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## CONSERVATION ON THE LANDSCAPE: A FARMER'S VIEW

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Conservation practices today are as much a reflection of the changing technologies in agriculture as are modern production practices and systems. Conservation is not a new concept; it has always been a part of farming. It has evolved as a culture of how we operate. We search for the balance between environmental responsibility and production. Our conservation efforts have to be economically feasible and compatible with profitable agriculture. Given the necessary tools and sound science, agriculture responds. As pork producers, we developed our Environmental Assurance Program and the On Farm Environmental Assessment Program and worked with our producers to use these tools. Examples abound in our efforts to control soil erosion. In Indiana, we have reduced soil erosion by 38% since 1982.

Challenges facing production agriculture today seem to be endless and they are framed in times of economic pressures. Questions surround biotechnology, biosecurity, food safety, animal welfare, regulations, emerging air issues, changing structure, government programs and/or intervention, and new technologies. Conservation, while an over arching theme, is just a piece of our management puzzle. These challenges are magnified by the lack of understanding and myths that surround production agriculture in 2002. Just one example is the term that many toss around, but is seems no one can define, and that is 'family farm'. I would argue that family farms come in all sizes and have many different ownership and management structures. It seems today we are much more sensitive to the size of a family owned or operated livestock farm, than we are to the number of acres they plant and harvest. Our goal should be to keep economically viable producers on the land and partner with them to conserve our natural resources for future generations.

### CONSERVATION AT HOME

I am a family farmer. My husband and I farm with his three brothers and their wives. The eight of us own all the stock in our farm corporation. We farm 1800 acres and have a 300 sow farrow to finish purebred seedstock operation located in northwest Indiana. Conservation tillage in our area is the norm. When I arrived on the scene 26 years ago, they had already put away the plow, opting for a chisel disc. Bean no-till is common practice in our area and we have been no-tilling both our corn and soybean ground for twelve years. While we realize savings in time and fuel by not making as many trips across the fields, we do have added costs in burndown chemical and application at \$10 to \$15/ acre. No-till usually harbors pest problems that add insecticide costs of \$15/ acre. Because of our soil types, we do accept lower top-end yields on some fields. No-till, also, delays the starting date in the spring and that can be a problem in years with cool weather. We, too, are mindful to leave buffer strips along drainage ditches.

In 1978, we terraced about 200 acres to eliminate gully erosion. We now are able to farm the entire field, though some is in different directions. It has improved the value of the property. Presently, they need to be reconstructed and there is now a seeding requirement. These areas are too small for

CRP, but we have applied for state cost share for the seeding. This will decrease the number of acres in these fields that we can raise a crop on, as well as create a challenge maneuvering the equipment during field work.

We do value the nutrients from our swine operation and research has shown that the application of manure improves soil structure. Through our manure analysis, we count on 40# of nitrogen, 30# of phosphorus, and 30# of potash per 1000 gallons of manure. With injection application at agronomic rates, we realize a nitrogen value of about \$20/ acre and a potash value of \$10/acre. One example, for the 2001 crop year, we applied finisher manure on fifty acres in late November and early spring. Only 40# of commercial N was applied with the planter to raise 179 bushels per acre of corn, which was ten bushels over our average. We have utilized the Purdue Manure Management Planner, soil and manure test analysis, and site specific recommendations. A semi tanker purchased in 1997 allows us to haul the manure further from the production sites. We are fortunate to have more acres than required by our operation for manure application.

The addition of a soil doctor five years ago has allowed us to slightly reduce our commercial nitrogen use. We side dress N with variable rate applicator which electronically measures soil nitrate capacity and cat ion exchange capacity, then adjusts the application according to crop needs. In a typical round, the application will vary from 30# to 140# per acre. We can produce 160 bushel corn on higher organic soils with 40# N at planting plus 30# at side dress. Yield checks comparing the variable rate to a typical flat rate of 100#-120# of N have given us confidence in this practice. This management tool allows us to only apply N to the acres of the field where it is needed. We have increased our record keeping and documentation for our manure application and our cropping systems. While part of it is required by regulation, it assists us in sound decision making.

As new technologies are available, we examine if they are right for our operation. Cost benefit analysis is not a new practice in agriculture. As I stated earlier, new technologies must be economically feasible. With all the added costs of doing business, especially with added regulation, the dollars are in short supply.

## **REGULATION**

The cost of compliance with regulation has placed many of us in agriculture in a difficult position, especially livestock producers. Under the proposed EPA Confined Animal Feeding Operation (CAFO) Rule, the costs of production for independent hog producers are going to place all sizes of operations at financial risk. According to EPA's own figures, costs for compliance for Midwest pork producers with about 1500 head are \$281,000 over 10 years, and \$332,000 for an operation with 3,400 head. This will prove too much for many to bear or impose restrictions that would force many producers to leave the industry. The rule also enhances EPA's authority to constrain animal agriculture's growth. . A Comprehensive Nutrient Management Plan (CNMP) is part of the CAFO rule. CNMPs are complex. They require expertise in agronomy, engineering, and nutrition to correctly develop the plan. It is a considerable investment of time and resources. There are also costs with making any necessary changes to the operation, costs of maintenance, and record keeping. A CNMP should be a balanced approach to nutrient management and conservation, and aid in improving efficiency of nutrient use. The effectiveness of Best Management Practices (BMPs) should also be evident in a CNMP. Moving to

Environmental Management Systems (EMS) would be more encompassing, require third party audits, and would need to be highly customized.

I have had the opportunity for input at different stages of regulation development and some of the greatest frustration comes from trying to work with regulators that do not have a grasp for agriculture. I have said many times to many different audiences that you can not effectively regulate an industry that you do not understand. Agriculture is a variable system. Regulation should not stymie technological innovation, in fact, it should encourage it. Regulations should be goal oriented, outcome based, and economically achievable. Requirements should be based on best available technologies and sound science.

These concepts need to carry through to EPA's Total Maximum Daily Load (TMDL) program. My experiences on EPA's FACA on TMDLs gave me an insight to additional regulation on agriculture. If you read the FACA report, you would see that on many issues surrounding the program, we reached consensus on the most effective approach. You would not see that reflected in the published rule, but hopefully, the new rule will take the FACA's lead in administering the program to achieve water quality benefits. I believe that TMDLs should be based on a watershed approach. The models used for TMDL development need to allow for the uniqueness and diversity of each stream segment and watershed, especially in agricultural areas. TMDLs are being used to address sediment, nutrients, and microbials. Through research and application, we are learning more about the effectiveness of BMPs, and models need to be adjusted to acknowledge that. Where the source of the pollutant is strictly legacy, as in contaminated sediment, it is not appropriate for a TMDL, but should be directly handled by a remediation program. TMDLs are a control management measure for non-point sources. Through a TMDL, the CAFO rule can be applied to all animal feeding operations, regardless of size. TMDL's become a land management program for agriculture. Because of 'load allocations' to non-point sources, does pollutant loading from a few drive watershed impairments, then all are held at fault for the actions of a few? States can choose to address other potential concerns in a watershed at the time of a TMDL and address nutrients, stream bank erosion, etc. even though the waterbody is not listed for those impairments. In an ideal world, we would take the emotion out of regulations. Nowhere in emotion do you find I.Q. Agriculture needs to have a real presence in the TMDL stakeholder groups and take a leadership role, where appropriate. We need to work together and stay out of court!

## **HOW DOES AGRICULTURAL RESPOND**

How do we in agriculture respond to these added costs and regulations? One way is to strengthen the private/ public partnership. We need to recognize the importance of collaboration with state and federal funding to leverage resources. Most importantly, there is a need to coordinate farm policy and conservation efforts. The Bush administration has promised financial rewards for stewardship on "working" lands. The program best able to do this is the Environmental Quality Incentives Program (EQIP). As chairman of National Pork Producers Environmental Committee when EQIP was given life, I had the opportunity to sit in on development discussions. If anyone questions agriculture's desire for conservation and cost share dollars, you should know that of the 276,000 application, almost 200,000 were unfunded. There were requests for an additional \$1.3 billion. With the almost 80,000 projects that were funded, there are 170 different conservation practices.

EQIP was written as an environmental benefit program. On the livestock side, politics turned it into a social program with animal unit limitations. Those limitations excluded more than 54% of the total hog production and many family owned operations from receiving financial assistance for the construction of waste management facilities. Hopefully, with the writing of a new farm bill, those limitations will be removed in favor of payment limitations. Some of the best waste management systems involve innovative technologies that are best applied to new or expanding operations. EQIP needs to help replace older systems that can not meet new environmental standards. The \$50,000 per year/\$200,000 per contract limit would give the needed assistance to economically viable producers for improved animal waste management systems, CNMP development and maintenance, and for voluntary environmental assessments. EQIP must be funded at the House's 10 year level of 12.875 billion, or more, to address the projected 10-year costs of federal, state, and local mandatory nutrient management, water and air quality protection requirements for all livestock and poultry operations greater than 50 animal units. Pork producers with over 50 animal units account for almost 98% of the production in the U.S.

On the row crop side, the increase in funding will allow for more stream miles of buffers strips, grassed waterways, increases in conservation tillage, residue management, and less erosion and runoff from agricultural lands. If we realize increased funding, our challenge, as producers, will be to work with our state NRCS Technical Committees to fund the appropriate priority areas and practices to assure the greatest environmental benefit. Legislative language is needed to structure and support the joint effort that will be needed from federal, non-federal, and private technical assistance providers. EQIP funds have to allow for third-party private sector certified experts to supplement the technical assistance to be provided by USDA.

The Wetlands Reserve Program and Conservation Reserve Program continue to have tremendous support from farmers. There is increasing interest in protecting wildlife habitat and farmland protection.

## **RESEARCH**

I can not overstate the need for research, especially at our land grant institutions. I heard someone say recently that the best place to stand is on sound science. We need more data on the quantifying the effectiveness of BMPs, more understanding of conservation practices such as buffer strips, riparian areas, and the potential for carbon sequestration. One of our Kansas pork producers, Roy Henry, is involved with a research project on carbon sequestration on his farm. John Kimble, NRCS, has been working with that project and it is an example of the private/ public partnership that can work to find answers for agriculture. Continued work on Phosphorus indexes, transport factors, and vegetative removal of P is so important as we face further regulation. We would like better and faster manure analysis and soil tests. Watershed scale research will benefit all of us. Pork producers have invested hundreds of thousands of dollars in air research and so many more answers are needed. Livestock producers are awaiting the results of the National Academy of Sciences study to improve the technical basis for characterizing air emissions from livestock, dairy, and poultry production facilities.

## **WHAT DOES THE FUTURE HOLD?**

We will continue to be a conservation oriented agricultural community. We realize that we live in a global environment. I do think we will transition to more green payments. With trade

considerations, we have to stay in the green box and away from the amber box. Green payments will need to reward the early adapters, as well as entice the adoption of additional practices. We need to strengthen our educational efforts and increase our capability for technical assistance.

We will continue to be challenged by water regulations and air regulations are right in front of us. Research and sound science are what we will turn to as we look for additional mitigating strategies to protect our water and air.

All conservation efforts are a continuous commitment. We have been active and proactive. As farmers and producers, we all need to reaffirm the value of our farm and commodity groups. As pork producers, our Environmental Assurance Program, the Environmental Dialog on Pork Production, the On Farm Environmental Assessment Program, and now our CNMP module are tremendous assets for our industry. It is through our commodity groups and their professional staffs that we can be engaged – with NRCS, Extension, SWCDs, EPA, state regulatory agencies, and our constituents. It is vital that agriculture engages with our non-agricultural neighbors. If we in agriculture stand on the sidelines and allow government to develop our conservation strategies, agriculture will be at great risk.

When you consider the land that we control as farmers, ranchers, and producers, we are the corner stone. Only our management actions can bring the elements of production and economic viability together with environmental responsibility and conservation.