

# Agriculture and Natural Resources

NDSU

EXTENSION

Providing the educational programs to help people transform air, water and soil into food, fuel, fiber and a sustainable environment

Agriculture is critical to the economy of North Dakota and routinely accounts for approximately 30 percent (\$9.1B in 2015) of all business activity in the state. Extension Agriculture and Natural Resources (ANR) specialists and county-based agents work to ensure that the latest research-based information is available to all who seek it. These same specialists and agents continually probe and listen for agriculture's next "need," and develop innovative educational programs and field studies to meet those needs as fast as possible.



**6,932** downloads of the Extension **Pest Management App** since 2014, combining the Extension Plant Disease Management, Insect Control and Weed Control guides into a digital form

The app has the potential to save future printing costs of \$3 per copy

Approximately

**15,000** producers attended county Extension **farm bill education meetings** in 2014



**90%** of respondents used the **Extension-developed farm bill decision aid tool** when making their final decision with FSA; of these respondents, **83% used the decision tool for ALL** of their acres

As of Dec. 2018, an estimated **\$1.3 billion** in farm bill payments were made to North Dakota producers since that training

Soil health networking used

**high tech** (twitter and video) and **low tech** (café talks)

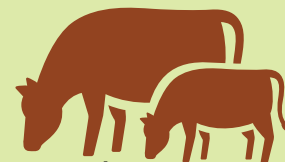
ways to share science-based and applied information to individuals with a common interest in soil health

This allowed everyday observations and short bursts of information as well as follow ups with personalized information implemented by producers



Forage testing, along with follow-up consultations and recommendations by Extension agents and specialists, prevented over

**16,000** cattle from being exposed to toxic forages during the 2017 drought



Other Extension drought responses:

- developed a platform to streamline **weekly drought condition reporting**
- played a key role in **testing forage and water** for producers
- **answered questions** through one-on-one conversations, articles and videos, and hosting meetings
- **provided information to producers** through meetings, presentations, media interviews, news releases and columns, publications and web-based materials

N.D. producers using precision ag technologies of all kinds realized an **\$88** per acre benefit compared to producers not using them

Extension has been providing educational programs on precision ag for more than **23 years**



In 2017,

**292** North Dakota gardeners **evaluated 106 promising home vegetable and herb varieties**

**99%** of responding households were **introduced to new varieties**

**87%** of responding households reported **more productive gardens**

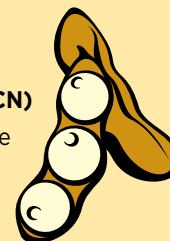
**89% of children** in responding households who grew vegetables **improved their diets**

**89% of children** in responding households **improved their level of physical activity**



About

**3,000** soybean cyst nematode (SCN) samples have been processed since 2013 because of county Extension office test kit distribution, helping growers identify and manage SCN



The value of planting resistant varieties when SCN is present is approximately a **40%** yield increase

More than

**3,800** samples processed and **26,400** tests performed at the self-funded NDSU **Plant Diagnostic Laboratory** in 2017 resulted in **informed pesticide use decisions and economic savings** for North Dakotans



For more information on these and other impacts of NDSU Extension, go to [www.ag.ndsu.edu/extension](http://www.ag.ndsu.edu/extension) or contact Charlie Stoltenow at 701.231.7171 or [charles.stoltenow@ndsu.edu](mailto:charles.stoltenow@ndsu.edu).

## ■ Cropping Systems

- Soybean cyst nematode
- Increasing salinity and sodicity awareness
- Managing weeds under different production systems
- Managing herbicide-resistant Weeds
- Prevention of Palmer amaranth incursion into North Dakota
- Managing Cercospora in sugar beets
- Managing root maggot in sugar beets
- Shop Talks: Sugar beet production
- Managing soil water through drainage and irrigation
- Using farm chemicals safely
- Pesticide application certification program
- Managing soil fertility
- Enhancing soybean yield and profitability
- Management of cereal crop diseases
- Wheat midge soil survey
- Management of stored grains
- Integrated pest management
- Introduction to organic agriculture
- Precision agriculture technology and data management

## ■ Farm Business Management

- Managing farm margins and financial decisions
- Ag lenders outlook and professional development
- Determining land values, cash rent and net return on land
- Understanding and coping with farmer/rancher stress issues
- Understanding the farm bill: ARC vs. PLC
- Understanding hedging and other risk management tools
- Price risk management for livestock producers
- Design Your Succession Plan
- Annie's Project – increasing knowledge and involvement of farm women
- Bioenergy and bio-byproduct economics

## ■ Horticulture and Forestry

- Master Gardener program
- Jr. Master Gardener program
- Promoting pollinator conservation
- Trees of Our Town—selecting the right tree species for your community
- Saline soils and shrubs
- Spring Fever Garden Forum
- Garden, horticulture or tree workshops

## ■ Livestock Management

- Stop the Truck—reviewing livestock health records before shipping
- Livestock mortality composting
- Antimicrobial stewardship
- Improving lamb quality and value
- Sheep education for new flocks
- Corn silage quality program
- Manure management
- Managing livestock during a drought
- Nitrate management in feeds and forage
- Feeding cattle for profit
- Livestock quality assurance
- Bovine emergency response program

## ■ Natural Resources Management

- Setting stocking rates
- Range and pasture management—grazing readiness
- Cover crops for healthy soil
- Reclamation and remediation of soil impacted by oil extraction
- Healthy soil schools
- Sodic soils: Should I tile the field or add an amendment?
- Café Talks: Soil Health—guiding farmer learning through networks
- Preparing for floods

## ■ Services Offered

- Crop and Pest Report—weekly
- Market Adviser column—monthly
- Plant Diagnostic Laboratory
- Certified Crop Adviser School
- Scout School
- Nitrate testing
- Feed testing
- Livestock water testing
- Variety trials and demonstrations

## ■ Youth Programs

- Livestock Camp
- Judging teams
- Kids, Compost, Crops and Consumption

This is a partial listing only. Please check with your local Extension office for more programs.