

## Overview - Pond irrigation system

- Ponds can be a useful climate change adaptation tool. They help provide irrigation water during dry periods, and serve as a reservoir for excess water and runoff during heavy precipitation events.
- Pairing ponds with an irrigation system can help balance these cycles of water surplus and scarcity by collecting and storing runoff for later use as irrigation during hot, dry periods.
- Use of irrigation can prevent crop losses, support crop yield and quality, and allow for the production of a greater variety of crops. Even in areas where crops have historically been produced *without* supplemental irrigation (e.g. the Northeast United States), the economic benefits of using irrigation are now clear.
- As climate change increases the frequency and severity of extreme weather patterns, such as heat and drought interspersed with heavy precipitation events, the need for and benefits of irrigation are likely to increase.

## Pond irrigation system trade-offs:

Potential Benefits	Potential Challenges
Improves crop quality, consistency, and yield  Supports the production of a greater variety of crops  Prevents crop losses	Upfront investment required to install pond irrigation system  Ongoing maintenance and labor costs for pond and irrigation system  Ponds require specific site conditions and are not possible or suitable for all farms  Must comply with state and federal regulations regarding water usage for pond installation

## Additional Resources:

Interested in ponds and irrigation? Check out our economic tool to determine the potential costs and revenue here. See what ponds and irrigation look like here.

[Getting started with drip irrigation: components and costs](#) (University of Vermont Extension, Rachel Schattman and Chloe Boutelle, Updated November 2018)

[Irrigation pays protecting crop revenues](#) (USDA Northeast Climate Hub)

Benefits of Irrigation: Intervale Community Farm

[Partial Budget](#) (USDA Northeast Climate Hub and University of Vermont Extension, September 2017)

[Case Study](#) (Andy Jones, September 2017)