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PROCEEDINGS OF

INNOVATIVE FARMERS OF OHIO

THIRD ANNUAL MEETING

JANUARY 20, 1996

DELAWARE HOTEL
351 S. SANDUSKY ST.
DELAWARE, OH 43015

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TABLE OF CONTENTS

FOREWORD

The following is a proceedings from the Third Annual Meeting of the Innovative Farmers of Ohio, held in Delaware, Ohio, on January 20, 1996, at the Delaware Hotel. The original intent was to put this information into our next newsletter, but the mere size of this effort prompted us to consider issuing a separate proceedings.

These proceedings are different from the traditional proceedings format as they are not a verbatim reiteration as to what was said by the speakers in the keynote and workshop presentations. Instead, these proceedings paraphrase the speakers' comments, gisting or summarizing comments to cover the predominant points. These summaries were based on relistening to the presentations from audio and video tape recordings. For those individuals who wish to hear the entire presentation verbatim, arrangements can be made to provide access to these recordings. Details on borrowing such recordings can be gotten from either Jeff Dickinson or Keith Dix, interim coordinators for IFO activities.

The **Table of Contents** lists only the names of the presenters. The individuals' names involved in writing these summaries are italicized following each presentation. A special thanks and note of appreciation is given to Michael Cote', who coordinated and did the recordings of these sessions, to Louise Warner, who reviewed, summarized and provided detailed notes of many of the recordings, and to Deb Stinner, who put in additional effort to capture the essence as much as possible from David Kline's presentation.

This is the first year for providing such a proceedings. We would appreciate any feedback on its value and/or format for the coming years.

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Introduction

Innovative Farmers of Ohio Gather for their Third Annual Meeting in Delaware, Ohio

On January 20th, 1996, approximately 90 IFO members and prospective new members gathered at the Delaware Hotel in Delaware, Ohio, for their Third Annual Meeting. One thing noticeably missing from this year's meeting was the snowstorm, but there was enough ice and cold weather around to make us all yearn for the warmer days of spring on our own farms.

David Kline, noted Amish farmer and author, inspired his audience with visions of community and family centered small farms and their connections to the land. In the afternoon, five separate workshops were presented, with four of these workshops repeated. Finally, after supper, Congresswoman Marcy Kaptur gave encouagment to all by reminding us that farmers do have friends in Washington, and that some people care whether or not they are buying food from corporations or from a neighbor down the road. Our meeting had a number of prominent visitors, including Dean Moser, Gene Logsdon, and Bob Evans, with representatives from OSU Extension, NRCS, Ohio Rural Development Partnership and Ohio Ecological Food and Farm Association.

The following are summaries from the keynote talks and workshops that were presented during the Third Annual Meeting of the Innovative Farmers of Ohio.

Keynote Address - "Isn't Farming a Wonderful Profession?"
(Based on a keynote speech presented by David Kline)

"Isn't farming a wonderful profession?", asked Amish farmer and writer David Kline in the kickoff address at the annual IFO meeting. David is the author of "Great Possessions: an Amish Farmer's Journal" and a spokesperson for sustainable agriculture in Ohio and elsewhere.

His talk was like a stroll through the Amish countryside he was born in and calls home, reminding many in the audience of values forgotten in our own hectic world.

"I think farming is one of the few professions in the world where we share everything. Farmers will not go to tell a neighbor how to do it, but if a farmer asks - if he sees a field that has done well for his neighbor. he'll ask, what kind of seed was it, what practices? And the farmer will tell him everything. There is no competition, (at least among dairy farmers)."

The spirit of these statements is what IFO is all about - farmers learning and sharing together for their mutual benefit and for the benefit of the rural communities in which they live. David talked about a sense of historical connection Amish farmers have to dairy farming especially, which goes back to the 16th century in the Swiss Alps and meadows, and how the dairy cow is still the ideal animal for Amish hill farms in Holmes county. He described in some detail how he follows many of the same practices as his Swiss ancestors, with a four year rotation of wheat/small grain, hay (1-2 years, corn (1-2 years), and how his farm has seen this rotation for 150 years, plowing warm spring soil bursting with life, threshing with neighbors with the old threshing machine full of innovations the Amish have added since it has been cast aside by the larger society, the benefits of having straw for loose housing the cows and the wonderful manure it makes to spread on the fields. He shared also how these traditions are being threatened by high farm land prices, uncontrolled growth in Holmes county and factories which lure young Amish men away from farming. He described what it was like to attend a one room school run by a teacher wise enough to allow the students to take advantage of many learning opportunities outside the classroom walls, especially in the world of nature, and how many Amish make self-taught learning a life long pursuit through reading, in spite of limited formal education. However, David also discussed how hard it is to survive in farming these days, "even if you are not head over heels in debt," and how important it is to be innovative, even the Amish. As an example, he shared information on how intensifying existing rotational grazing on his farm has improved

their profitability.

In addition to sharp management skills, he stressed the importance of "being tight with the buck." Two advantages he sees Amish farmers have, he said, is that, "all our machinery expenses would fit into the cost of one modern tractor, and also we have the help of the community." The Klines further reduce expenses with crop rotations, which means less fertilizer and no insecticides. They and their neighbors cut herbicide costs by cultivating and using a small amount of herbicide in a large amount of crop oil. He talked about further increasing efficiency of intensive rotational grazing by using the most appropriate breed of dairy cow for this management system, which for David is the Jersey, especially on small farms.

Many Amish families are diversifying into vegetable production to stay in farming, especially those in churches which do not allow milking machines. For those Amish who are allowed by their church to have milking machines, a nice income can be made milking 25-30 cows, according to David. (Think of how low their overhead costs must be!) Whereas most of the vegetable producers market their produce to a newly established wholesale market near Mt. Hope, David's wife, Elsie, has developed a Community Supported Agriculture garden for a few lucky urban families in Wayne and Holmes counties. David discussed also how some Amish are opting to go to contract farming (especially chickens) to stay in farming. He took a dim view of this, however, citing the historical reasons the Amish left Europe to own land and not to have to work for the lords and princes under a fuedal system. He sees contract farming as a return to a similar type of fuedal system with the multi-national corporations as the "lords and princes." He cited how low hog prices are hurting Amish farmers and pointed out that the high corn prices will take their toll on the mega-contract operations if they stay high a second year in a row.

"Shall we pray?" asked David (who also is an Amish minister).

What David shared with us was a snapshot of a farming life struggling to survive like so many family farms and rural communities are in the larger society, but with a contentment and joy that many of us do not seem to have for all our time and labor-saving devises. The Amish are not opposed to technology per se, David told us. But they do test potential benefits of technology against their strong commitment to family and community. If it is determined that a particular technology could have detrimental effects on family or community integrity, it is rejected. This strikes me as a hallmark of a mature society.

I will close with one more notable quote from David's talk.

"There is so much going on that we don't understand here (in farming). That's good. We need that mystery. If you know everything, farming isn't interesting any more".
Debbie Stinner

Converting from a Conventional to an Intensive Rotational Grazing Dairy Operation
(based on a workshop presented by Dave Forgey)

Farmers have been grazing for 1000's of years. It was not until the last 40-50 years that what has become known as conventional dairy farming emerged. Dave Forgey is a third generation farmer who learned from his father, grandfather, and on his own. Originally he operated 400 acres at Riverview Farm, in Logansport, Indiana, with only 100 acres in permanent pasture. He appreciates the lifestyle that his family-owned dairy business has brought to him and his family. In his words, "All we have we owe to udders." However, in 1991 he began to ask himself if perhaps he needed to rethink his land-use pattern...more grazing, fewer crops. He was influenced by rotational grazing specialists from Ohio State University, Wisconsin and New Zealand, but no one he talked to provided specific answers or gave him a recipe to follow. He had to figure out on his own what worked best for him.

In 1992 he began to rotationally graze the 100 acres in April, not stopping until October, milking 140 cows at that time. At the same time he began converting crop land into permanent 2 1/2 to 5 acre paddocks. He

now grazes 300 acres of his 400 acre farm. He uses a break-wire fence to break these down into smaller 3/4 acre paddocks. He now milks only seasonally, with no milking being done in January and February, and stopping/starting times dependent on that particular season. His production may be down 5-6%. but his profits are up 20%.

Over the years, Dave has developed a unique system that works for him. As with all farming systems and management styles, the specifics or "nuts and bolts" of the system vary considerably from farmer to farmer. For those readers who enjoy "nuts and bolts", the following summary of Dave's system is presented.
Jeff Dickinson

Dave Forgey's Rotational Grazing Dairy Farm in a Nutshell

Farm Layout	400 acres, 300 rotationally grazed; 2 1/2 acre paddocks with 3/4 acre sub-paddocks; 100 foot drop in lay of land; 1-wire high tensile, 12 1/2 ga; gateway electricity underground with wrap-around insulation; lanes 10-12 feet wide covered with 2" of thumb-sized gravel as base then 2" of agricultural lime; no machinery on lanes (drives machinery through paddocks).
Water System	lays 1000' feet/hour of plastic pipe with vibrating cable plow; depth ranges from few to 30 inches (limestone layer underneath); doesn't use system in winter, drains water loops in system (no breaks in 3 winters); 100 gallon Rubbermaid water tanks, dragged from cell to cell; keep free-choice salt/mineral with water, dragged with water tank (run two sets of water tanks and salt mineral).
Grass Management	to estalish a new pasture, grazes rye (3 passes), followed with sudan grass (5 passes), followed with no-till drilling of Reed canarygrass and Alsike clover; burns down every other paddock in July with gramoxone, then no-till drills orchard grass, red clover and Alfagraze; 12 hour grazing schedule (milks at 1AM and 1PM) - cows go to fresh paddock after milking; grazes down to 3", regrazes at 8"; following 12 hours, bred heifers follow up milkers to clean up paddock; recently started to feed grain under break wire; clips pastures in early spring, clips again if cows aren't grazing completely (doesn't allow seed-head formation); frost seeds in early March; hays excess alfalfa.
Winter Feeding	round bale hay, covered in plastic, stored in paddocks: unrolls to feed, sets break wire into windrow, feeds heifers and calves same way, feeds grain (including ground corn) and pellets (12% hi-energy) in paddocks unless too wet.
Calves	seasonal birthing (March, April and May); after colostrum from mom, uses New Zealand method of feeding from 18 nipples from 55 gallon barrel with plastic hose to bucket of milk in bottom of barrel; fills bucket with water when ready to wean; calves put into while Dutch clover pasture with grass hay.
Breeding	trys to maintain 20,000# herd average; breeding back is vital; breeds to a 10 week window currently (may cut to three weeks); cull if don't breed; keep heifers from first 6 weeks of freshening only; uses 100% New Zealand Holstein bull semen; uses heat detection device called "Heat-Watch", a radio transmitting patch put on the tail that detects when the cows/heifers are being mounted, sending a signal to a computer which records the time and duration (bred 159/170 in 1995); trying to eliminate hormone regulating drugs; uses herring-bone breeding pen.
Marketing	considering cooperative for year-round milk; cheeses, ice cream from the farm; more direct marketing strategies.

Small Scale Food Farming and Marketing to Restaurants - Promoting Local Economies
(based on a workshop presented by Herm Beck-Chenoweth and Linda Lee)

Herm Beck-Chenoweth and Linda Lee have a basic philosophy of farming: "Grow a healthy animal in the most humane conditions; slaughter humanely; give the customer the best possible product you can. If you can do that and make a reasonable living, you must be doing the right thing."

Some Facts about On-Farm Processing of Poultry in Ohio

- You can process only what you produce.
- A poultry producer who processes less than 1000 birds a year is exempt from any regulations.
- Between 1000 and 20,000 birds a year, the producer must have his/her facility inspected and approved by the Ohio Department of Agriculture. The annual charge for this is $50.
- Individual bird inspection is optional; however, if you choose to have bird-by-bird inspection, then every bird slaughtered must be inspected.
- Over 20,000 birds a year requires a state inspector on-site. There is no charge for the inspector.
- Exotic birds are exempt from inspection.
- State inspectors follow federal regulations already in place.
- For further information on rules and regulations with on-farm poultry processing, contact Dr. Joos, acting Chief of the Meat Inspection Division of the OH Dept. of Agriculture, at 1-800-282-1955.

Herm and Linda must be doing the right thing for they alone can not meet the demand of the local fresh poultry market they have tapped into in southeast Ohio. For them, the "right thing" also includes serving the local economy and keeping local dollars moving between local businesses and customers. That includes keeping the dollars made from processing on the farm for the farmers and their families to use. During their workshop at the IFO annual meeting, Herm pointed out that producers may get only $.68/pound for a chicken; however, the processor can get $2/pound. For poultry, State and Federal regulations set limits on the amount that can be processed on-farm and the degree of regulation required based on the number of birds processed per year (see sidebar).

Herm and Linda further enhance the local economy by selling directly to a local restaurant. Some restaurants make a point of advertising that they buy and serve locally grown food, listing the local producers on their menu. This creates a win-win situation for the restaurant since they are serving the freshest and highest quality food possible, and for the producers, who develop visibility in their community, and has even greater potential for direct sales to informed customers.

According to Herm and Linda, one of the greater challenges remaining is to find more producers with more and different farm products, to encourage more diverse and year-round local buying by restaurants and families. Moreover, a greater effort is needed in educating consumers about where their food comes from, how it is produced, and how these two factors together influence the quality of food people eat.
Jeff Dickinson

Fix Your Nitrogen: Management Alternatives
(based on a workshop presented by Charles Eselgroth and Ed Zaborski)

How much nitrogen do you need to apply to your crops? Would you believe that you could get 200 bushels/acre of corn with only 100 pounds of applied nitrogen? Charles Eselgroth did. But he didn't do so overnight. After being exposed to Rex Spray and his farming system 8-10 years ago, Charlie thought it was time to fine-tune his nitrogen application rates, to at least cut back, if not to eventually eliminate all purchased nitrogen from his crop fields.

His primary tool for doing so is cover crops. He has used hairy vetch and clovers. He learned how to give "N-credits" for these crops; and, combined with a late spring soil nitrate test, he has reduced his nitrogen application for corn by 80 pounds per acre. He thinks he can do even more.

Ed Zaborski, research associate at OARDC and research coordinator for on-farm research with IFO

cooperators, points out that nitrogen management is not like falling off a log: it requires an understanding of the nitrogen cycle, the soil biology that influences this cycle, including microbial activity and its association with plants, in particular legumes, coupled with frequent soil sampling and following recommendations. There is a greater tendency to overapply than to underapply; therefore, utilizing the monitoring tools that we have is important in fine-tuning our application rates.

Cover crops take mineral nitrogen out of the soil and hold onto it at a time of the year when the primary crop isn't there to take it up. Therefore, it is conserving nutrients made available primarily through soil biological activity, holding them until they are plowed down and eventually decomposed into the soil ecosystem. Cover crops can add 10-15 tons per acre of organic matter to the soil if incorporated. Another 6000 to 7000 pounds per acre of living organisms reside in the soil to decompose this organic matter. These living organisms themselves become additional organic matter for decomposition throughout the season. Through the decomposer food web, this organic matter releases slowly a variety of macro- and micronutrients to the soil ecosystem in addition to nitrogen. Many of these nutrients eventually become readily available for plant uptake. If you know what and how much of these nutrients are in your soils, that's less fertilizer and other soil amendments you have to purchase, reducing your production costs, and increasing your profits, in addition to maintaining your soil's health.
Jeff Dickinson

Developing a Whole Farm Systems Approach to Farming
(based on a workshop presented by Rex Spray and Deborah Stinner)

Rex Spray has been farming organically 23 years. Over that period he has developed his own definition of sustainable agriculture:

> "...integrated systems of agricultural production that minimize or eliminate the use of synthetic chemicals, using low-input or organic methods to maximize the use of on-farm resources to maintain crop productivity, maintain or increase farm profits, and protect food, water and environment."

He wonders, "How could anybody be against that?".

Once Rex realized that his farm was lacking humus - the stable portion of organic matter that has a profound influence on soil nutrients, water, air and subsequent biological dynamics - he decided that most of his farming efforts would be directed towards building soil humus. Over the last 23 years, he built soil humus without purchasing any fertilizer inputs, not even lime. He argues that all of the necessary nutrients were there, they just were not available. His main tool for doing so was with his rotation, learning how to turn crop residue into soil humus. Presently, Rex out-produces 66% of the corn farmers in his county. The people who keep track of these numbers don't even want to hear about his profits. Do they just don't care, or are they afraid of the possibility that organic farming and profitability can go hand-in-hand?

During the early transition years, Rex did use humates, inoculants, and compost: but with his rotation, which includes corn-beans-wheat or spelt (small grain)-hay, he has been able to maintain productivity (and profitability) without any purchased inputs beyond his seed and fuel (of course we all know that farmers work for free!). This rotation has also reduced his weed and insect problems: he uses no herbicides and insecticides.

Rex is a firm believer in tillage. It may take more trips across the field, but in addition to weed control, Rex believes that tillage increases yields by incorporating residues, allowing more air in the soil, and promoting more aerobic decomposition in the soil, which is necessary in the formation of soil humus.

Rex also believes that you can build soil humus without animal manure inputs. According to him, "green manure" works just as well as animal manures.

What about no-till? Rex believes that no-till production leaves too much of the residue on the surface, leaving too many of the nutrients to be volatilized and lost to the atmosphere.

Debbie Stinner, from OARDC at Wooster, has completed an economic study of Rex's farm for 1991 and 1992. She verified that his yields are comparable to county averages. The biggest drain on his profits were seen with labor and fuel costs, primarily in the control of weeds.

For those of you who are still skeptical, just visit Rex's farm yourself. The proof is in the pudding!
Jeff Dickinson

Keynote Presentation - "The Living Soil"
(based on a presentaion by Ed Zaborski, Reasearch Associate, OARDC, Wooster, Ohio)

A number of the management tools of farming have a profound effect on soil organisms, either directly or indirectly. Ed Zaborski characterized the "living" qualities of soil during the IFO annual meeting. These tenants of the soil are easy to forget since we generally can't see them. Living organisms are all influenced by the soil's physical, chemical, geological, and other biological characteristics. All of these soil characteristics are impacted by agricultural activities. The Soil Ecology/Sustainable Agriculture group at OARDC has a printed version of Ed's presentation for those of you who like detail. Otherwise, here's a brief rundown of who lives in your soil.

- **Bacteria** - one gram of soil contains 3 billion bacteria.
- **Fungi** form threads that can be up to 50 meters long in a single gram of soil.
- **Protozoa** feed primarily on bacteria and dead organic matter, participate in the release of nutrients in the turnover of microbial biomass.
- **Nematodes** are multicellular organisms (4mm or less) which can number as many as 7,000,000 in one square meter of soil. Most nematodes do not harm plants.
- **Earthworms** are the largest invertebrates in the soil, feeding on decayed organic matter and getting nutrition from the fungi and protozoa growing in the organic matter.
- **Podworms, slugs, snails, sow/pill bugs, millipedes, centipedes, springtails, and mites** are just a few of other common macro- and micro-invertebrates, which are too many to mention here.

What do all of these creatures do in the soil? In terms of soil nutrients, they influence the availability of these nutrients to plants basically in three different ways: 1) by forming direct or symbiotic relationships with plants, such as nitrogen-fixing bacteria (rhizobium) or mycorrhizal fungi; 2) through the physical, chemical and digestive breakdown of organic matter, making nutrients available to plants, or recycling nutrients; and 3) by holding on to or preserving nutrients to prevent leaching and/or volatilization.

Finally, Ed pointed to the influence of soil life on soil structure. Many of these organisms produce gummy, sticky substances that bind soil particles together. A good soil structure has stable aggregates which consist of soil particles forming fine pores that conserve soil moisture, and larger pores that drain excess water and bring oxygen into the soil.
Jeff Dickinson

Keynote Address - "Words from Washington"
(based on a keynote speech presented by U.S. Representative Marcy Kaptur, Chair of the Agricultural Appropriations Committee)

United States Congresswoman (D) Marcy Kaptur spoke at the Innovative Farmers of Ohio's annual meeting held on January 20, 1996. Kaptur spoke about the some of the problems and concerns facing farmers and her role in the government to improve their standing. Kaptur expressed a concern for the farm community and posed the question: "Do farmers have to be bigger to be better?"

Kaptur wants to be a voice for the common farmer who has been hurt by the expansion of large agricultural

producers. "I feel bad about our countriy's inability to reward our farmers for their contributions," Kaptur said. One of her goals in this regard is to direct money that is now going into the pockets of retailers back to the farmers producing the food.

Kaptur was also preparing for the upcoming "Farm Bill II" debates. The bill was a follow-up plan to the 1995 Farm Bill which was vetoed last year. The plan calls for more support and funding to areas of agriculture such as soil conservation, rural development, forestry, and agricultural research and development. Farmers now find themselves at a crossroads, depending more and more on themselves to raise their families and hold on to their land, according to Kaptur. "There are enough good people to turn this around. The agriculture institutions have grown too big, but I really believe that we can change things," Kaptur said.

Congresswoman Kaptur encourages her constituents to communicate their concerns and questions to her. You can do so by writing or calling her office at (419) 259-7500.
Clint Turner