Irrigation Soil Health Mgt. System GUIDE (Part 2: Slides 17 – 31)

1. Soil Health Improvement Activities

Practice: Orchard with cover crop understory

- Irrigating the cover crop
- Mix of grasses and legumes
- Wood mulch creates fungal environment

- Cover crop enriches soil
- Tree root zone extends into cover crop

- Trees planted as “whips”
- Tree growth after one season
- Mulch around trees but NOT at base of trees

Why? A healthy cover crop under trees provides nutrients to tree roots

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Unlock the SECRETS of the SOIL

NRCS
Practice # 620:
Tree and shrub establishment
Practice 660:
Tree pruning

NRCS.usda.gov/
1. Soil Health Improvement Activities

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2. Habitat for Pollinators and Wildlife

Practice: Perennial shrubs along field borders

Why? Food source for bees, windbreak, retains moisture, increases diversity

Practice # 386: Field Border

- Permanent perennial shrubs
- Watered by drip line
- Suppresses weeds

- Shrubs after one year’s growth
- Apache plume, sage, chamisa, turpentine bush
2. Habitat for Pollinators and Wildlife

Practice: Hedgerow Planting

Why? Food source for bees, windbreak, retains moisture, increases diversity

- Planted along fence line
- Habitat for variety of beneficial insects
- Flowering cactus attract bees

- Shrubs in bloom
- Russian sage, globe mallow, catmint

Before

After
2. Habitat for Pollinators and Wildlife

Practice: Hedgerow Planting attracts pollinators

Why? Food source for bees, windbreak, retains moisture, increases diversity
2. Habitat for Pollinators and Wildlife

Practice: Hedgerow Planting

• Catmint comes out early

• Followed by Russian sage and globe mallow

Why? Flowering plants attract beneficial insects to the farm
Practice: Wildlife habitat

- Raptor pole
- Bat box
- Ducks during flood irrigation

Why? Predators (hawks, owls, bats) eat pests (mice, voles, mosquitoes). Ducks are just fun
2. Habitat for Pollinators and Wildlife

Practice: Bees on the Farm!

- **Crop pollination**
  Particularly good for melons, squash, cucumbers, pumpkins

- **Topbar hive**
  Easier to maintain than Langstroth hive

*Why? Bees increase yields and improve diversity*
2. Habitat for Pollinators and Wildlife

Practice: Bees on the Farm!

- Bee water station
  Living plants keep water clean

- Hangin out!

Why? Bees increase our yields and improve diversity
2. Habitat for Pollinators and Wildlife

Practice: Vegetation along ditchbank

Why? Provides habitat for wildlife and flowering plants for beneficial insects
3. Farm Infrastructure

Practice: Greenhouse

- Maintains quality control
- Start transplants from seed

Why? All aspects of plant propagation under our control
3. Farm Infrastructure

Practice: Trellis system for vertical growing

- Welded rebar trellis has long life
- Perfect for vining plants
- Saves space
- Easy to move and install
- Crops we grow vertically
  - Beans, peas, tomatoes,
  - melons, cucumbers, squash

Why? Growing plants up on a trellis saves space and disrupts pests
Practice: Vertical Growing of Tomatoes

- Tomatoes growing vertically

Why? Saves space and ease of harvesting

- 6 varieties of cherry tomatoes
Practice: Vertical Growing of Melons

- Melons will climb a trellis

Why? Saves space and confuses squash bugs

- Melons hang naturally without support
Practice: High Grow/Low Grow System

Why? Efficient use of row space

3. Farm Infrastructure

- Tractor can navigate
- We spray three sides
- Intercropping confuses pests

- Low grow crops:
  - peppers, sweet potatoes,
  - garlic, potatoes, onions,
  - beets, radish, carrots

- Tractor fits between trellises
- Drives over low crops no problem