

HOW I WORKED
WITH NRCS TO
MAKE MY FARM
MORE RESILIENT TO
EXTREME WEATHER

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Bascom Road Blueberry Farm

Newport, NH

December 18, 2024

AGENDA

- **Overview of Bascom Road Blueberry Farm**
- **Climate Resiliency Practices**
 - Drought
 - Excessive Moisture
 - Other Mitigation Strategies
- **Questions & Discussion**



BASCOM ROAD BLUEBERRY FARM

Newport, NH

ABOUT OUR FARM

First Generation, 11 Acre PYO Farm in
Newport, NH

- Crops:
 - PYO Blueberries
 - PYO Strawberries
 - PYO Pumpkins
 - PYO Apples (coming soon!)
 - Vegetables in High Tunnels
- Year-Round Farm Store on-site





RESILIENCY PRACTICES: DROUGHT

DROUGHT: MONITORING

Farm Concern: How do we know what the actual soil moisture is?

Solution: Real, timely data to drive decision making using tools obtained through NRCS cost sharing grants:

- Monnit Remote Monitoring System
 - Cell phone app
 - Easy access to real time data
 - Personalized alert settings for temperature and moisture extremes
 - 4 monitors on our farm:
 - 3 Blueberry Fields
 - 1 Strawberry Field



DROUGHT: MONITORING



Farm Concern: How do we know what the actual soil moisture is?

Solution: Real, timely data to drive decision making using tools obtained through NRCS cost sharing grants:

- Rainwise Weather Station tied to NEWA collective regional data via NEWA
 - Temp, wind speed, leaf wetness, precipitation, humidity, dewpoint
 - Tracking for pest modeling & control

DROUGHT: IRRIGATION

Farm Concern: How do we get water?

Solution: NRCS cost sharing grants for well system:

- Use of Existing Dug Well
 - Plan was to utilize the existing 240-year-old dug well on the property
 - Adding pumping station off the dug well
 - Quickly learned the dug well did not regenerate quick enough to meet our needs
- Second solution: New artesian well with pumping station
 - Well drilled to 505 feet, provides 20 GPM
 - Variable speed driven pumping station
 - Meets demands of all the high tunnels and the 3 blueberry fields



DROUGHT: IRRIGATION

Farm Concern: Need additional water to support farm expansion in PYO Apples

Solution: NRCS cost sharing grants for irrigation pond design, installation, with solar pumping station

- Two rounds of test pits
- NRCS designed the pond
- The farm did the manual labor to excavate the pond to the original NRCS design utilizing existing farm equipment and renting a larger excavator



DROUGHT: IRRIGATION

- Pond wasn't deep enough to support volume of water needed; re-design and new contract obtained to enlarge the pond
- New design will support irrigation of 2 acres every other day for two months





DROUGHT: IRRIGATION

Overflow pipe and drainage
installed



DROUGHT: IRRIGATION

Solar pumping station will be
added in spring of 2025

DROUGHT: WATER DELIVERY & RETENTION

Farm Concern: How to get the water direct to the crops

Solution: Drip Lines from irrigation hydrants and mulching via NRCS cost sharing grants

- Drip Lines
 - Underground piping system from well pump
 - Hydrants
 - Drip line at soil level



DROUGHT: WATER DELIVERY & RETENTION

Added Benefit of Drip Line

Fertigation!!!

Gets the nutrients right to the root zone



SUCCESS!!

**Momma Woodcock hatched
her eggs in the mulch**



DROUGHT: WATER DELIVERY & RETENTION

Farm Concern: How to get the water direct to the crops

Solution: Drip Lines from irrigation hydrants and mulching via NRCS cost sharing grants

- Evaporation Reduction
 - Mulching
 - Blueberries: pine chips
 - High Tunnels: woven fabric
 - Strawberries: biodegradable plastic and straw



DROUGHT: WATER DELIVERY & RETENTION

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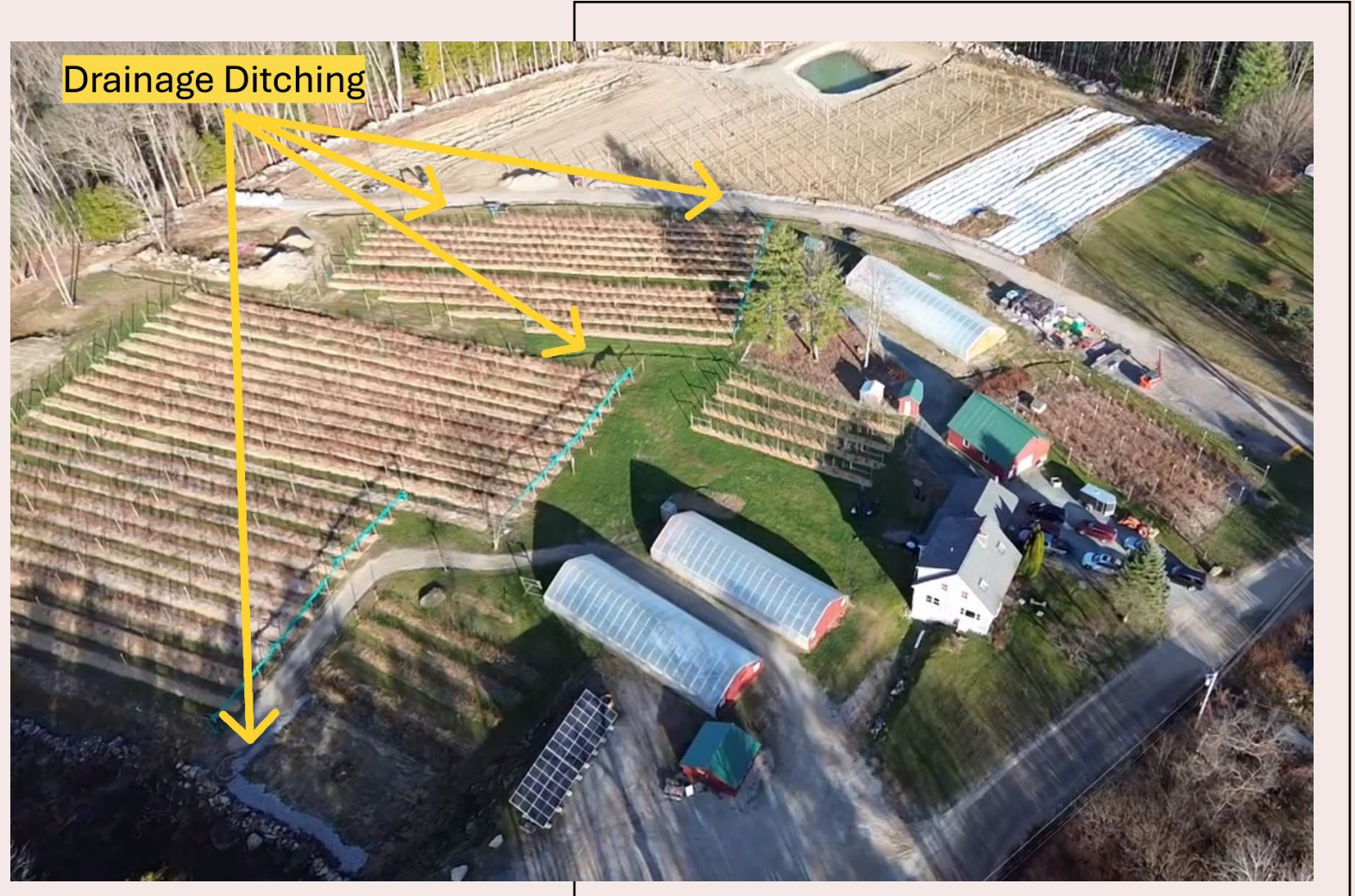
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EXCESSIVE MOISTURE MITIGATION

- Lined water ways
- Grassy Waterways



EXCESSIVE MOISTURE MITIGATION

Lined water ways



EXCESSIVE MOISTURE MITIGATION

Lined water way – completed!



EXCESSIVE MOISTURE MITIGATION

Grassy Waterways





RESILIENCY
PRACTICES:
OTHER MITIGATION
STRATEGIES

OTHER MITIGATION STRATEGIES

Farm Concern: Need environmental controls to decrease plant stress in high tunnels

Solution: NRCS Cost Sharing Grant for Automation Processes

- Temperature Controlled:
 - Roll up sides
 - Louvers
 - Exhaust fans
- Controlled Irrigation



A dark, starry night sky with a silhouette of a mountain range in the foreground. The sky is filled with numerous stars, and the mountains are dark against the lighter, starry background. The overall scene is a serene night landscape.

QUESTIONS