicts of interest and limit the scope of agricultural education.

To address these challenges, it is essential to promote critical thinking and independent research in agricultural education. Students should be encouraged to question conventional wisdom and explore alternative approaches. Organizations like NPSAS are supporting initiatives that

promote farmer-to-farmer knowledge sharing and on-farm training through field days that can help to bridge the gap between academic research and practical application.

Agricultural education has undergone a significant evolution, moving away from a chemical-centric model towards a more holistic and regenerative approach. It is unknown if we'll see a day without education on the synthetic chemical application for soil amendments and seed development. In the meantime, it is a move in the right direction that all types of agriculture production options are being presented. By embracing innovation, interdisciplinary collaboration, and community engagement, we can build a more sustainable and resilient food system for the future.

USDA Announces Final \$300 Million in...

Continued from page 7

FLP payment eligibility is determined on a loan-by-loan basis. Distressed borrowers may be able to receive assistance under multiple categories if they have multiple direct or guaranteed loans that qualify, however each qualifying loan may only receive one payment. FLP direct and guaranteed borrowers who have a loan that qualifies under multiple categories of assistance above will receive a payment on that loan based on the option that provides the greatest payment amount, except in cases where the loan is eligible for payment of non-capitalized interest, which can be applied to that loan along with another assistance category.

Any distressed direct and guaranteed borrowers who qualify for these forms of assistance and are currently in bankruptcy will be addressed using the same case-by-case review process announced in October 2022 for complex cases.

While FSA does not at this time anticipate having remaining funds available for additional assistance under IRA Section 22006 after each type of assistance above is issued, if any funds remain at that time, FSA will make a payment on a prorated basis by loan and subject to the availability of funds towards the next installment due on all FLP direct loans, not to exceed the remaining balance, for borrowers who both (i) have direct loans that qualified for assistance under the first bullet above; and (ii) have not received IRA 22006 assistance prior to this announcement. If full next installment payments are made to borrowers who meet (i) and (ii) above, and funds remain available, FSA will provide the same installment assistance on a prorated basis by loan and subject to the availability of funds to borrowers who meet (i) but have received prior IRA 22006 assistance.

Farm Loan Programs Improvements

FSA recently announced significant

changes to Farm Loan Programs through the Enhancing Program Access and Delivery for Farm Loans rule. Distressed FLP direct loan borrowers may benefit from the Distressed Borrower Set-Aside program included in the regulation update, which allows qualifying distressed borrowers to set aside up to a full loan installment on certain loans, at a reduced .125% interest rate. This policy change and many others included in the rule are designed to expand opportunities for borrowers to increase profitability and be better prepared to make strategic investments in the enhancement or expansion of their agricultural operations.

FSA also has a significant initiative underway to streamline and automate the Farm Loan Program customer-facing business process. FSA has made several impactful improvements including:

The Loan Assistance Tool that provides customers with an interactive online, step-by-step guide to identifying the direct loan products that may be a fit for their business needs and to understanding the application process.

The Online Loan Application, an interactive, guided application that is paperless and provides helpful features including an electronic signature option, the ability to attach supporting documents such as tax returns, complete a balance sheet and build a farm operating plan.

An online direct loan repayment feature that relieves borrowers from the necessity of calling, mailing, or visiting a local USDA Service Center to pay a loan installment.

A simplified direct loan paper application, reduced from 29 pages to 13 pages.

A new educational hub with farm loan resources and videos.

The Distressed Borrowers Assistance Network, a national initiative aimed at providing

personalized support to financially distressed farmers and ranchers. The network connects borrowers with individualized assistance to help them regain financial stability.

USDA encourages producers to reach out to their local FSA farm loan staff to ensure they fully understand the wide range of loan and servicing options available to assist with starting, expanding, or maintaining their agricultural operation. To conduct business with FSA, producers should contact their local USDA Service Center.

FSA helps America's farmers, ranchers and forest landowners invest in, improve, protect and expand their agricultural operations through the delivery of agricultural programs for all Americans. FSA implements agricultural policy, administers credit and loan programs, and manages conservation, commodity, disaster recovery and marketing programs through a national network of state and county offices and locally elected county committees. For more information, visit fsa.usda.gov.

USDA touches the lives of all Americans each day in so many positive ways. Under the Biden-Harris administration, USDA is transforming America's food system with a greater focus on more resilient local and regional food production, fairer markets for all producers, ensuring access to safe, healthy and nutritious food in all communities, building new markets and streams of income for farmers and producers using climate smart food and forestry practices, making historic investments in infrastructure and clean energy capabilities in rural America, and committing to equity across the Department by removing systemic barriers and building a workforce more representative of America. To learn more, visit usda.gov.



NORTHERN PLAINS FOOD & FARMING CONFERENCE

January 23-25, 2025 • JOIN US IN Aberdeen, SD

TENTATIVE SCHEDULE

This schedule may change - please check final schedule upon conference check-in

Time	Description
THURSDAY-January 23	
7:30 a.m. - 8:30 a.m.	Vendor Set-up
10:00 a.m. - 5:00 p.m.	Dakota Organic Academy Road Show (OARS)- Free to transitioning organic farmers
1:00 p.m. - 4:30 p.m.	How to Stop the Fight on the Way to the Funeral - Joeline Brown
4:30 p.m.	Farm Breeder Network
5:30 p.m.	OARS Community Information Night with Vendors
FRIDAY-January 24	
8:00 a.m. - 9:15 a.m.	Breakfast - Exhibits Open
9:30 a.m.	Welcome Message -by Martin Goter, NPSAS Board President
9:35 a.m. - 10:30 a.m.	Healing the Earth by Growing Food as Medicine: The Future of Agriculture - Bob Quinn
10:45 a.m. - 11:35 a.m.	Workshop/Breakouts* • Devyatka Buckwheat Evaluation of a determinate variety - Steve Zwinger • Transition to Organic - Panel • Nuts and Bolts of Growing Food as Medicine - Dr. Bob Quinn • Kids Ag Workshop - Master Gardeners of Brown County
11:45 a.m.-1:00 p.m.	Exhibits Open
12:00 p.m. - 1:30 p.m.	Lunch
12:45 p.m. - 1:15 p.m.	Annual Meeting
1:30 p.m. - 2:30 p.m.	Keynote - Ray Archuleta
2:40 p.m. - 3:00 p.m.	Workshop/Breakouts* • Beginning Farmer Education Options - FARRMS staff • The Family transition planning conversation- The Family transition planning conversation - Russ Tweiten • Improving watershed health, wildlife habitat, and ranch profitability - Dr. Krista Ehlert • Kids Ag Workshop - Master Gardeners of Brown County
3:00 p.m. - 3:30 p.m.	Exhibits Open
3:30 p.m. - 4:20 p.m.	Workshop/Breakouts* • Navigating the World of Humic Acid - Larry Sax • Finding Financial Freedom and Flexibility with Improvements to FSA Farm Loans - Gail Gullickson • Marketing Your Farm - Panel • Kids Ag Workshop - Master Gardeners of Brown County
4:30 p.m.	Happy Hour Social & Cash Bar available
5:30 p.m.	Taste of Ag - Dinner - Auction - Down Home Music

TENTATIVE SCHEDULE

This schedule may change - please check final schedule upon conference check-in

Time	Description
SATURDAY - January 25	
7:00 a.m. - 8:30 a.m.	Breakfast - Exhibit Hall Open - Networking
8:30 a.m. - 9:20 a.m.	Workshop/Breakouts* • Making the most of organic Standard 823 - Paul Dubourt • Value-added Ag Ideas - Panel • Rise of Regenerative Organic Agriculture - Dr. Angela Jackson-Pulse • Kids Ag Workshop - Master Gardeners of Brown County
9:30 a.m. - 10:30 a.m.	General Session - Tilling the Soil of Opportunity: The Next Generation of Ag Leaders - Panel
10:40 a.m. - 11:30 p.m.	Workshop/Breakouts* • Learn How FSA Youth Loans Support 4-H and FFA Member Ag Projects.- Gail Gulickson • Benefits of Finishing Cattle on Pasture - Seth Boechler • Building resilience in farm crisis management - Harriet Behar • Kids Ag Workshop - Master Gardeners of Brown County
11:30 p.m. - 1:00 p.m.	Lunch - Exhibits Open
1:00 p.m. - 2:00 p.m.	Insights from Ag Experience - Farmers Panel
2:00 p.m. - 3:00 p.m.	Keynote- Jolene Brown - Harvest the Humor: Celebrating Life on the Farm

KEYNOTE SPEAKERS



NORTHERN PLAINS
**FOOD & FARMING
CONFERENCE**

January 23-25, 2025 • JOIN US IN Aberdeen, SD



JOLENE BROWN

JOLENE BROWN, CSP, CPAE is a farmer, author, and curator of peace working with family farms to create a working plan for generations to work together for an operation that can be passed on for generations. A walking/talking champion for the people of agriculture, she shares her credibility, authenticity, humor, and wisdom with audiences worldwide through her writing, keynotes, and workshops.



RAY ARCHULETA

RAY ARCHULETA is a farmer who's worked with a number of farmers in his capacity as a Certified Professional Soil Scientist with the Soil Science Society of America. He has over 30 years' experience as a Soil Conservationist, Water Quality Specialist, and Conservation Agronomist with the Natural Resources Conservation Service (NRCS) working in New Mexico, Missouri, Oregon, and North Carolina.



BOB QUINN

Bob Quinn, is a farmer with a Ph.D. in plant biochemistry. He returned to his family's Montana farm and founded Kamut International. His company transformed an ancient grain into a global superfood, known for its health benefits and community-focused approach. He started a successful grain mill and has committed his time to developing a learning center on his Montana farm. He's a long-time member of NPSAS.



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Jolene Brown * Ray Archuleta * Dr. Bob Quinn

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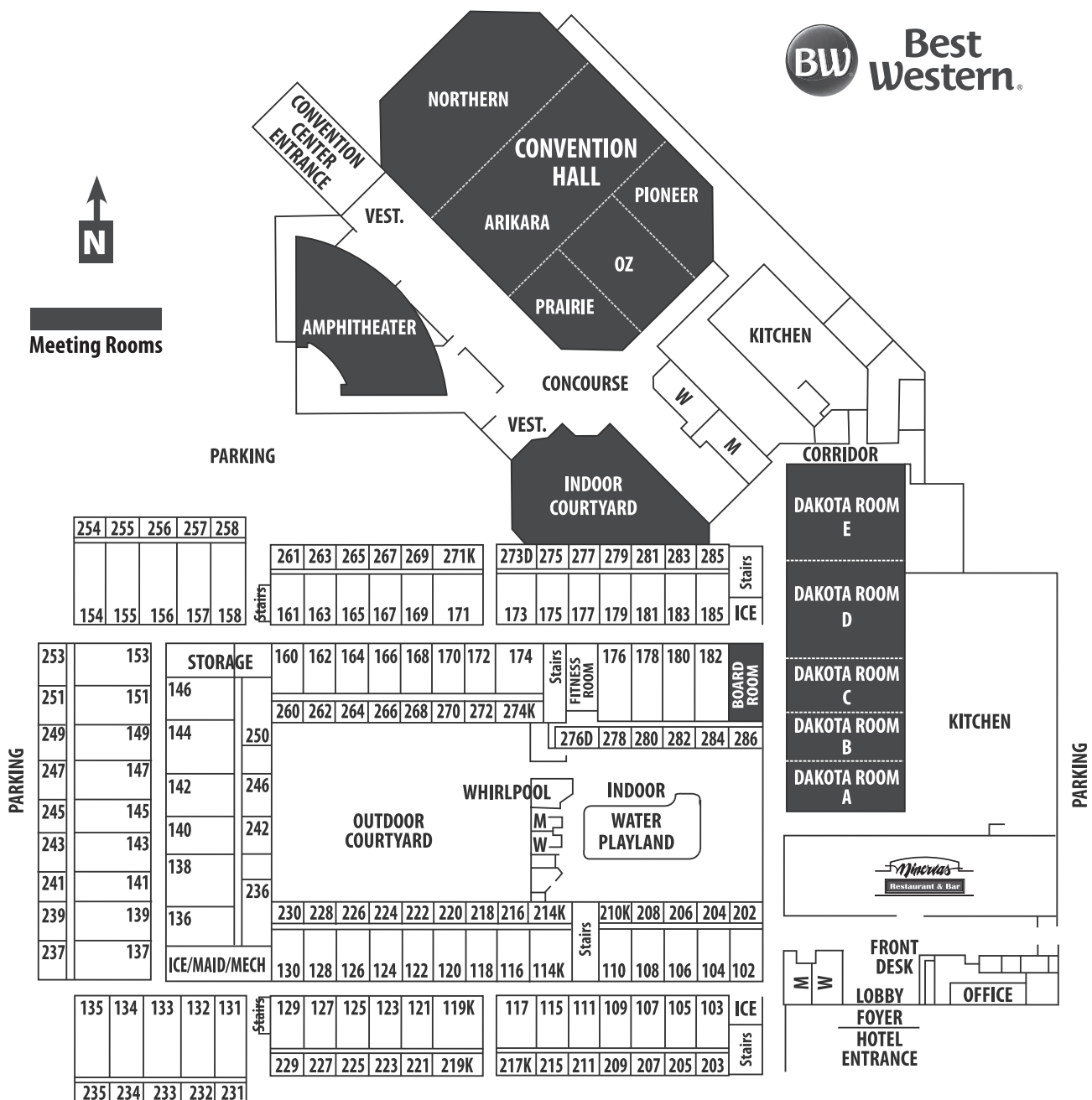
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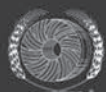
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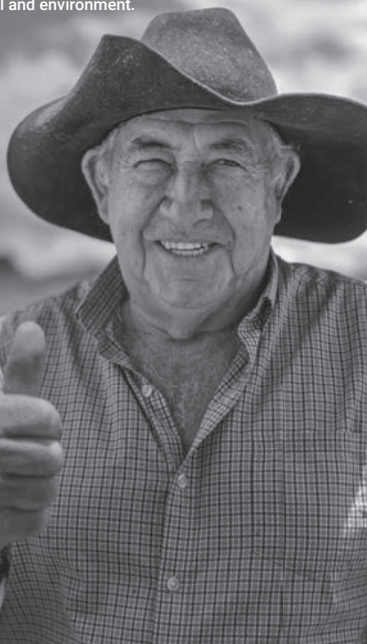
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Growing nutrient dense food, using environmentally sound farming methods that support the long-term sustainability of human communities, soil, and water resources has been the focus of NPSAS for 40+ years. When we started, there were few others interested in our ideas, and markets for our products were hard to find. All that has changed. Your new membership or membership renewal will help us continue to build our community of support as we work to meet the increasing demand for knowledge and tools to build a more sustainable way of life.

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Thanks for your continued support of NPSAS!

The NPSAS Board & Staff are committed to honoring and building on what the founders created and previous boards and staff nurtured. We will serve the mission of the organization to the highest standard to ensure NPSAS is here to serve for generations to come.



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Meatloaf with Chili Sauce



Ingredients

- 1 1/2 lbs. grassfed ground beef
- 1 egg, slightly beaten
- 1- 8 oz. can tomato sauce, divided Combine 4 oz. with 1/2 cup water.
- 3/4 cup rolled oats, uncooked
- 1/3 cup chopped onion
- 1/2 tsp. salt
- 1/4 tsp. pepper



Instructions

1. Heat oven to 350 degrees. Combine all ingredients except reserved 4 oz. tomato sauce. Mix and put in 9 by 5 inch loaf pan. Stir 1 tsp. chili powder into reserved 4 oz. tomato sauce, and pour over the meat mixture. Bake for one hour or until meat reaches 160 degrees internally. Let stand 5 minutes before serving, with chili sauce on the side.
2. We enjoy this recipe with buckwheat, a gluten-free grain. The mild flavor of buckwheat lends itself well to any seasonings, so it can be used as a side dish in many recipes. It can also be substituted for cooked rice. To cook buckwheat, bring 2 cups of lightly salted water to a boil and add 1 cup of buckwheat groats, which are tan in color without the dark outer hull. Cover and simmer on low for 20 minutes or until the moisture is almost absorbed. Remove from heat, and stir in butter or oil so it's not sticky. Buckwheat is good with honey mixed in and cinnamon sprinkled on top.



Oat Crepes



Ingredients

- 1 1/2 c. Oat flour
- 1 1/2 c. Milk
- 3 lg. eggs
- Pinch of salt



Instructions

1. Combine all ingredients and whisk well or blend ingredients in a blender.
2. Heat a non-stick pan over medium-high heat. Spray the pan lightly With cooking spray. Once the pan is hot, pour 1/3 cup of the batter into the pan while turning it in a circular motion with the other hand to spread the batter thinly around the pan. Cook for 1-2 minutes on one side until set. Then flip and cook for another 30 seconds on the other side. Stack the cooked crepes on a plate and continue with the rest of the batter. Serve with fillings of choice and enjoy! Yields about 14 crepes which don't last long in this household!
3. The crepes in the picture are filled with peanut butter, honey, and banana on the left (popular fillings with the kids) and cranberry creme on the right.

NPSAS Member Miller Feed & Cattle

These questions were answered by Brett Miller who farms with his parents and brother.

Tell us about your farm?

We raise oats, yellow peas, sunflowers, soybeans, buckwheat, millet, alfalfa, and cattle

Tell us a little about your family?

My wife Katie and I have 4 daughters and 2 more on the way. I farm with my parents Allen and Kim Miller, and my brother, Craig, and his wife, Stephanie. They have 3 daughters.

What year were you first certified organic?

2009

What is the best advice you've gotten that helped your operation?

Listen and watch what other have tried or are trying.



Part of the Miller crew out working with the cattle

Do you have anything new you're working on or a goal for the operation next 5 years?

Balancing farming and family effectively

Do you have any great advice for new and transitioning farmers?

Don't be afraid to hustle and work hard. Ask questions.

What advice, if any, do you have for bringing in the next generation to your operation?

Be open to new voices and ideas, I think my dad has done this pretty well.

Do you have a change you have made in your operation that made a big difference for you?

Adding more crops to lengthen our rotation has made a difference for us.

Who is your mentor?

My dad, Allen and my father-in-law Mike Klipfel who also farms organically.

Why are you part of NPSAS, and how does it help your operation?

Networking with others and learning from them.



The 4th Generation of Millers on the farm.

Woofing: A Hands-On Education in Organic Farming

Organic farming has been growing in popularity over the years, with more and more people seeking out sustainable and eco-friendly food sources. Taking that step without any background knowledge can be intimidating. There are several options to learn about new opportunities, but nothing beats hands-on, experiential learning. If you're interested in learning more about organic farming and want to learn by doing, WWOOFing could be the perfect opportunity for you.

WWOOF, which stands for World Wide Opportunities on Organic Farms, is a global network that connects volunteers with organic farmers. WWOOFers, as the volunteers are called, work on farms in exchange for room and board. This unique arrangement offers a valuable educational experience for those passionate about organic agriculture.

In 2010, Sean Hyatt, a former NPSAS board member, and his wife served as WWOOFers in Australia before getting married. When asked about their experience, Sean said, "Wwoofing provided us with an amazing opportunity to experience sustainable and organic living in many different forms. We learned



Sean and fellow WWOOFer Michael are working on a compost pile in Australia.. They are still friends today. Photos Courtesy of Sean and Denise Hyatt

how we wanted to set up our own farm and got a lot of inspiration and insight into practical farming. The many conversations we had with the people we stayed with and the questions we got to ask helped us a lot to dream and plan up our place."

The opportunity of WWOOFing compared to other on-the-job experiences is different but no less valuable. WWOOFing provides an immersive learning experience where you can get your hands dirty and learn directly from experienced organic farmers. You'll have the chance to participate

in a variety of tasks, such as planting, weeding, harvesting, composting, and animal care. This practical experience will deepen your understanding of organic farming principles and techniques.

This unique opportunity allows participants to develop a wide range of skills that are valuable in both farming and other fields. You'll learn about soil health, crop rotation, pest and disease management, and sustainable farming practices. You'll also gain skills in teamwork, problem-solving, and time management.

One of the big differences between WWOOFing and learning from other traditional on-farm learning experiences in the US is the cultural exchange opportunity that WWOOFing offers. If you choose to WWOOF in another country, you can connect with people from diverse backgrounds and cultures. You'll live and work alongside farmers learning more than perhaps just a different language, but most certainly learning about their traditions, customs, and philosophies. This cultural exchange can broaden your perspective and deepen your appreciation for different ways of life.



Sean's wife Denise works to extract honey as a WWOOFer on a farm in Australia

Continued on page 27

The Unexpected Expertise of Organic Inspectors

While often labeled “experts,” organic inspectors like myself learn most from the farmers they inspect. My formal agricultural education, while valuable, pales in comparison to the wealth of knowledge I’ve gained directly from farmers in the field. They are the true experts, and the ongoing dialogue with them is the most rewarding aspect of my job.

Inspectors gather information through a multifaceted approach: careful observation of farm practices, a thorough review of farm records, and in-depth interviews with the farmers themselves. A significant portion of this crucial information emerges from these direct conversations with the farmers. Our primary role is to verify that their farming practices align with the rigorous standards outlined in their Organic System Plan and comply with the comprehensive regulations set forth by the USDA. While ensuring compliance is paramount, fostering open and honest communication with farmers is equally vital.

The world of organic farming continually presents unexpected surprises. What I often perceive as an innovative technique often turns out to be a time-honored family tradition passed down through generations. For instance, I encountered a farmer who employed cross-planting to effectively suppress weeds. Upon further discussion, I learned that his grandfather had utilized this same method for cultivating grain crops. Sharing this valuable knowledge with another farmer facing a similar challenge led to a successful implementation of cross-planting for safflower cultivation.

Even seemingly simple ideas can have a profound impact. During an inspection, I learned about a low-tech yet ingenious horn fly trap devised by a resourceful farmer. Intrigued, I delved deeper and discovered a strikingly similar design in a 1942 USDA publication. Similarly, the concept of using a vacuum



Margaret Scoles (far left), IOIA Ex. Director with students interested in becoming inspectors at a recent class in Minnesota.

to remove flies from cows, initially met with some skepticism, sparked a potential solution for fly control in a slaughterhouse.

While organic inspectors are not authorized to provide direct advice to farmers on how to overcome specific certification challenges, open discussions and the sharing of publicly available information are strongly encouraged. This fosters a collaborative learning environment where both farmers and inspectors gain invaluable knowledge from each other.

Organic inspecting offers a uniquely rewarding career path for farmers seeking alternative avenues. It allows them to leverage their existing knowledge and experience while exploring the diverse and fascinating world of organic farming

practices across the country. For individuals passionate about contributing to the growth of the organic sector, organic inspecting provides a unique opportunity to engage with dedicated farmers, learn from their expertise, and play a crucial role in building a more sustainable and resilient food system.

NOTE: Margaret Scoles serves as Executive Director of IOIA, maintaining the International Organic Inspectors Association office in Montana since January 1999. She has over 30 years of organic inspection experience for numerous certifiers (mostly in the US), including inspection of farms, livestock, and processors and has been teaching organic inspector training courses since 1989.

OCIA R&E Mentorship Program



Paid Mentor Opportunities for Organic Growers:

As a Core Partner in the USDA's Transition to Organic Partnership Program (TOPP), OCIA Research & Education is looking for organic growers in the Great Plains Region (NE, CO, KS, OK, ND, SD) to serve as mentors to farmers who are transitioning to organic.

Mentors need to be certified by any USDA-NOP certifier and in good standing OR have a minimum of 3 years experience in organic production. A commitment to 45 hours per 12-month cycle will include 2 on-farm visits, 3 touch points during the growing season, and mentor trainings. Mentors will be provided a \$3,000 yearly stipend for their participation and travel.

If you are interested in being contacted further regarding a mentor training for this exciting new program, please email at info@ocia.org.

Thank you,

Angie Tunink

Executive Director
OCIA Research & Education, Inc.

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INNOVATION: Drones Provide Education

Drones have revolutionized the way farmers and ranchers manage their operations, providing them with a wealth of data and insights that were previously inaccessible. These aerial marvels have transformed traditional agricultural practices, enabling farmers to make more informed decisions, increase efficiency, and ultimately boost their yields.

One of the most significant advantages of drones is their ability to capture high-resolution images and videos of vast areas of land in a fraction of the time it would take for ground-based surveys. These aerial images provide farmers with a bird's-eye view of their fields, allowing them to identify issues such as pest infestations, nutrient deficiencies, and irrigation problems that might otherwise go unnoticed. By quickly pinpointing these issues, farmers can take immediate action to address them, minimizing potential losses.

Furthermore, drones equipped with specialized sensors, such as multispectral and thermal cameras, can collect data on various aspects of crop health and soil conditions. Multispectral cameras capture images in different wavelengths of light, revealing information about plant vigor, chlorophyll content, and nitrogen levels. This data helps farmers assess the overall health of their crops and identify areas that require additional fertilization or irrigation. Thermal cameras, on the other hand, can detect temperature variations in the soil and plants, allowing farmers to identify water stress, disease outbreaks, and other hidden problems.

By analyzing the data collected by these sensors, farmers can create detailed maps of their fields, highlighting areas of concern and areas of optimal growth. These maps can be used to optimize fertilizer and pesticide applications, ensuring that these resources are used efficiently and minimizing their environmental impact. Additionally, drones can be used to monitor livestock, track their movements, and identify sick or injured animals. This information helps ranchers manage their herds



Farmer using a drone - Photo courtesy of Tenacity Ag

more effectively and improve animal welfare.

Another valuable application of drones in agriculture is precision spraying. Drones equipped with specialized nozzles can accurately apply pesticides and fertilizers to crops, eliminating tire tracks and the need to drive traditional equipment through the field in wet conditions. This allows for more timely applications, lower cost, and higher yields. This not only helps to protect the environment but also reduces costs for farmers. Furthermore, drones can be used to assess the effectiveness of these treatments, allowing farmers to fine-tune their application strategies for optimal results.

"Most of the drones used for spraying can also replace the liquid tank with a granular tank and spreader, making them useful for spreading various seeds and fertilizers from the air. The largest of these types of drones have a capacity of up to 18.5 gallons and speeds up to 40 mph, allowing for productivity to reach as high as 60 acres per hour. These spray drones have been used for pest management and fertilizer applications in both conventional and

organic production." shared Devin Nohl, CEO at Tenacity Ag, a provider of drones in the agriculture industry.

In addition to their practical applications, drones also provide farmers with valuable insights into their operations. By analyzing the data collected by drones, farmers can identify trends and patterns in their fields, such as historical yields, soil moisture levels, and pest outbreaks. This information can help them make long-term planning decisions, such as crop rotation and irrigation scheduling, to optimize their operations for future success.

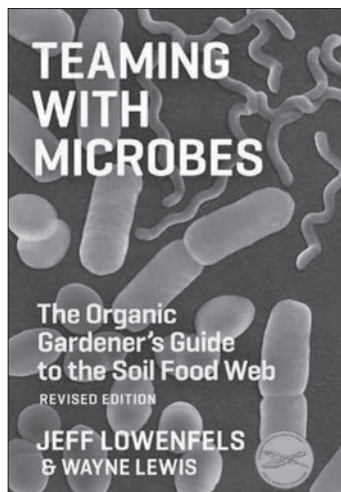
However, the use of drones in agriculture is not without its challenges. One of the main challenges is the regulatory environment surrounding drone operations. Different countries and regions have varying regulations regarding the use of drones for commercial purposes, including agriculture. Farmers must comply with these regulations to ensure that their drone operations are legal and safe.

Another challenge is the cost of drones and their associated equipment. While the cost of drones has decreased significantly in recent years, they can still be a significant investment for many farmers.

Continued on page 27

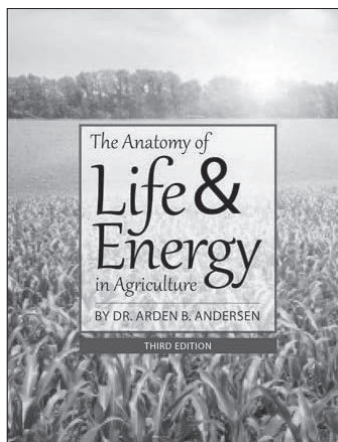


Great Reads for Better Farming



Teaming with Microbes by Jeff Lowenfels and Wayne Lewis

This book is a captivating exploration of the hidden life in our soil, unveiling the crucial role microorganisms play in creating vibrant gardens. With a blend of scientific insight and practical gardening tips, Lowenfels empowers readers to cultivate soil health naturally. This book encourages a shift from conventional practices to organic methods, showcasing how nurturing the soil food web enhances plant vigor and yields. Each chapter bursts with valuable knowledge that transforms gardening into a deeply interconnected experience. Dive into this enlightening read and unlock the secrets of thriving ecosystems right beneath your feet—your plants will flourish!



The Anatomy of Life and Energy in Agriculture by Dr. Arden B. Andersen

The Anatomy of Life and Energy in Agriculture offers a compelling exploration of the interconnectedness of life and energy within agricultural systems. It challenges conventional farming practices by emphasizing the importance of holistic and regenerative approaches. By delving into the intricate relationships between soil, plants, animals, and the environment, the book provides valuable insights for farmers, researchers, and anyone interested in sustainable and ethical food production. It serves as a thought-provoking framework for understanding and improving agricultural systems, inspiring readers to consider a more harmonious and regenerative approach to food production.

Woofing: A Hands-On Education...

Continued from page 23

The experience alone made quite an impression on Sean and Denise. "You could spend years traveling that way, there are so many opportunities, and you will always feel like you missed out on something. We would definitely 100% recommend it to anyone. Doesn't matter if you are interested in gardening, canning, homesteading or large-scale agriculture, there is something for everyone"

You can be any age and be a WWOOFer. But, if you're in the younger age demographic, Sean shared this detail, "If you are under 30. Australia offers a once-in-a-lifetime work and travel visa. If you're in this age group, do it!"

The community building you gain from WWOOFing is also unique. WWOOFing fosters a sense of community among WWOOFers and farmers. You'll have the chance to meet like-minded

individuals who share your passion for organic farming and sustainable living. You can form lasting friendships and support networks within the WWOOF community.

While any new job likely offers personal growth and discovery, WWOOFing can offer that on a higher level and can also be a transformative experience. You'll learn to adapt to new environments, work independently, and overcome challenges. You'll also develop a deeper connection to nature and a greater appreciation for the food we eat.

WWOOFing offers a unique and valuable opportunity to learn about organic farming, gain practical experience, and connect with like-minded individuals. If you're passionate about sustainable agriculture and want to make a difference, consider joining the WWOOF community and embarking on your own farming adventure.

INNOVATION: Drones Provide Education...

Continued from page 26

Large spraying drones range from \$20,000 to \$45,000 for a complete kit. Additionally, the specialized software and data analysis tools required to make the most of the data collected by drones can be expensive.

Despite these challenges, the benefits of using drones in

agriculture far outweigh the costs. By providing farmers with unprecedented access to information and insights, drones are revolutionizing the way we produce food. As drone technology continues to advance and become more affordable, drones will become an essential tool for farmers and ranchers around the world.



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