Module 7

The Sustainable Agriculture Imperative
A Vision for Agriculture

Michael Heller
Clagett Farm
Section A

Introduction
We Meet by Accident

Photo: Michael Heller
Need to Reevaluate

Photo: Michael Heller
The Sustainable Agriculture Imperative

Photo: Michael Heller
Clagett Farm

1. Vegetable crops
2. Grass-fed beef
3. Nursery of native trees and shrubs

Photo: Michael Heller
Livestock

Photo: Michael Heller
Components of a Sustainable Food Production System

- Key considerations that impact all decision making
  - Weed control
  - Pest control
  - Fertility

- Sustainable methods employed by Clagett Farm
  - Vegetable crops
    - Crop rotation
    - Cover crops
  - Grass-fed cattle
    - Rotational grazing
    - Manure composted and recycled as fertilizer
Crop Rotation

- 5- to 7-year rotations

Year 1: Tomato family

Photo: Michael Heller
Year 2: String beans/legumes (produce nitrogen)
Year 3: Broccoli, cabbage/mustard family (use nitrogen)
Year 4: Sweet potato
Pumpkins/Squash

Photo: Michael Heller
Cover Crops/Crimson Clover

- Protects the land and builds soil
- Improves fertility
- Aids in pest control

Image source: CBF. (April 9, 2002). Clagett Presentation.
Cover Crops with Food Crops

Photo: Michael Heller
Summer Cover Crops

Photo: Michael Heller
Mulching

- Provides nutrients and protects soil without requiring moisture
- Aids in pest control

Photo: Michael Heller
Cattle

- Key component of farm
- Utilize land too steep for crops
- Rebuilds soil “mined” from corn and soy monocropping
- Closed herd keeps cows healthy
rotational grazing

- Sustainable cattle production is essentially successful “grass farming”
Grass Shading Clover

Photo: Michael Heller
Fully Grazed Pasture

Photo: Michael Heller
Rich Full Pasture

Photo: Michael Heller
Winter Hay

Photo: Michael Heller
Composting Manure

Photo: Michael Heller
Oxygen for Bacteria

Photo: Michael Heller
Covered Compost

Photo: Michael Heller
Warmth of Compost in Winter

Photo: Michael Heller
Compost Used as Fertilizer