

Nebraska Extension's Weather Ready Farms Certification Program



Overview

The Weather Ready Farms certification program is designed to **improve or increase resilience towards the impacts of extreme weather on Nebraska's farms**. This program recognizes and rewards Nebraska farmers who prioritize weather readiness and are committed to reducing the impact of extreme weather events on their farms.

About the Program

The Weather Ready Farms certification program is a **one- or two-year program**. The length of the program will be dependent on a participant's previous and current experience implementing crop management practices related to extreme weather and climate variation.

The program will be delivered locally or regionally, with local or regional Extension faculty and staff coordinating the program and communicating with participants. **Participants apply to the program by submitting a self-assessment**, which serves as a part of the application.

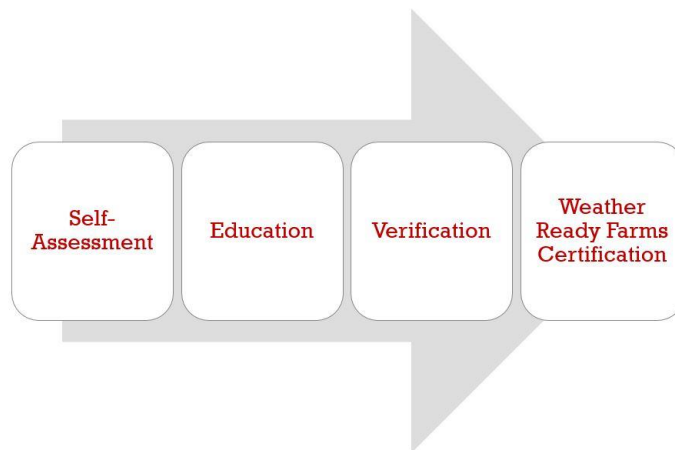
Throughout the certification program experience, **participants will learn through face-to-face and online teachings methods**.

Certification Category

At this time, there is only one category in which farmers can receive certification: Crop Production. More categories will be added in the future.

How Certification Works

There are **four phases** to the Weather Ready Farms certification program.



- **Self-Assessment:** Participants complete a self-assessment to determine areas of vulnerabilities on the farm.
- **Education:** Participants attend a variety of Nebraska Extension programs and partner events, where they learn about new research and ways to implement practices on the farm. In the Crop Production category, participants learn about topics like climate literacy; management of soil, water, pests, and crops; and disaster and emergency planning and preparedness.
- **Verification:** Participants prioritize areas on the farm where they can implement new management strategies, and these practices are verified by a third-party provider.
- **Certification:** Participants who have completed phases 1-3 receive the Weather Ready Farms certification status.

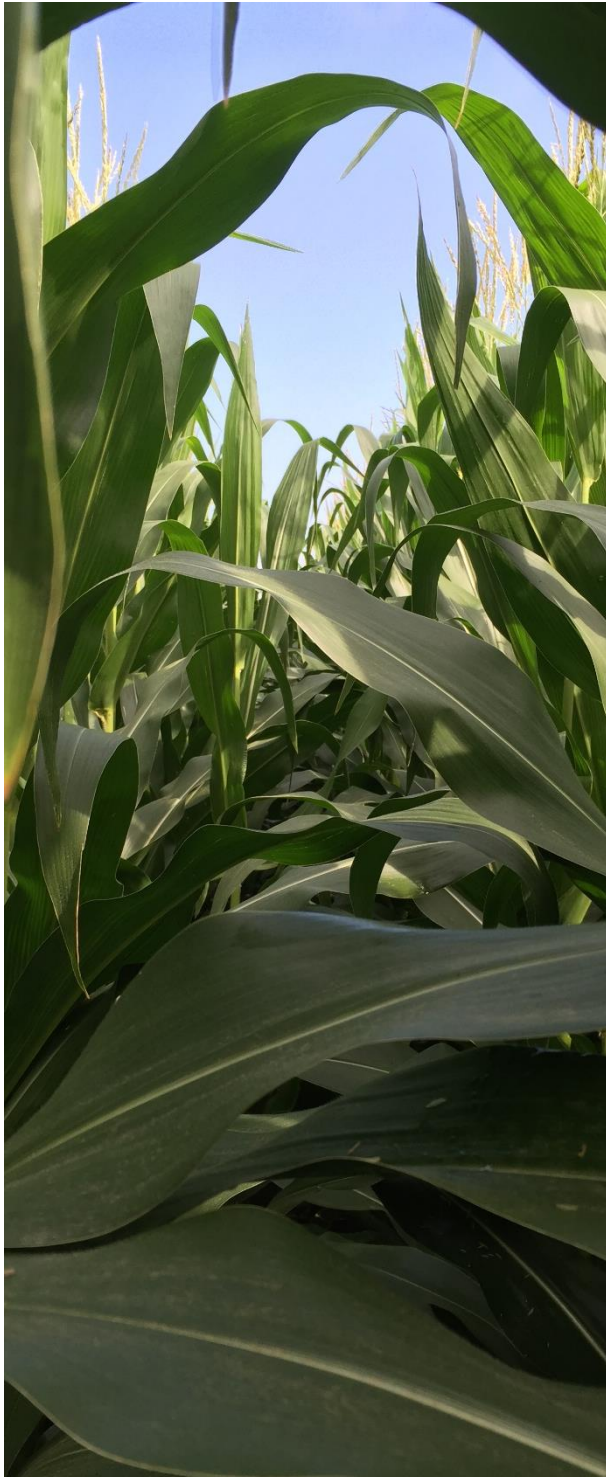
Certification Benefits

When this program gets the developed, the goal is for the potential benefits for receiving the Weather Ready Farms certification status to include:

- Early access to Nebraska Extension, University of Nebraska-Lincoln, and program partners' educational resources and programs
- Certification signage for the farm and local recognition
- Insurance premium discounts
- Improve or increase resilience towards the impacts of extreme weather on the farm

Weather Ready Farms'

Phases to Certification



Overview

There are **four phases** to the Weather Ready Farms certification program:

- Self-Assessment
- Education
- Verification
- Certification

The Weather Ready Farms certification program is approximately a **one- or two-year program**. The length of the program is dependent on a participant's previous and current experiences implementing crop management practices related to extreme weather and climate variation. The self-assessment and education phases take participants approximately 9-12 months to complete, and the verification and certification phases takes an additional 3-12 months.

Self-Assessment Phase

Each participant takes a self-assessment upon acceptance into the certification program. The self-assessment (**Appendix A**) allows both the participant and the certification program team 1) to understand what practices the participant is already doing to reduce the impact of climate variation and extreme weather on the farm, and 2) to develop a learning plan for the participant.

The self-assessment is divided into three tiers: 1, 2, and 3.

- **Tier 1** encompasses introductory practices to increase farm resilience to extreme weather.

- **Tier 2** includes practices that are intermediate in their approaches to increase farm resilience to extreme weather. These practices may require more time and resources to implement.
- **Tier 3** includes advanced management practices that are the most time and resource intensive.

Education Phase

The education phase of the certification program includes face-to-face and online teaching methods, and it takes place over 9-12 months. All participants enroll in core education programs. Each participant enrolls in different elective programs, which are based on the participant's self-assessment and interests. An example of an individualized learning plan can be found on **Appendix B**.

Verification Phase

In the verification phase, participants reflect on concepts learned and apply new or alter crop management strategies to reduce the impact of climate variation and extreme weather. A third-party verifier works with each participant to confirm the management strategies used on his/her farm. Verification encompasses information from the self-assessment and education phases, and this phase of the certification program is approximately 3 months for each participant.

Once a participant is ready to reach certification, a third-party verifier will review the participant's initial self-assessment and implementation of crop management strategies at the participant's farm. The goal of program is to identify ways in which the participant has increased on-farm resilience to extreme weather; the results will be subjective for individual farmers and their farm, experiences, and decisions. Following the verification meeting, the verifier, in conjunction with the Nebraska Extension project team, will determine certification status and notify the participant.

Certification Phase

The certification phase is the final phase of the Weather Ready Farms program. For participants to achieve certification, they must demonstrate management practices that increase resilience to extreme weather. Examples include:

- If a participant's initial self-assessment mostly falls in Tier 1, certification would be awarded if the participant implements and documents Tier 2 management practices.



Figure 1. A mockup of a farm sign that indicates Weather Ready Farms certification.

- If a participant's initial self-assessment mostly falls in Tier 2, certification would be awarded if the participant implements and documents Tier 3 management practices.
- In the rare event a participant's initial self-assessment mostly falls in Tier 3, certification would be awarded through an agreement of personalized management practices between the participants and the Nebraska Extension project team.

Upon notification of the certification status, the participant is recognized for accomplishments. Means of recognition may include but are not limited to:

- Farm sign (example shown in Figure 1)
- Feature in local or regional publications or media
- Reception or banquet
- State Ag Day ceremony

For More Information

For more information or questions about the Weather Ready Farms certification program, contact **Ashley Mueller** at ashley.mueller@unl.edu or **Tyler Williams** at tyler.williams@unl.edu or 402-441-7180.

Weather Ready Farms Self-Assessment

Number of acres farmed _____ Number of acres irrigated _____

Weather Ready Farms Self-Assessment

Number of acres farmed _____ Number of acres irrigated _____

Phase 1

Category	Practice	Measurement Progress		
CP-1.1	Fieldprint from Field to Market program <i>Measurement: 10% of acres or representative of operation (3 field min)</i>	☐ None	☐ Partially (# acres_____)	☐ Yes
	<i>Recommendation: Create a Fieldprint using the Field to Market Fieldprint Calculator found at https://fieldtomarket.org/ for fields representing the scope of your operation. Create an account and provide requested data. Reports will be generated for each separate field.</i>			
	Explanation of fields selected: 			
CP-1.2	Diverse corn and soybean planting dates and relative maturity plan <i>Measurement: Record of targeted dates and maturities and future plan</i>	☐ No	☐ Partially, (% acres in largest MG_____)	☐ Yes
	<i>Recommendation: Target dates for early and diverse plantings and diverse relative maturities, but only if soil conditions arise. Less than 50% of acres planted to a specific maturity group. Understand frost/freeze risk. Generate a back-up plan if conditions are not favorable to maintain diverse planting and relative maturities.</i>			
	Explanation of plan and back-up plan: 			

Date of Avg. Last 28°F _____ Avg. First 28°F _____

CP-1.3	Irrigation scheduling <i>Measurement: all (100%) irrigated acres utilize recommendations</i>	☐ N/A	☐ No	☐ Partially (# acres_____)	☐ Fully		
	<i>Recommendation: Monitor precipitation (rain gauge within 1 mile of each field), evapotranspiration (on-site or provide source estimate), and soil moisture (sensors or provide estimate method) to schedule irrigation.</i>						
	Explanation of scheduling method:						
CP-1.4	Minimize Fall N application and use N inhibitors <i>Measurement: N fertilization plan and record</i>	☐ None	☐ Partially (% near/in-season_____)	☐ Fully			
	<i>Recommendation: At least 50% of total N applied near planting or in-season; Use N loss inhibitors on all fall and early spring applications. *NRCS has CSP enhancement for N use BMPs.</i>						
	Comments:						
CP-1.5	Active programs to reduce soil erosion utilizing reduced or no tillage <i>Measurement: all (100%) acres use recommendation, NRCS Highly Erodible Land conservation compliance</i>	☐ No	☐ Partially (# acres_____)	☐ Yes			
	<i>Recommendation: No-till should be utilized in all reasonable locations, especially HEL (highly erodible lands) and sloped fields. Exceptions can be made for extreme cases or common sense. Maintaining residue coverage should be considered a high priority through no-till or cover crops. All acres should have programs to reduce soil erosion to maintain FSA conservation compliance*. *Based on 70% residue cover.</i>						
	Explanation of soil and residue management:						
CP-1.6	Field locations and directions identified	☐ No	☐ Partially (% fields_____)	☐ Fully			

	Measurement: All field locations identified by name and location with directions for responders.			
	Recommendation: A document or map will be created with the names and locations of fields, bin sites, and farm sites, including directions to be accessed and distributed to first responders in case of emergency. *All farm employees/members have access			
	Comments:			
CP-1.7	Emergency information is maintained and stored Measurement: Emergency numbers, farm map, and additional information (i.e. 911 address) is stored in a secure, concealed mailbox or lockbox at headquarters	☐ No	☐ Partially Missing_____	☐ Yes
	Recommendation: Emergency information should be available to the property owner, employees, emergency personnel, and first responders to best respond to an incident. Information may include but not be limited to emergency numbers, farm map, locations of hazardous materials (ex. Fuel barrels) and employee contact information and be stored in a secure location that is concealed yet accessible.			
	Comments:			
Phase 2				
Category	Practice	Measurement		
CP-2.1	Use results from on-farm research studies Measurement: Record of studies referenced	☐ No	☐ Yes	
	Recommendation: Participate in a Nebraska On-Farm Research Network meeting and/or use results to make better management decisions. Meetings are held annually, typically in February, in multiple locations throughout the state.			
	Comments:			
CP-2.2	Diverse crop rotation Measurement: Incorporate a third crop on one or more fields	☐ No	☐ Yes	

	<i>Recommendation: Multiple crops should be rotated within the same field between years. At minimum, rotation must consist of three different crops (example: Year 1 is corn, Year 2 is soybean, Year 3 is wheat). Preferably, crops in the rotation would represent different growth cycles, like winter annual crops and summer annual crops.</i>				
	Comments:				
CP-2.3	Use of waterways, underground outlet, terraces, buffers and prairie strips to reduce soil erosion <i>Measurement: Evidence of practices on vulnerable fields</i>	☐ NA	☐ No	☐ Partially % of acres	☐ Fully
	<i>Recommendation: Fields vulnerable to soil erosion should have erosion control methods implemented. Methods are designed to carry surface water across farmland without causing soil erosion and have a safe outlet.</i>				
	Comments:				
CP-2.4	Irrigation scheduling on a field basis <i>Measurement: Record of scheduling at field level</i>	☐ N/A	☐ No	☐ Partially (% of fields____)	☐ Yes
	<i>Recommendation: Monitor precipitation within field, evapotranspiration (on-site or provide source estimate), and soil moisture (multiple sensors or satellite estimate) to schedule irrigation.</i>				
	Irrigation scheduling methods per field:				
CP-2.5	Field scouting and pesticide use with multiple modes of action used in subsequent years	☐ NA	☐ No	☐ Partially (# of acres____)	☐ Fully

	Measurement: Record of products at field level and IPM strategy						
	Recommendation: A scouting plan is in place for each field and use available thresholds for pests. Use multiple modes of action with each subsequent application. Back up plans are developed to address potential impacts from weather scenarios for excess moisture, late-planting, crop changes, early or rapid growth, etc.						
	Scouting methods, IPM strategy and backup plan:						
CP-2.6	Utilize cover crops Measurement: Plant cover crops on dominant, critical soils.	☐ None	☐ Partially (# of acres_____)	☐ Fully			
	Recommendation: Target fields with excess moisture issues and dominant, critical soils and concentrated flow areas. Include any number of cover crops species. Planting and termination should be based on NRCS Cover Crop Practice Standard.						
	Cover crop usage (or non-usage) explanation:						
CP-2.7	Split Nitrogen applications and no fall applications Measurement: Nitrogen application schedule	☐ No	☐ Partially (# of acres_____)	☐ Fully			
	At least 25% of total N applied in season as sidedress or fertigation and no Fall applied N. Apply N using UNL recommended rate.						

	Nitrogen Management Plan:			
CP-2.8	Family members and employees are trained in CPR and first aid <i>Measurement: all family members and employees are trained</i>	☐ No		☐ Yes
	<i>Recommendation: CPR is a lifesaving technique useful in many emergencies in which someone has stopped breathing or the heartbeat has stopped. First aid is the assistance given to someone suffering from an injury or illness, with care provided to preserve the life, prevent worsening, or to support recovery.</i>			
	Comments:			
CP-2.9	First Aid kits are available is easily accessible locations and maintained throughout the farm and vehicles <i>Measurement: Record of first aid kit locations and their maintenance schedules</i>	☐ No	☐ Partially	☐ Fully
	<i>Recommendation: First Aid kits contain it useful medical supplies that can be used in giving assistance to someone who is suffering from an injury or illness. Because some kit supplies expire (i.e. pain relief medications and triple antibiotic ointment), kits should be maintained every year; expired items should be replaced.</i>			
	Comments:			

Phase 3

Category	Practice	Measurement			
CP-3.1	Conduct an on-farm research study <i>Measurement: Study protocol</i>	☐ No		☐ Yes	
	<i>Recommendation: Conduct an on-farm research study and attend a Nebraska On-Farm Research Network meeting to share results. Work with an Extension Educator or Specialist to design a study of interest.</i>				
	On-Farm Research study:				
CP-3.2	More diverse crop rotation <i>Measurement: At least three crop rotation on all fields.</i>	☐ No	☐ Partially (% of acres_____)	☐ Yes	
	<i>Recommendation: Three or more crops, in rotation, including cool-season (i.e. wheat, oats, peas), warm-season crops (i.e. corn, soybean, sorghum, summer forages), or perennial crops (i.e. alfalfa, grass) on all fields.</i>				
	Crop rotation plan:				
CP-3.3	Variable rate and irrigation scheduling on a field basis <i>Measurement: Record of scheduling</i>	☐ NA	☐ No	☐ Partially (# of acres_____)	☐ Fully
	<i>Recommendation: Monitor precipitation (rain gauge in-field), evapotranspiration (on-site or provide source estimate), and multiple soil moisture sensors to schedule variable rate irrigation on each field. * NRCS has IWM Plan</i>				

	Variable Rate Irrigation plan:			
CP-3.4	Field scouting and pesticide use with multiple modes of action used in subsequent years <i>Measurement: Record of products at field level</i>	☐ No	☐ Partially (# of acres_____)	☐ Fully
	<i>Recommendation: A scouting plan is in place for each field and use available thresholds for pests as well as the presence of beneficial organisms. Additional cultural, biological, and physical tactics are used to reduce pest pressure. Back up plans are developed to address potential impacts from weather scenarios for excess moisture, late-planting, crop changes, early or rapid growth, etc. * NRCS has IPM Standard</i>			
	Complete IPM plan per common field:			
CP-3.5	Cover crops are planted on all fields <i>Measurement: Cover crop planting on all fields and all acres</i>	☐ No	☐ Partially (% of acres_____)	☐ Yes
	<i>Recommendation: Fields are planted to cover crops after harvest, annually. Planting and termination should be based on NRCS Cover Crop Conservation Practice Standard.</i>			

	Cover crop management plan:				
CP-3.6	Tile drainage water management <i>Measurement: Controlled drainage or woodchip bioreactor</i>	☐ NA	☐ No	☐ Partially (# of acres _____)	☐ Fully
	<i>Recommendation: If fields have tile drainage, install one or more controlled drainage structures on patterned tiled fields. Add one woodchip bioreactor to patterned or non-patterned tiled fields. Edge of field outlets are managed and controlled</i>				
	Drainage tile control plan:				
CP-3.7	Comprehensive nutrient management plan <i>Measurement: Record of CNMP</i>	☐ No		☐ Yes	
	<i>Recommendation:</i>				
	Comments:				
CP-3.8	Windbreaks are planted to provide shelter and protect soil from erosion <i>Measurement: Evidence of windbreak(s) on farm</i>	☐ NA	☐ No	☐ Partially	☐ Fully
	<i>Recommendation: Utilize field windbreaks to protect a variety of wind-sensitive crops, control wind erosion, and increase bee pollination and pesticide effectiveness.</i>				

	Comments:			
	Create a Soil Health Management Plan <i>Measurement: Creation of NRCS Soil Health Management Plan</i>	☐ No	☐ Partially (% of fields ____)	☐ Fully
CP-3.9	<i>Field windbreaks protect a variety of wind-sensitive crops, control wind erosion, and increase bee pollination and pesticide effectiveness.</i>			
CP-3.10	Farm business information and data is maintained securely <i>Measurement: Record of how secure information is stored</i>	☐ No	☐ Partially	☐ Fully
	<i>Securing financial information is critical. All sensitive information is stored in a secure area and shredded upon disposal, computer data is backed up regularly, and computers and other technologies are properly maintained and secured from unauthorized use.</i>			
	Comments:			
CP-3.11	Continuity of operations plan (COOP) that guides the business after an emergency or incident <i>Measurement: A plan is created and maintained</i>	☐ No	☐ Yes	
	<i>A continuity of operations plan (COOP) is a document that outlines the continuity and recovery strategy of the business/farm, and it include but is not limited to essential functions, identify critical resource infrastructure, business transfer plans, and primary decision-maker designee (and others if primary decision-maker is not available or incapacitated).</i>			
	Comments:			

Appendix B

Individualized Participant Learning Plan

Example

Participant Name: <i>Joe Smith</i>		WRF Number:		Initial Date: 1/29/19
Certification Category: Crop Production X				
People involved in setting learning plan: <i>Joe Smith, Ashley Mueller, Tyler Williams, and Daren Redfearn</i>				
Category	Target practices (SMART) <i>Specific, Measurable, Achievable, Realistic, and Timed</i>	Success Criteria	Learning Strategies	Review & Comments
CP-2.1	Participate in a Nebraska On-Farm Research Network meeting on Feb. 18 in Grand Island or other event as it fits in schedule.	Identify a study or studies that guide at least one management decision for the 2019 growing season.	Attend the meeting and engage – ask questions and talk with others. Follow up with farmers and/or cooperating Extension faculty with questions.	☐ No ☐ Partially ☐ Fully
CP-2.4	Schedule irrigation on a field-level basis for entire growing season by participating in online ETgage tool.	Record field-level irrigation by monitoring precipitation, evapotranspiration, and soil moisture.	Visit Nebraska Agricultural Water Management Network (NAWMN), including ETgage tool Read Extension publications related to ETgage and watermark sensors	☐ No ☐ Partially ☐ Fully
CP-2.6	Plant cover crops in fields with excess moisture and soil runoff.	Cover crops are planted.	Attend the Nebraska Cover Crop & Soil Health Conference – ask questions and talk with others. Read Cover Crops: A Primer Use the Selector Tool to learn which selections might be best	☐ No ☐ Partially ☐ Fully

CP-2.7	Attend a CPR and first aid training	Documentation of training attendance (i.e. certificate) is obtained.	Understand techniques related to life-saving measures for CPR and first aid. Follow up with instructor about any questions.	☐ No ☐ Partially ☐ Fully
CP-2.8	Purchase/create at least two first aid kits for farm.	Kits are placed in common location (i.e. farm office) and one vehicle.	Read First Aid Kits for Production Agriculture Assess your, your family's, and your employees' needs – make special considerations where necessary	☐ No ☐ Partially ☐ Fully
Learning Plan Meeting		Participant Sign:	WRF Rep Sign:	Date:
Review Meeting		Participant Sign:	WRF Rep Sign:	Date

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