

# Climate Adaptation Planning for Farms

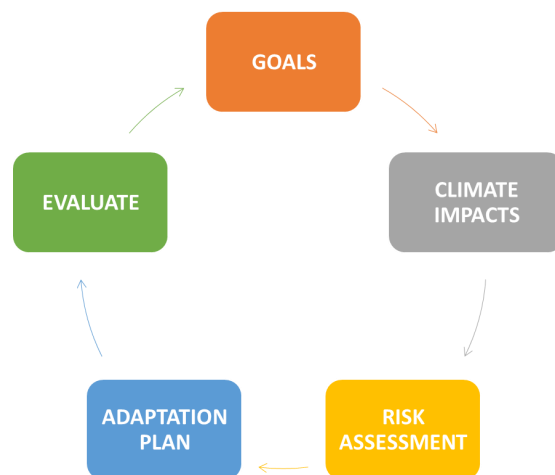


**American Farmland Trust**  
SAVING THE LAND THAT SUSTAINS US

*Start planning for climate adaptation and farm resilience based on the unique variables of your land and operation.*

## Five steps for farmland climate adaptation planning:

1. Define your farm goals and priorities
2. Identify specific, observed climate impacts
3. Conduct a risk & vulnerabilities assessment based on your climate impacts and farm goals
4. Develop a set of adaptation practices
5. Evaluate the effectiveness of those adaptations practices and update your plan accordingly



## 1. Goals *What are the overall or immediate goals of your farm operation?*

**Articulate one to three goals that inform your choices and priorities.** Consider foundational values, financial requirements, organizational strengths, farm resources, aspirations, challenges, etc.

## 2. Climate Impacts *What impacts of climate change have you observed and experienced on your farm? Check all that apply. Circle the most concerning impacts.*

### Changing precipitation patterns

- ☐ Wetter springs or falls
- ☐ More frequent extreme precipitation
- ☐ Saturated soils affecting planting, weeding, and/or harvest
- ☐ Seasonal drought
- ☐ Increased need for irrigation
- ☐ Decreased pasture/forage yield

### Increased temperatures

- ☐ Increased seasonal temperatures
- ☐ More extreme temperatures
- ☐ Changing pest or disease patterns
- ☐ Increased weed vigor
- ☐ Increased cooling needs
- ☐ Heat stress
- ☐ Animal health declines

### Extreme weather

- ☐ Flooding and/or ponding
- ☐ Increased erosion
- ☐ Nutrient leaching
- ☐ High wind effects
- ☐ Infrastructure damage due to wind, snow, rain, or temperatures
- ☐ Wildfire & smoke impacts

### Seasonal shifts

- ☐ Wetter, cooler spring
- ☐ Longer fall
- ☐ Unpredictable frosts, fruit loss
- ☐ Warmer winter/summer
- ☐ Changes in timing of planting/harvest
- ☐ Crop or variety not adapted
- ☐ Pest or pollinator shifts

**Other** (write in)

### Projected Changes in Weather in the Northeast for mid-century (2041-2070 average)

ANNUAL TEMP	ANNUAL PRECIPITATION	GROWING SEASON	HOT DAYS	HOT SPELLS	COLD DAYS	EXTREME PRECIPITATION
<b>+ 4 to 8 F</b>	<b>+ 1 to 7 inches</b>	<b>+ 19 to 27 days</b>	<b>+ 3 to 21 days</b>	<b>+ 1 to 7 days</b>	<b>- 6 to 24 days</b>	<b>+ 2 to 4 days</b>
Avg temp increases, and increases in each season. Milder winters	Seasonal increase greatest in winter Decrease in summer	Warmer, wetter springs	Least change in northernmost areas	Increase in consecutive days over 95	Greatest decrease in the north	More days of precipitation exceeding 1"

This table is adapted from the USDA Regional Climate Hubs' Regional Agricultural Vulnerability Assessment and the National Climate Assessment NESDIS reports using the A2 climate scenario. Growing season=the period between the last occurrence of 32° in the spring and first occurrence of 32° in the fall; hot days=annual average of days with max temp exceeding 95°; hot spells=max number of consecutive days with max temps over 95°; cold days=average annual number of days with min temp below 10°; freeze days=days with a min temp below 32°; extreme precipitation=number of days with precipitation over 1 inch.

### 3. Risks Assessment

*Based on your observations of climate impacts, and taking into account projected changes in climate, **what are 4 major vulnerabilities of your farm operation?** What areas of land, important crops, animals, or essential infrastructure are a priority to protect? What is at most risk? Where do the identified climate impacts directly impact your top farm goals?*



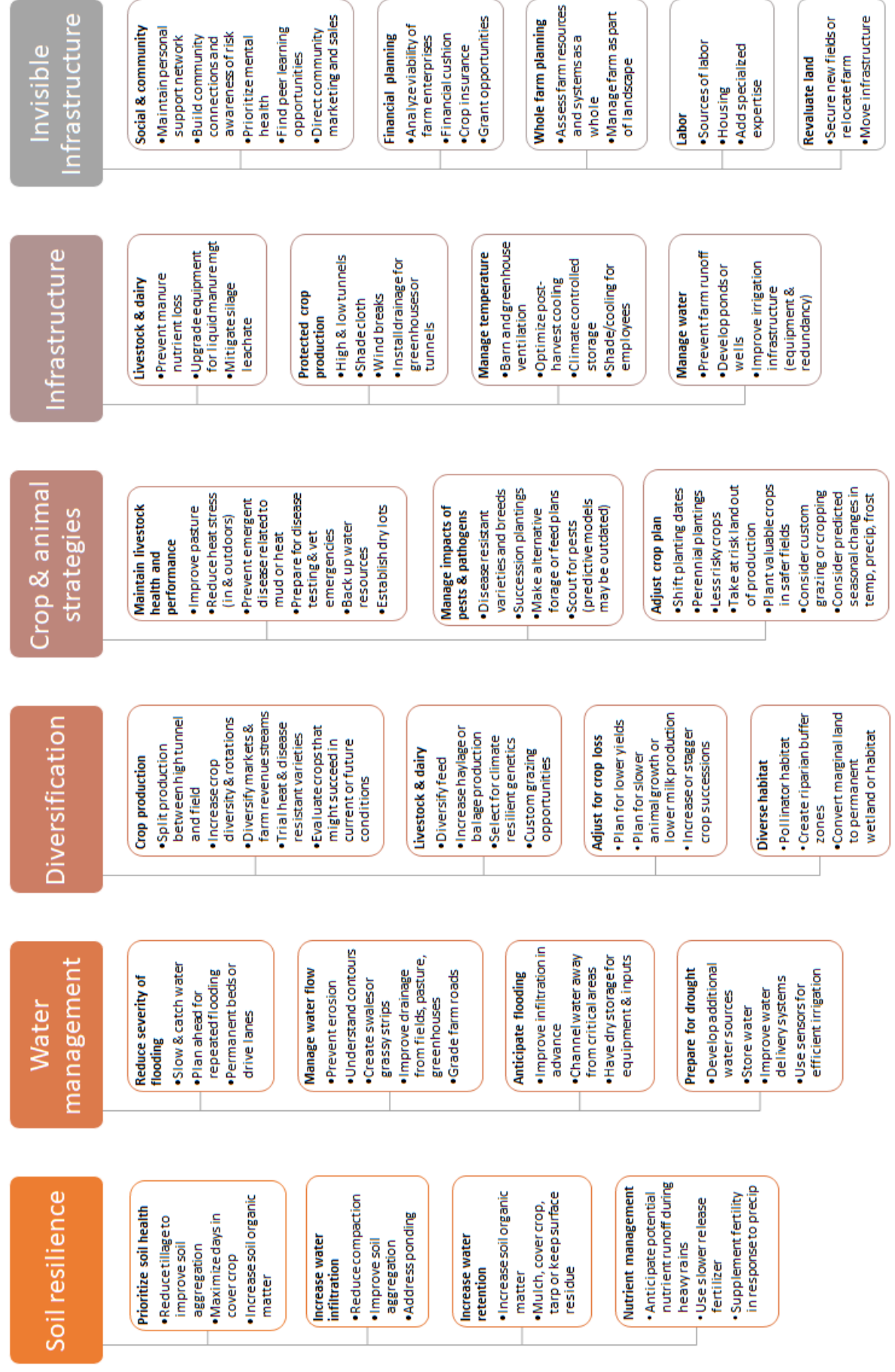
**Mind map** *Use this space to map out critical areas of the farm, or brainstorm the issues.*



Now choose which vulnerabilities are the priority. Priority should be given to large financial risks, preventable losses, and long-term priorities that meet the goals of your farm.  
**Circle your top priority.**

# Consider Adaptation Strategies and Possible Practices:

Review these strategies, and specific potential practices, for adapting to climate change. Which one(s) would help address the risks and vulnerabilities that you've prioritized above? Circle the most relevant ones (or develop your own).



## 4. Adaptation Practices

1: Write down what you identified as your **most significant risks** to climate impacts.

2: Using ideas on the previous page, **note what strategies might be used** to mitigate these risks?

3: Consider **what specific practices** could serve to increase the resilience of your farm?

*Remember that adaptive practices should include:*

- Considerations of feasibility and potential effectiveness
- Flexible management that can adapt with new information
- “No regrets” decisions that will create broad benefits with little risk
- Resources that are available and supported in your network
- A specific, practical timeline

Risk:

Strategy:

Practice:

Risk:

Strategy:

Practice:

## Timeline and Considerations

⇒ What is a realistic time frame for developing these practices? How could they fit into your current systems?

⇒ What are possible funding sources, technical services, or community support?

⇒ Have other people been successful with these practices? Who can you consult about their experience?

## 5. Evaluate

Choose one or two criteria to measure the effectiveness of your climate adaptation practices.

*What will indicate success? How often will you take that measurement?*

Use tools like the NRCS In-Field Soil Health Assessment, financial analysis, soil health tests, forage yields, or other data to measure success.



### In Summary:

This climate adaptation planning cycle should be repeated over time as new practices yield results, information is gathered, and new challenges emerge. Congratulations on getting started, and good luck with your climate resilience planning!

#### Climate Adaptation Planning

##### Adaptation Resources for Agriculture

[https://www.climatehubs.usda.gov/sites/default/files/adaptation\\_resources\\_workbook\\_ne\\_mw.pdf](https://www.climatehubs.usda.gov/sites/default/files/adaptation_resources_workbook_ne_mw.pdf)

Climate Adaptation & Mitigation Planning Tool <https://www.adaptationfellows.net/planningtool>

Cultivating Climate Resilience on Farms and Ranches [https://www.sare.org/content/download/80674/1415715/file/Cultivating Climate Resilience on Farms and Ranches.pdf](https://www.sare.org/content/download/80674/1415715/file/Cultivating%20Climate%20Resilience%20on%20Farms%20and%20Ranches.pdf)

Webinar: Climate Adaptation for Vegetable and Flower Farms <https://www.johnnyseeds.com/growers-library/webinar/webinar-series-climate-adaptation-for-vegetable-and-flower-farms.html>

Five Step Guide to Farm Resilience <https://regenerativefarmresilienceguide.org/>

New England Adaptation Survey for Fruit and Vegetable Growers <https://adaptationsurvey.files.wordpress.com/>

The Adaptation Workbook <https://adaptationworkbook.org/>

#### Practice Resources

Building Soils for Better Crops [www.sare.org/resources/building-soils-for-better-crops/](http://www.sare.org/resources/building-soils-for-better-crops/)

Managing Cover Crops Profitably <https://www.sare.org/resources/managing-cover-crops-profitably-3rd-edition/>

Northeast Cover Crops Decision Tool <https://northeastcovercrops.com/decision-tool/>

NRCS Climate Smart Conservation Practices <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/climatechange/?cid=nrcseprd1881023>

Climate Adaptation Resource Database <https://www.uvm.edu/climatefarming/>

High Tunnels and Extreme Weather <https://blog.uvm.edu/cwcallah/2024/08/13/a-guide-to-preparing-high-tunnels-for-extreme-weather/>

Cornell Climate Smart Farming Program <http://climatesmartfarming.org/>

Real World Resilience Stories <https://cultivatingresilience.com/real-world-resilience/>

#### Funding & Social Resources

Find local NRCS office <https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>

Ambrook Funding Resource Library <https://ambrook.com/funding>

Farm Resource Network <https://farmaid.my.site.com/>