



NATURAL FARMING SYSTEMS IN THE SOUTH: MAPLE SPRING GARDENS

VIDEO GUIDE

I. ORGANIC FARM – This farm has been inspected by a qualified inspector and a USDA accredited agency has certified that the practices and products used on this farm meet the National Organic Standards. National law requires this annual certification for those with annual sales over \$5,000 of products labeled as organic. To learn more about organic certification, contact National Organic Program- <http://www.ams.usda.gov/nop/indexIE.htm>

II. DIVERSE FARMING SYSTEM – This farm utilizes a diverse farming system, which includes;

1) A diversity of production systems such as

- greenhouse production
- unheated hoophouse production
- field production on plastic
- field production not on plastic

This makes it possible for Ken to grow a wider variety of crops over a longer season. Selecting the appropriate production system for each crop during each time of the growing season improves crop yields and net profits. Risks are spread also, as a rainy season may hurt outdoor production, while greenhouse and hoophouse production will be less impacted.

2) A diversity of production practices such as

- Crop Rotation
Reduces disease and pest risks, helps maintain balance of soil nutrients.
- Cover Cropping
Builds healthy soil, attracts beneficial insects, reduces soil erosion and compaction, reduces nutrient leaching.
- Drip Irrigation
Makes efficient use of water, reduces soil erosion, reduces risk of plant fungal diseases.
- Mulch
Reduces soil erosion, soil compaction, nutrient leaching, disease, and organic mulch helps build soil

- Beneficial insects
Help pollinate crops or help keep pests in check (97% of insects found on farms are beneficial or neutral).
- Organic fertilizers and pest controls
Reduce impact on ecosystem. They are made from natural sources and approved by the National Organic Standards. Refer to their website for more information.
- Crop Variety Selection- Specialty Crops
Reduces market risks by increasing diversity of buyers, market appeal, and niche market opportunities.
- Succession Planting
Guarantees continuous harvests throughout a long growing season.
- Plasticulture / Plastic Mulch
Conserves soil moisture, suppresses weeds, prevents nitrogen leaching, keeps fruit cleaner, prevents transmission of soil borne disease by reducing soil splashing on plants, black plastic warms soil in early spring for earlier planting. Drawbacks – has to be removed at end of season and cannot be recycled easily.

This diversity of production practices all work together to reduce risks by improving plant and soil health, increasing efficiency and yields, and lowering costs.

3) A diversity of crops

- Approximately 40-50 varieties of flowers
- Approximately 40 varieties of vegetables

As discussed on this video the benefits of having a diversity of crops are a). Having crops to harvest over a long season, b) Spreading labor out over the season, c) Spreading risk in case of crop failure and, d) Providing favorable habitats for beneficial insects.

4) Diversity of Markets

- 90% retail sales at two different farmer's markets in two different cities
- 10% wholesale to local restaurants

Having a diversity of markets makes the farmer less vulnerable if a market declines and it increases the opportunities for selling a greater quantity and variety of products.

III. INTEGRATED FARMING SYSTEM – Ken operates with the assumption that everything done on this farm affects other things on the farm. For example, cover crops grown to improve the soil also attract beneficial insects and drip irrigation makes more efficient use of water, but it also reduces weed pressure. By operating with the whole system in mind, Ken is able to make the most sustainable decisions for his farm.

IV. PLASTIC MULCH / PLASTICULTURE – Plastic mulch is used to produce some crops on this farm. It suppresses weeds, reduces labor, conserves moisture, prevents transmission of soil borne disease by reducing soil splashing on plants, keeps fruit cleaner, prevents nitrogen leaching, and black

plastic warms soil in early spring for earlier planting. Plastic mulch helps Ken improve his profitability also.

- 1) Plastic thickness – 1 mil
- 2) Amount of plastic used – Approximately 1/3 cubic yard for 2 acres
- 3) Plastic Laying Technique - Till in cover crop 2-3 weeks in advance. Shape bed and add soil amendments. Run mulch laying machine over bed.
- 4) Mulch laying machine is tractor drawn, lays drip tape on bed with plastic over it and covers the edges of the plastic with soil to keep it secure, all in one pass.
- 5) No methyl bromide is used because it kills everything in soil and is counter to organic principles, which is to build diverse ecosystem in soil.
- 6) Temperature under black plastic is 20-25 degrees hotter than under white plastic in heat of the summer. Use black plastic in spring and early summer, then use white plastic in heat of summer for new transplants.
- 7) Straw mulch between beds mulched with plastic reduces soil erosion and compaction, captures more rain than bare soil, prevents soil from splashing on crops, allows workers in field immediately after rain, and adds organic matter.
- 8) Costs - \$2,000 for mulch laying machine, 2.5 cents per linear ft for black plastic, 5 cents per linear ft for white plastic, 2 cents per linear ft for drip tape, plus labor to remove from field.

V. LABOR – The use of laborers has helped increase yearly sales three-fold from when just Ken’s family was doing all the farm work.

- 1) Hires 4-5 laborers outside the family, at a cost of \$20,000-\$30,000 annually.
- 2) Students from local community college offering sustainable agriculture program are attracted to his farm. Many are attracted to his farm because it’s organic.
- 3) Extra labor helps with producing, harvesting and selling.
- 4) Laborers get an hourly wage, lunch, extra produce and good life experiences.
- 5) Payroll taxes are paid just like with any small business.

VI. HARVESTS

- 1) Harvest flowers all week and store in milk truck cooler.
- 2) Harvest vegetables Friday morning.
- 3) Clean, bundle/package and ready vegetables for market Friday afternoon.
- 4) Make 50-300 flower arrangements on Friday afternoon.
- 5) Ken and two helpers set up and sell at large farmer’s market on Saturday morning.
- 6) Ken’s wife sets up and sells at smaller farmer’s market in a nearby city Saturday morning also.
- 7) Ken sells to restaurants what isn’t sold at farmer’s market.
- 8) 90% is sold at farmer’s market
- 9) Ken believes being able to sell most of their crops retail directly to customers at the farmer’s markets is how they are able to make a good income on a small-scale farm. Currently, gross sales are in excess of \$90,000 annually

The production of this video was a partnership between Southern Sustainable Agriculture Working Group and the USDA Risk Management Agency. June 2003.

Videos may be purchased for \$15 each. Please complete the [order form](#) and send check, made payable to Southern SAWG, to Pamela L. Corcoran, Executive Director, 2250 Sewell Lane, SW, Roanoke VA 24015.

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