

NRCS Training May 7 , 2009

The Basics of Organic Transition

A Project funded by the
Organic Farming Research Foundation



The Certification Process: The Rules of Organic Production

Martin Kleinschmit

Phone: 402 254 3310

email: martink@hartel.net

Organic Production

- ❑ **Organic is not a content claim.**
 - It does not represent that a product is “free” of something.
- ❑ **Organic is not a food safety claim.**
 - Organic is not a judgment about the quality and safety of any product.
- ❑ **Organic is a production claim.**
 - Organic is about how food is produced and handled.

Organic production

A production system that is managed in accordance with the Act and regulations to respond to site-specific conditions by integrating **cultural, biological and mechanical practices that foster cycling of resources, promote ecological balance and conserve biodiversity.**

Qualifying as Organic

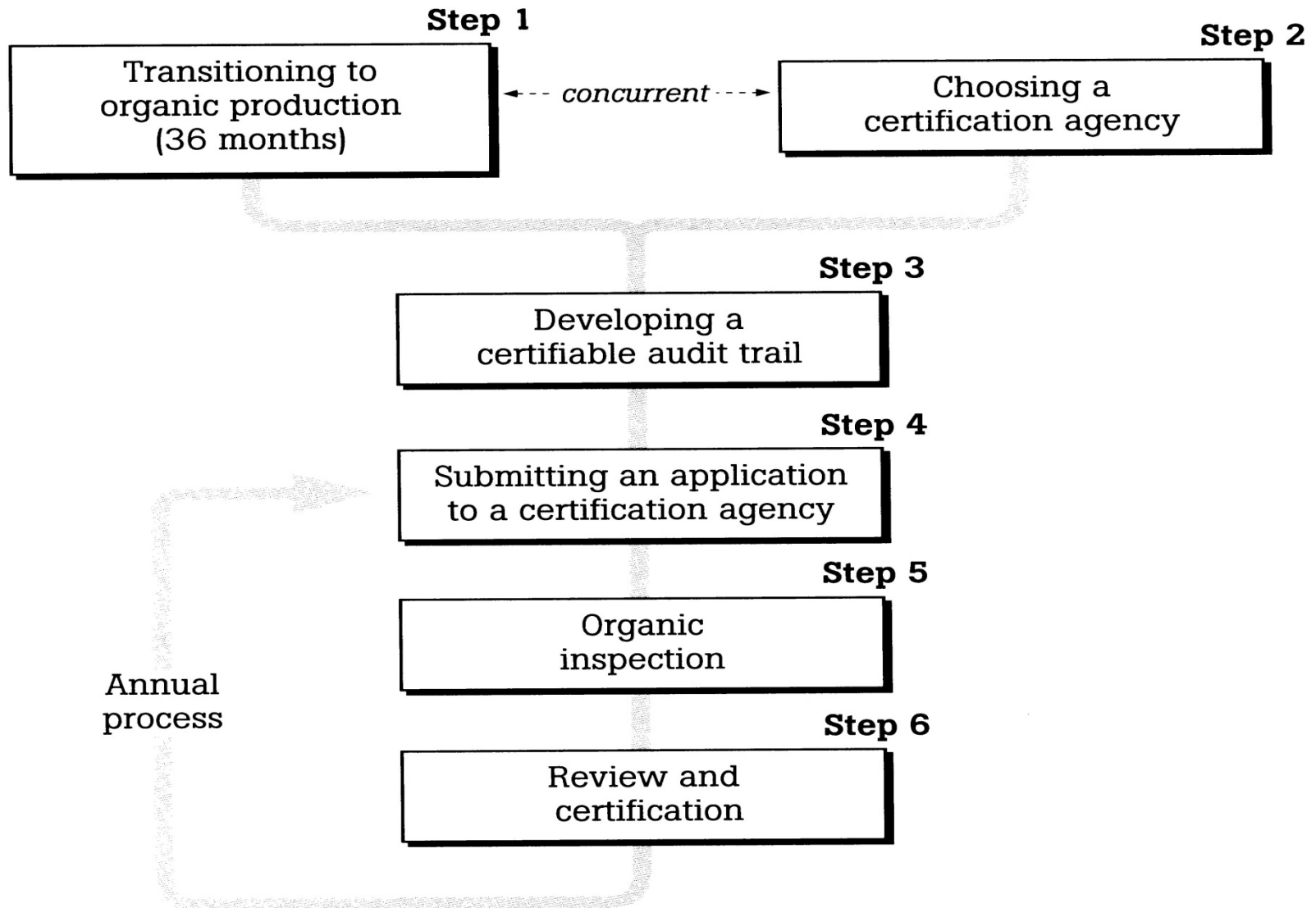
IFOAM: International Federation of Organic Agriculture Movements (World-wide)

- NOP: US Standards
- BIOSUISSE: Switzerland
- JAS: Japan
- EU: Europe

Certification Process



The Organic Certification Process



Transition Period is a time to:

- Meet the 3-year soil requirements - restrictions for fertilizer and pesticides
- Develop a farm plan
- Learn the rules for certification
- Learn soil fertility practices
- Learn to manage pests
 - Life cycles of weeds and insects
- Identify organic markets

Qualifying for Certification

- Don't add anything that is not allowed
- Don't grow anything that is not allowed
- Start developing a Systems/Farm Plan
- Connect with a National Organic Program (NOP) certifier

Basic things to stop doing:

- No Round-up Ready soybeans
- No Round-up Ready or Bt corn
- No treated seed
- No GMO alfalfa inoculants
- No Chemical fertilizer
- No herbicides
- No insecticides

Certification Process

- ❑ Farmer chooses certification agency
- ❑ Applies for certification
- ❑ Agency reviews application and may ask for more information
- ❑ Agency assigns inspector, crops must be seen during growing season
- ❑ Inspector writes report and sends to agency

Certification Process

- Agency reviews all documentation, and either:
 - Grants certification with no conditions.
 - Grants certification with conditions to be met by the next annual inspection
 - Requests more information before certification can be granted
 - Denies Certification

Prohibited Substances

- Visit www.ams.usda.gov/nop for approved and unapproved inputs as well as changes to the NOP rule
- All naturals approved
- Most all synthetics prohibited
- List is broken into crops, livestock and ingredients.

Prohibited Substances

- Always check with certifier before applying anything**

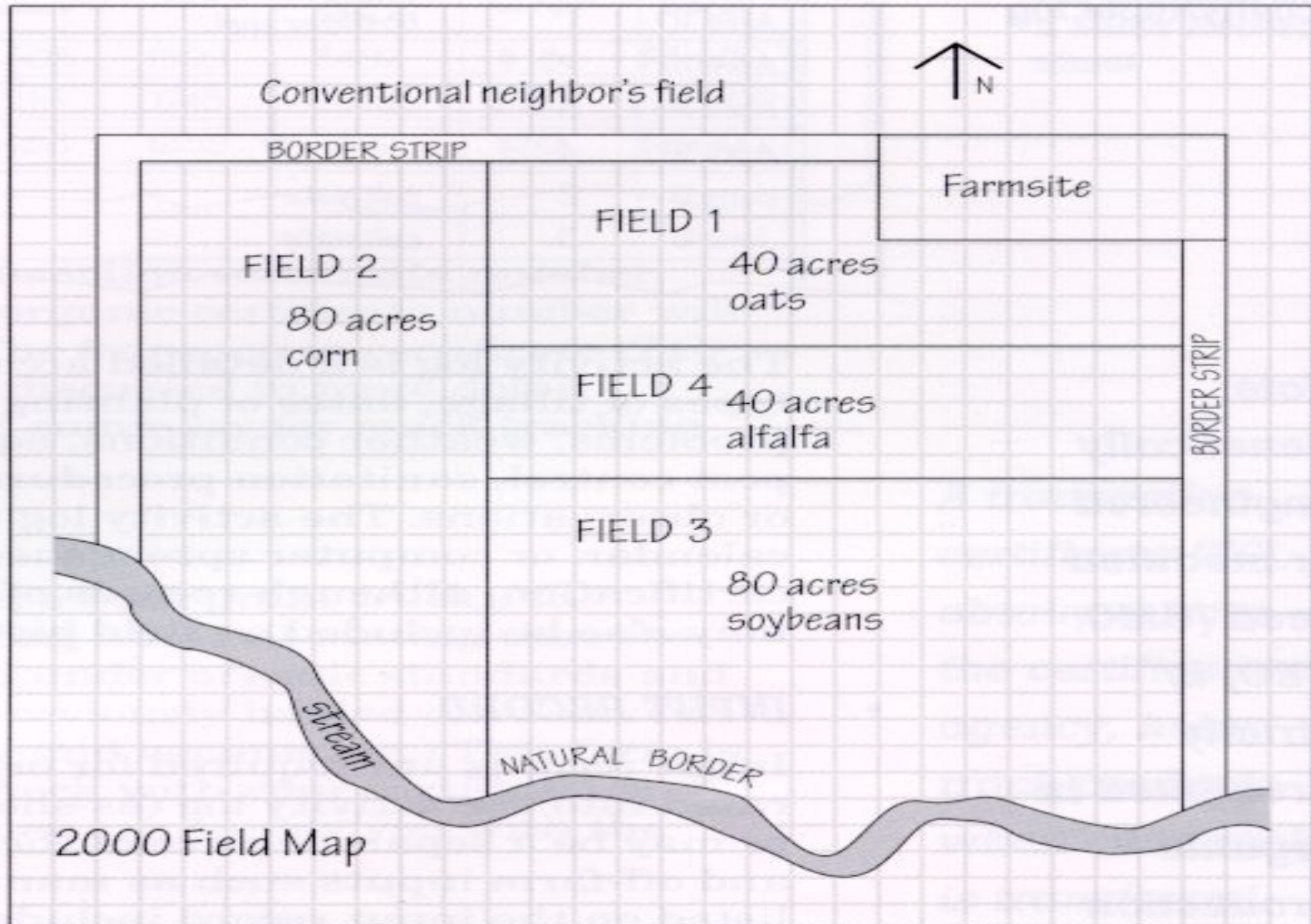
Organic System Plan:

- Management Goals & Methods
- Practices (weeds, pests, fertility)
- Materials used
- Monitoring process
- Recordkeeping
- Buffer zone management

Documentation

- Identify fields – part of traceability
- List practices and dates performed– provides a management record
- Identify risks of contamination
- Designate buffer areas
- Designate storage areas
- List any additives

Field Maps – Buffer Areas



Risks/Solutions to Contamination

- ❑ Run- off from adjacent field – grassed waterways
- ❑ Spray drift – buffer zone, notification
- ❑ Mistaken application – no-spray signs, applicator notification
- ❑ If contaminated, designate, document and harvest separately
- ❑ Contamination means re-starting the process (liability?)

Buffer Zone

- ❑ An area located between a certified production operation and an adjacent land area. It is not organically managed.
- ❑ A buffer zone must be sufficient in size or other features (e.g. windbreaks or a diversion ditch) to prevent the possibility of unintended contact by prohibited substances applied to adjacent land areas (25-35 feet or what ever it takes).

Record Keeping

- ❑ Receipts or labels verifying seed, input and labor purchases
- ❑ Activity logs: tillage, planting, cultivation, and harvest
- ❑ Long term field history: crop planted, yields
- ❑ Storage records: where, how much, to whom sold
- ❑ Sales records: tickets, contacts, etc.

Organic Farming Adjustments

- More storage bins (more crops)
 - More planning/thinking
 - More cleaning (food not feed)
 - More tillage
 - More time in the field
 - More income
-

Livestock Production

- Origin of livestock
 - Organic management from last third of gestation (poultry 2nd day of life)
 - 100% organic feed
 - Synthetic vitamins and trace minerals allowed

Livestock Production

- Prohibited substances
 - No synthetic hormones or growth promoters
 - No antibiotics
- Accommodate the health and natural behavior of the animal

Transitioning to Organic

- ❑ Start small
- ❑ Big mistakes on a small scale are better than small mistakes on a large scale
- ❑ Ask for help (other farmers)
- ❑ Work with a group

Transition Assistance

- RC&Ds with funding from the Nebraska Environmental Trust is providing continued training, farm tours and support.
- 9 RC&Ds with local contacts, three Organic technicians – 2 conferences, 9 farm tours, 9 regional meetings.

Transition Assistance

Follow-up meetings will include:

- How-to of organic farming
 - Weeds, fertility, insects
 - Crop rotations, machinery, storage
 - Cleaning practices
 - Local experienced organic farmers
 - Contacts with NOP certifying agencies
 - Marketing options
 - Certification process & documentation
-

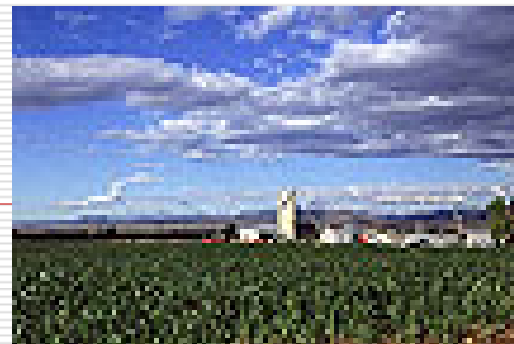
Chuck Francis, UNL, Agronomy and Horticulture Department

Organic Farming requires careful management, with certain guidelines and input restrictions

- Disposing of certain “organic myths”
- Managing soil fertility
- Weed management
- Insect pest management
- Whole system thinking and planning
- Information resources in organic farming

Disposing of certain “organic myths” heard in the coffee shop

- Myth: Organic farming is only for “small farmers”
- Fact: Organic farms range from less than one acre to more than 5,000 acres; in Sweden the average organic farm is larger than the average conventional farm



Disposing of certain “organic myths” heard in the coffee shop

- Myth: Organic farms are “mom and pop” operations with products sold through small specialty shops
- Fact: Over half the organic food sold in the U.S. today is through major supermarket chains, and Whole Foods is one of the largest in organics.



Disposing of certain “organic myths” heard in the coffee shop

- Myth: Organic foods represent a small part of the U.S. food system
- Fact: Although this part of the food sector is less than 2%, it represents over \$18 billion/year and has grown by 20% annually for 20 years



Disposing of certain “organic myths” heard in the coffee shop

- Myth: Organic farming methods have lower yields than conventional farming
- Fact: Yields from many organic farms are above county averages for major crops



Disposing of certain “organic myths” heard in the coffee shop

- Myth: Organic farming means cutting out all production inputs.
- Fact: Organic farming is a sophisticated set of practices in well-designed systems using approved inputs under certification.



Disposing of certain “organic myths” heard in the coffee shop

- Myth: Organic food is the same as food from conventional systems
- Fact: There is a much lower level of pesticide residue on organic foods; more research is needed on food quality and nutrition

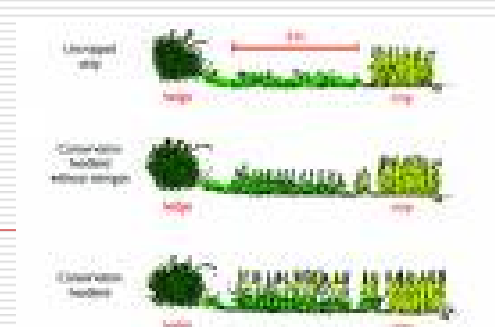


Managing soil fertility in organic systems

- Rotations
- Cover Crops
- Compost
- Manure
- Crop selection
- Green manure
- Appropriate crop rotations
- Grazing crop residues
- Commercial products

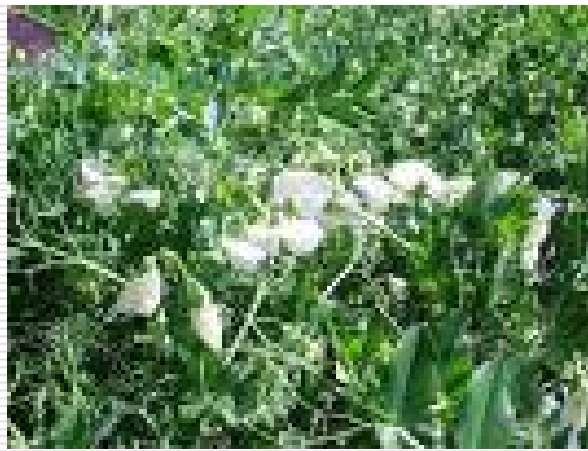
Managing soil fertility in organic systems: crop rotations

- rotate cereals with legumes, row crops with drill or solid-seed crops, winter annuals with summer annuals



Managing soil fertility in organic systems: cover crops

- Provide soil protection, fixed nitrogen, added organic matter; concerns about water use in our climate



Managing soil fertility in organic systems: compost & manure use

- Primary source of nutrients on many organic farms: crop/livestock integration seen as essential



Managing soil fertility in organic systems: crop selection

- Choose crops for efficient nutrient use, nitrogen fixing, scavenging root systems



Managing soil fertility in organic systems: green manure

- Early planting before summer crops, fall planting to overwinter or winter kill (oats), fallow year possible



Managing soil fertility in organic systems: commercial products

- ❑ Most products are expensive, much better to design rotations and crops to provide fertility within system



Weed management in organic systems

- Crop rotation - Sanitation - Cultural
- Mechanical, Physical, Beneficial insects, Mulches, Grazing
- Hand and mechanical weeding
- Flame or heat weeding
- Plastic mulch (with restriction)
- Biological, botanical, mineral inputs

Must document conditions for all use of synthetic substances on the National List

Weed management priorities

- ❑ 1st: Cultural (crop rotation, sanitation, seed variety) and system design to avoid pests
- ❑ 2nd: Mechanical or physical & Natural biological or mineral inputs
- ❑ 3rd: Approved synthetics

Insect management in organic systems

- Crop rotation
- Produce plants with high brix content, foliar feeding with sugars, fish emulsion, and kelp.
- Use approved insect control materials such as Neem, Rotenone, Sabadilla, Spinosad
- Bug vacuums
- Release of beneficial insects
- Grow a mixed forage
- Leave a strip

Insect management priorities

- ❑ 1st: Cultural (crop rotation, sanitation, resistant cultivars), overall system design
- ❑ 2nd: Mechanical or physical using natural biological or mineral inputs
- ❑ 3rd: Approved synthetics only when needed

Whole system thinking and planning

- ❑ Long-term planning for conversion and continued management
- ❑ Diverse crops in rotation, summer-winter, cereal-legume, annual-perennial, cash crop-pasture/hay crop
- ❑ Minimize export of nutrients from farm; focus on highest value-added product possible
- ❑ Manage the farm as one complete unit and part of the larger landscape ⁴⁵

Information resources in organic farming

□ Farmers with experience in organic farming

□ ATTRA (Fayetteville, Arkansas):

- attra.org has a large section on line with recommendations for organic farmers

- Web site also has information in Spanish

□ SARE National Program (Beltsville)

www.sare.org/publications/

□ Organic Farming Research Foundation

www.ofrf.org/

□ Landgrant universities, eg. UNL

<http://cari.unl.edu/Presentations/organic-farming-2008.doc>

Science-Based Organic Farming 2008: Toward Local and Secure Food Systems

- <http://cari.unl.edu/Presentations/organic-farming-2008.doc>



Charles Francis, Katja Koehler-Cole, Twyla Hansen, Peter Skelton
Editors 2008

University of Nebraska – Lincoln
Extension Division
Center for Applied Rural Innovation

□ Making the Decision to Transition

Dave & Deb Welsch

Milford, NE

402-826-5361

dwelsch@westbluefarm.com

Making the Transition

- Initiating the transition process:
- Making the decision to go organic
- First steps
- First Crops
- First practices
- Choosing a Certifier
- Completing the farm plan

Making the Transition: References

ATTRA

www.attra.org

National Agricultural Library

www.nal.usda.gov/afsic

Sustainable Agriculture Research & Education

www.sare.org

The New Farm

www.newfarm.org

Midwest Organic & Sustainable Education Service

www.mosesorganic.org

Organic Trade Association

www.ota.com

Organic Transition Resources

Rodale Insitute/New Farm web-page
15-hour on-line organic training
www.tritrainingcenter.org/course/

- Principles of organic agriculture
- Practical details for organic crop and livestock production
- Marketing opportunities
- Recordkeeping /other requirements

Organic Transition Resources

ATTRA, USDA Sustainable Agriculture web site:
<http://attra.ncat.org/organic.html#overview>

- [Organic Publications Overview](#)
- [Organic Regulation, Certification, Transition & History](#)
- [Organic Fruits](#)
- [Organic Vegetables, Flowers and Herbs](#)
- [Organic Field Crops](#)
- [Organic Livestock](#)
- [Organic Control of Pests](#)
- [Organic Soils & Fertilizer Issues](#)
- [Organic Marketing](#)
- [Organic Farming Information from Other Sources](#)

Corey Brubaker

USDA Environmental
Quality Incentive
Program (EQIP):

- Transition to Organic
Production

EQIP Incentive

- ❑ Designed to overcome risk
- ❑ Addresses 3 years of production without chemical inputs but no premium prices.
- ❑ Fixes the problem: "I can do it but in 3 years I'll may be certified organic but also broke!"

EQIP Program

- Sign up at local NRCS office
- Complete EQIP application
- Application is scored sent to state office
- Approved contract returned for applicants signature
- Binding only if signed

EQIP Program

- ❑ Should be an option in all Districts
- ❑ Payment and acreage limits may vary between Districts
- ❑ Applicants should still try to apply to show the need for the program

2008 EQIP Incentive Payments: Cropland

- ❑ \$30-60 per acre (\$75 irrigated)
- ❑ 160 acres maximum, 20 minimum
- ❑ Each year for three years maximum
- ❑ Cropland must be planted to an **annual** crop for two consecutive years (?)
- ❑ A conservation plan is needed to address soil and water issues.

2008 EQIP Incentive Payments: Grazing land

- ❑ \$10/acre
- ❑ 320 acres maximum, 40 minimum
- ❑ Each year for 3 years maximum
- ❑ Grazing land must be permanent pasture
- ❑ Have a prescribed grazing plan
- ❑ At least 10 animal units.

NRCS EQIP/ NOP Rules

- Land must be able to be certified organic
- Land enrolled in CRP does not qualify
- Buffer areas do not qualify but can be enrolled in CRP
- Land enrolled in the irrigated to dry land program does qualify
- Waterways, high risk areas, forest land does not qualify

Incentive Payments:

- Applicants with organic land can apply as long as the end result will be not exceed the maximum acres allowed in each category (Subject to 2008 Farm Bill Language?)
- Applying for one of the above programs does not exclude participation in the other

Incentive Payments:

- ❑ This is a 4-year contract, 3 years transition, one as certified organic.
- ❑ Failure to complete contract will result in a refund of payments plus a 20% penalty.
- ❑ Early certification terminates the contract with no penalty.
- ❑ EQIP Organic Transition Program details may vary between counties.

Things to stop doing:

- No Round-up Ready soybeans
- No Round-up Ready or Bt corn
- No treated seed
- No GMO alfalfa inoculants
- No Chemical fertilizer
- No herbicides
- No insecticides

NRCS Transition Concerns

- ❑ Don't add anything that is not allowed
- ❑ Don't grow anything that is not allowed
- ❑ Start developing a Systems/Farm Plan
- ❑ Connect with a National Organic Program (NOP) certifier

Incentive Payments:

- ❑ Payments will be made **after harvest** each year
- ❑ After **verification of compliance** by a NOP certifying agency to NRCS.

See www.newfarm.org "Guide to Organic Certifiers" to compare certifying agencies.

Social/Economic Impacts

Organic Production
Impacts More Than
Farm and Field

TRENDS

- Before WWII, one out of every three Americans was involved in agriculture. Today it's less than one out of 100.
- In 1950 there were almost six million farms in America, today there are less than two million.

TRENDS

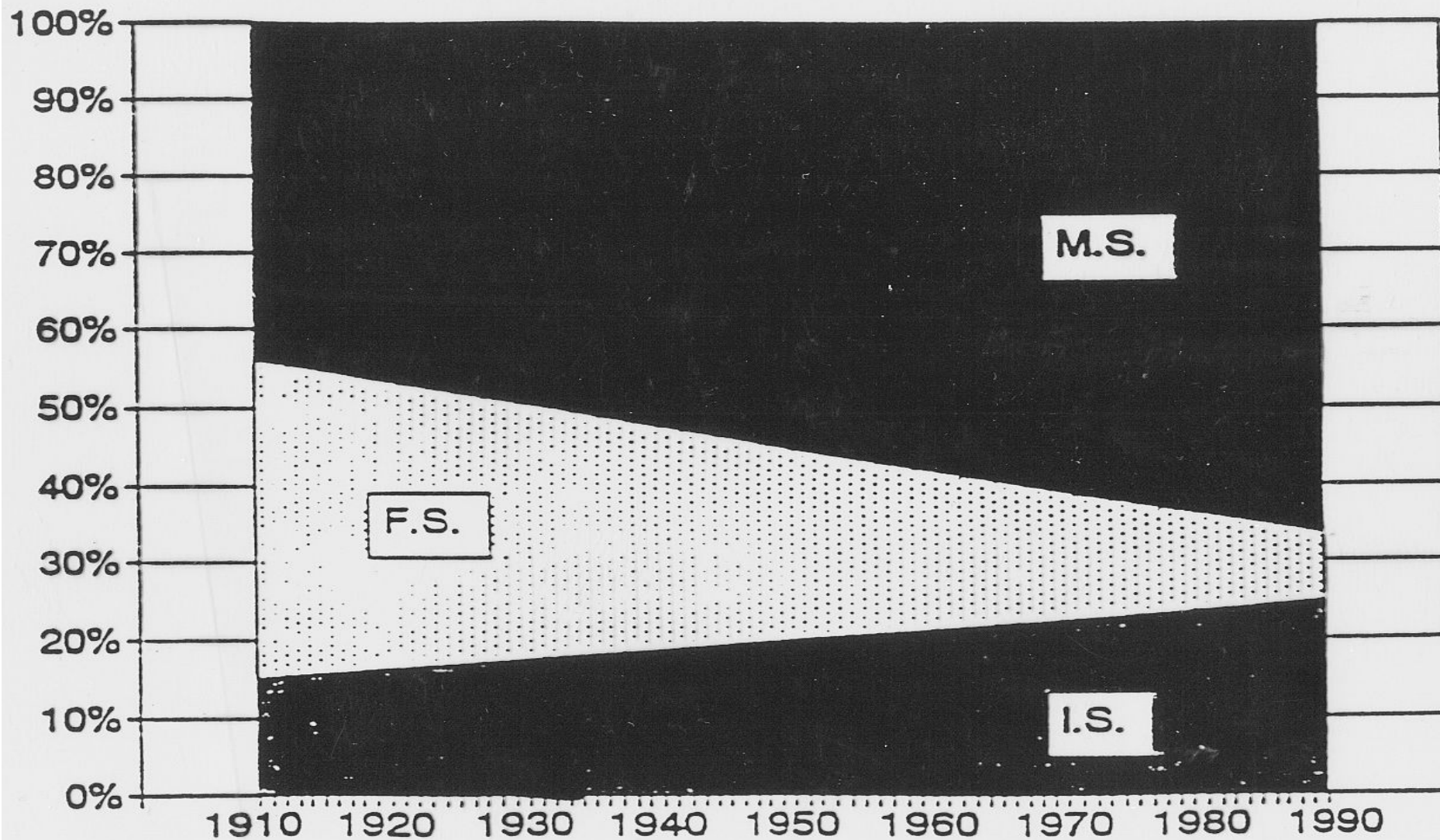
- ❑ Farmers are aging since few have the resources to retire and provide the financial help beginning farmers need.
- ❑ Increasing farm size or yield does not seem to solve the problem.

TRENDS

For many, the farm needs to finance their retirement also, so their kids go to town for a job, dad and mom stay on the farm until full retirement or longer and the farm is sold off so other farms can get larger.

Diminishing Returns by Stewart Smith, UM

Marketing, Input, and Farm Shares



Seven Counties, Southeast Minnesota, 1997:

| | |
|----------------------------------|-----------------|
| ❑ Crops and livestock million | \$ 866 |
| ❑ Expenses* | \$ 947 million |
| ❑ Loss | \$ - 80 million |
| ❑ Federal Programs | \$ 40 million |
| ❑ Off-farm income | \$ 40 million |

* Half of which left the county (chemicals,
seed, interest)

Woodbury County, Iowa, 1998-2003:

Annual averages

- ❑ Crops and livestock \$ 154 million
- ❑ Production Expenses \$ 178 million
- ❑ Loss \$ - 24 million
- ❑ Federal programs \$ 23 million
- ❑ Off-farm income \$ 12 million
- ❑ Imported food: \$ 170 million

2008 Iowa State Research on Profitability of Commodity Farming

\$52 per acre profit for conventional is based on discussions with farm management specialists in Iowa (\$20 in 2006).

Mike Duffy has a publication that outlines cost of production for corn and soybeans, as well as other crops

(<http://www.extension.iastate.edu/Publications/FM1712.pdf>).

2008 Iowa State Research on Profitability of Organic Farming

Average Iowa organic farm producing corn, soybeans, oats with alfalfa, and alfalfa, the average return for the 4 crops is approximately **\$254** (\$170 in 2006) profit per acre (not yet published).

Chase, PhD Farm Management Field Specialist, 720 7th Ave SW, Tripoli, IA 50676 319.882.4275, 319.882.4292 (FAX) cchase@iastate.edu

\$45,000 goal Commodity (c/s) vs. Organic (c/s/o/alf)

| | Com. | Org |
|--------------------|-------------|---------|
| Acres | 865 | 177 |
| Profit per acre | \$52 | \$254 |
| Land rent @ \$200 | \$173k | \$35k |
| Land @ \$3,500/a | \$3 million | \$620k |
| Machinery @ 250/a. | \$216k | \$44.3k |
| Hours labor total | 865 | 320 |

Oct. '07 Iowa State Profitability Numbers: Commodity vs. Organic

Commodity:

| Crop | Price | Yield |
|----------|---------|-------|
| Corn | \$ 3.50 | 180 |
| Soybeans | \$ 8.50 | 50 |

Organic:

| | | |
|---------|---------|--------|
| Corn | \$ 8.25 | 150 |
| Soy | \$14.60 | 40 |
| Oats | \$ 2.70 | 80 |
| Alfalfa | \$95 | 4 tons |

2008 Organic Livestock Feed Prices

| | |
|----------|--------------------|
| Corn | \$ 8.75 - \$ 9.00 |
| Soybeans | \$ 14.40 – \$16.00 |
| Wheat | \$ 9.50 – \$10.00 |
| Barley | \$ 6.00 - \$ 6.50 |

- ❑ Food-grade price is 10-20% higher
- ❑ Contracted FOB the farm
- ❑ Courtesy of West Plains Company

www.westplainsco.com

Sample Budget:

□ 320 acre farm, 100 acres each:

corn @ 100 bu. x \$9 = \$90,000

wheat @ 60 bu. x \$10 = \$60,000

Beans @ 30 bu. x \$14 = \$42,000

□ Gross Income \$174,000

Expenses, \$200/acre = \$60,000

Land costs, \$200/acre = \$60,000

Net Income = \$ 54,000

Economic / Social Impact

- ❑ A **conventional corn and soybean** farm with a profit margin of \$52 per acre will need 865 acres to generate \$40,000 of net income.
- ❑ At this rate, every township (36 sections) will support only 26.6 farms.
- ❑ If each family has 1.6 children, The township will have a total of 43 children.

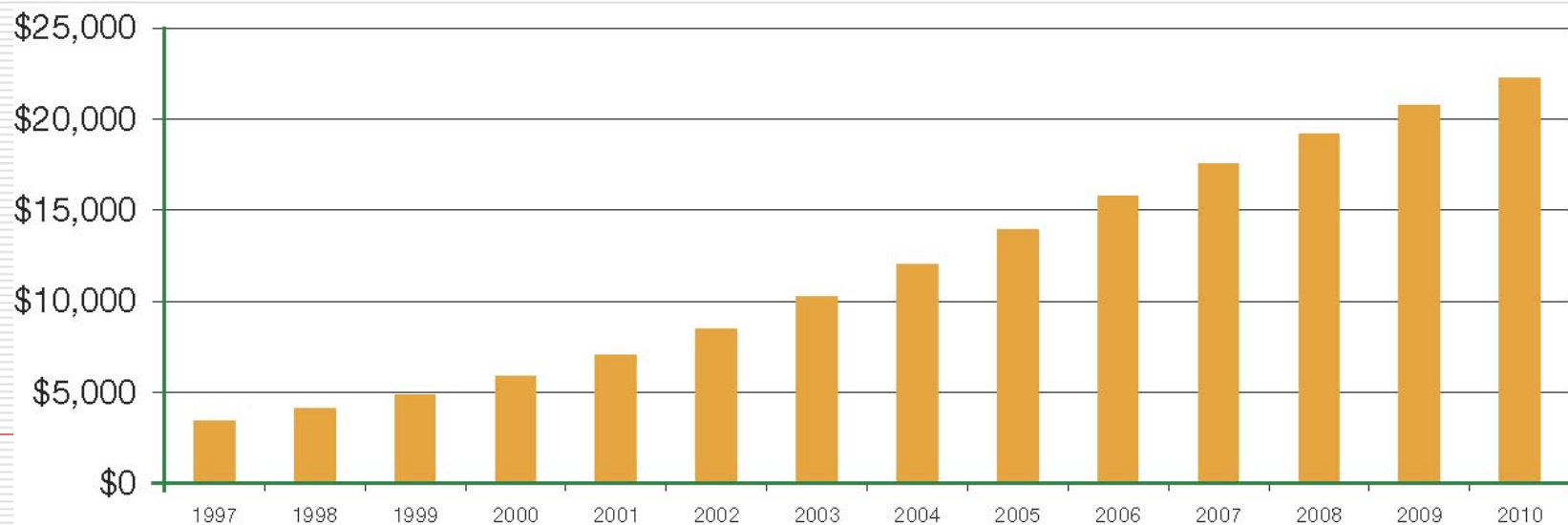
Economic / Social Impact

- ❑ An **organic farm** with a profit margin of \$254 per acre will need only 177 acres to make \$40,000 of net income.
- ❑ At that rate, every township can support 130 farm families.
- ❑ With 1.6 children per family, the township now has 208 children.

Organic Food Demand in the U.S.

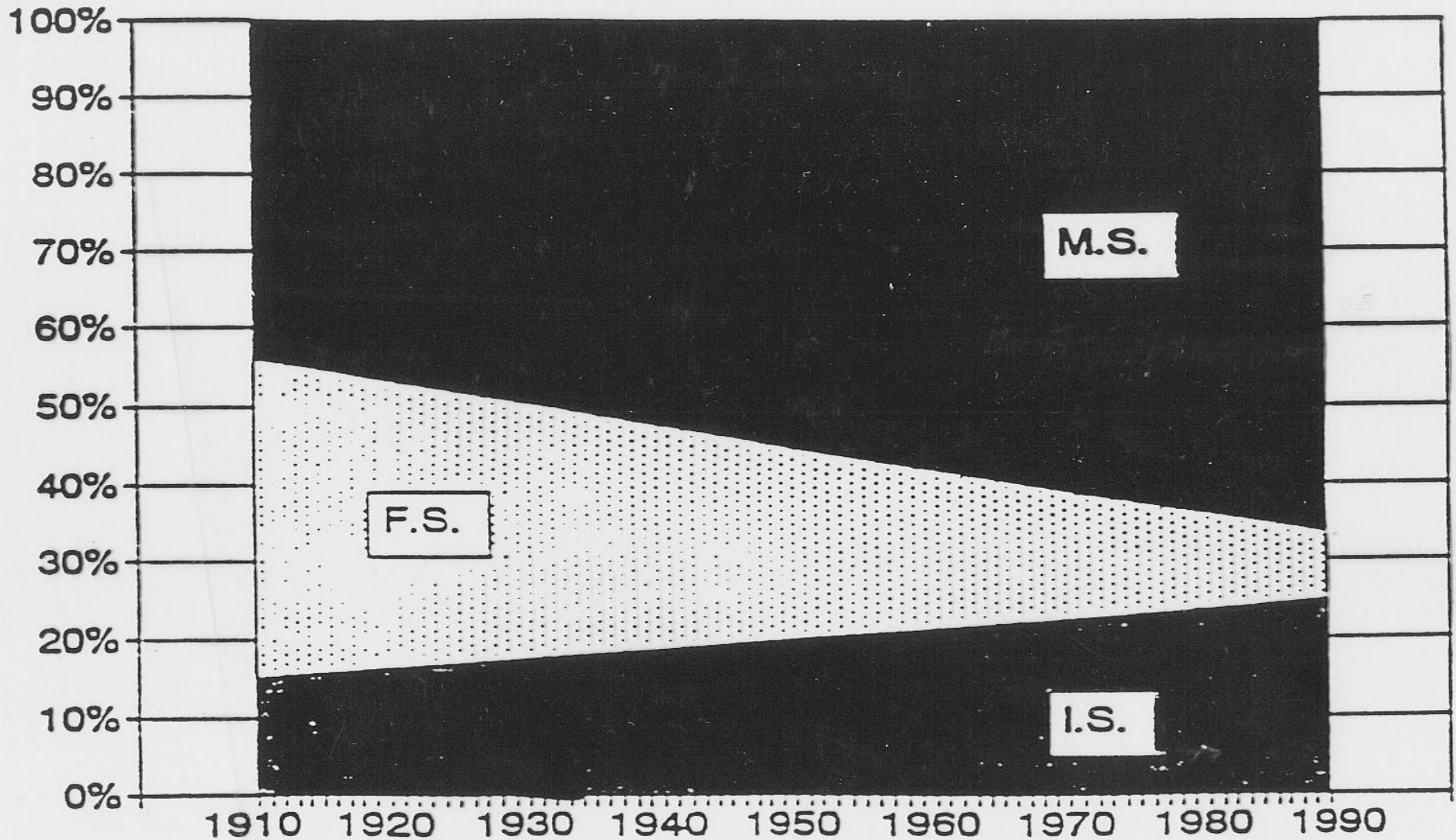
Organic Food Sales have doubled since 1997 to reach \$7.1 Billion in 2001 & are expected to double again to \$14 Billion in 2005.

Annual U.S. Consumer Sales of Organic Foods, 1997-2010 in \$mil



Diminishing Returns

by Stewart Smith, UM
Marketing, Input, and Farm Shares



Thank you

A special thanks to Organic Farming Research Foundation for funding this project and to MOSES for use of their materials in helping develop this curriculum.