

THREE QUESTIONS FOR AGRICULTURE ABOUT THE ENVIRONMENT*

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I. INTRODUCTION

As a plenary session speaker, I have been asked to address three overarching questions about the agriculture industry:

1. Where is the agricultural industry sector in the development of environmental responsibility?
2. How will becoming green ultimately aid agricultural industry development?
3. How can the law help influence the green development of the agricultural industry sector?

Good questions indeed. In the concurrent panels on agriculture later today and tomorrow, you will hear about conservation easements, the environmental impact of raising animals for human consumption, clam aquaculture, total maximum daily loads, and restoration of the Everglades. These are all topics that pertain to the three theme questions, particularly for agriculture in Florida. But, like much of farm policy, they are actually quite limited in focus, playing to local interests and narrow industry sectors. They are pieces of the agriculture-environment policy puzzle, but they

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miss the big picture. Most of agriculture-environment policy is pitched at this level because we have simply forgotten, or remembered to forget, to ask the conference's three theme questions frequently and pointedly. In other words, we need to think about the environmental law and policy of agriculture at more holistic levels. Thus, following a few very brief observations about agricultural policy and the agricultural industry, I offer my perspectives on how each of the conference's three theme questions has been obfuscated by past and current policies, and how it might be rediscovered in a new light.

II. A PRIMER ON AGRICULTURAL POLICY AND THE AGRICULTURAL INDUSTRY

As I lament our failure to direct the three theme questions of the conference toward agriculture, am I suggesting that we do not have a coherent policy theme for agriculture and the environment? Not at all. We do have, and have for a long time had, a very clear policy that has become deeply entrenched in national, state, and local politics and law. Recently, EPA Administrator Christine Whitman summed it up as concisely as I've ever heard in a speech before a forum sponsored by the *Farm Journal*, proclaiming that "We can't harm food production to implement food protection."¹ Substitute "environmental protection" for "food protection" and you have our national environmental policy for agriculture, as well as that of most states. In fact, substitute just about anything in there—worker safety, taxes, antitrust laws, minimum wage laws, labor laws, bankruptcy laws—and that pretty much sums up our policy on the topic for agriculture. And this "no harm" premise has been the bedrock of agriculture policy for decades regardless of which party was in control of Congress or the White House.

Consider how it would sound, though, for the EPA Administrator or another federal or state agency head to make the following declarations about other industries. Just pop in the following pairs for *A* and *B* in this sentence:

1. Susan Bruninga, *Whitman Urges Partnerships to Boost Environmentally Friendly Farm Economy*, 32 ENV'T REP. 2317 (2001).

We can't harm [A] to implement [B].

A	B
nuclear power production	public safety protection
petrochemical production	water quality protection
mall development	wetlands conservation
auto industry production	engine fuel efficiency
steel industry production	air quality protection
medical industry profits	patient care protection
garment industry production	child labor protection
mining industry production	worker safety protection

Not so pretty, are they? Imagine the public uproar that would follow any such statement. So why make the statement about farms, and why no uproar when it is made?

One objection farm advocates are sure to make to this comparison is that these industries are fundamentally different from farming. They are *industries*. Well, so is farming. Farms cover over 930 million acres of the United States, with roughly equal divisions of cropland and pastureland accounting for the vast majority of that total.² The total market value of agricultural products sold by farms in 1997 was just under \$200 billion, and total expenses were over \$150 billion. Within those large parameters, farms represent a vast diversity of attributes. For example, roughly half of the farms generate annual product values under \$10,000, accounting for less than 1.5 % of total farm production value, whereas roughly 3.6 % of farms generate over

2. These data for the nation and Florida are from the NAT'L AGRIC. STAT. SERV., U.S. DEP'T OF AGRIC., 1997 CENSUS OF AGRICULTURE (1999), available at <http://www.nass.usda.gov/census/census97>.

\$500,000 in annual product value, accounting for over 56 % of total farm production value. Over half of farms are under 500 acres in size, whereas only 4 % are over 2000 acres in size. Over 85 % of farms, mostly the so-called "small farms," are owned by individuals or families; corporate farms make up under 5 % and partnerships just under 9 %. The four principal crops, in order of acres in production, are corn, soybeans, hay, and wheat. The principal livestock, in order of production value, are cattle, poultry, and hogs. As a point of reference, in 1997 farms in the United States produced over 98 million head of cattle, 366 million egg layer chickens, 6.5 *billion* broilers and meat chickens, and 61 million hogs. Farms had an estimated total market value of over \$110 billion in machinery and equipment in 1997. They spent a total of over \$6 billion on gasoline and other fuels, over \$28 billion on chemical fertilizers, crop control chemicals, and other agricultural chemicals combined, and over \$2.75 billion on electricity. The payroll for farms in 1997 was over \$14 billion for hired farm labor and over \$2.9 billion for contract labor.

Florida agriculture is representative of these characteristics:

number of farms	34,799
total acres of land in farms	10,454,217
total acres of harvested croplands	2,435,702
total acres irrigated	1,862,404
avg. acres per farm	300
avg. value of land and buildings per farm	\$662,538
avg. value of equipment per farm	\$40,869
avg. agricultural revenue/yr per farm	\$172,550
avg expenses/yr per farm	\$126,043
percent below \$10,000/yr revenue	57.5
percent above \$100,000/yr revenue	14.8

In short, farming is a vast industrial complex in the United States and in Florida, not to mention the tremendous industries that supply and are supplied by farms. The three theme questions guiding this conference are as pertinent to agriculture as they are to the petrochemical industry. As I show in this paper, however, the problem is that the answers that keep coming out of the policy box for agriculture are remarkably different than for other industries.

III. REFLECTIONS ON THREE QUESTIONS FOR AGRICULTURE

To the extent the conference's three theme questions were being asked about *any* industry in the 1970s, it would not have made much sense to focus on agriculture at that time. Other industries presented far worse problems, and policy triage required that they be addressed first. Today, however, many other industries have dug their way substantially out of their environmental holes, and

people are beginning to ask questions about farms like those this conference has posed.

A. Where is the Agricultural Industry Sector in the Development of Environmental Responsibility?

The best way I know how to address this question is by examining how the agriculture industry is performing in terms of environmental impact. Just a few "factoids" pertinent to that topic paint a rather distressing picture:³

- 930 million acres of habitat have been converted to farming uses
- farming practices are converting to mono-culture and total-area cultivation
- 25 % of all cropland has become highly erodible
- 2 billion tons of soil are eroded annually from farms by wind and water
- 331 million tons of eroded farm soils empty each year into the Gulf of Mexico alone
- 55 million acres of cropland are irrigated
- 48 million acres of cropland have become saline, most due to irrigation
- 750 million pounds of pesticides are released annually
- farms produce 200 times as much animal waste as the nation's human waste
- Maryland's 300 million chickens produce 720 million pounds of waste annually
- farm runoff releases 1.16 million tons of phosphorous into the nation's waters each year
- farm runoff releases 4.65 million tons of nitrogen into the nation's waters each year
- ammonia from hog waste releases 179 million pounds of nitrogen into the atmosphere each year in North Carolina alone.

Where does all this put farms in the overall environmental responsibility department? After all, one could amass some rather startling statistics about pollution from a variety of industries. Put in context, however, agriculture is still a major source of environmental harm. Indeed, agricultural nutrient, pesticide, and sediment pollution is the leading source by far of impairment of our nation's lakes, rivers, and estuaries.⁴ The impact of irrigated

3. These data are presented in more detail in my previous work, J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 *ECOLOGY L.Q.* 263 (2000).

4. OFFICE OF WATER, U.S. EPA, NATIONAL WATER QUALITY INVENTORY 1994 REPORT TO

agriculture on water supplies in the western states is unsurpassed by any industry.⁵ The vast majority of Florida's cropland remains heavily treated with pesticides, with no downward trend in sight.⁶ Suffice it to say that, based on relative performance, agriculture has worked its way to the bottom of the list in many respects as other industries have strived to work their way up. And we are well past the days when environmental policy triage leaves agriculture out of the operating room. The spotlight now is on agriculture.

B. How Will Becoming Green Ultimately Aid Agricultural Industry Development?

The second conference theme question just doesn't compute in conventional farm policy, because, despite all the evidence that agriculture is one of today's most significant sources of environmental injury, the agriculture industry *already* is green. Didn't you know that? Secretary of Interior Gale Norton does. Addressing the question of western grazing policy, she recently proclaimed that "farmers and ranchers are often the best stewards of the land. We can achieve more by working with them—and capitalizing on their intimate knowledge of the land they depend on—and the land they love."⁷

This is the mantra of the "first stewards of the land" rhetoric of agricultural policy. The basic argument is that because farmers "depend" on their land, because they "know" and "love" their land, they are environmentally benign or, even better, a positive environmental force. All we need to do is let farmers do the thing that comes naturally to them, that flows from their love for and knowledge of the land, and everything will be all right.

Being dependent on something, however, does not necessarily guarantee stewardship. The fishing industry is dependent on fisheries, but has depleted many to unsustainable levels. One has to bear in mind that when speaking of agriculture, over 900 million acres of our nation's land that are now in agricultural uses at one time were not. They were at one time undisturbed wildlife habitat. It is agriculture that removed trees and other vegetation, drained the wetlands, and leveled the soils. Historically, agriculture has been, if anything, the first *converter* of land. As for "stewardship" after that, how are we to count depositing fertilizers, pesticides, and

CONGRESS EXECUTIVE SUMMARY (1994).

5. COUNCIL FOR AGRICULTURAL SCIENCE AND TECHNOLOGY, *THE FUTURE OF IRRIGATED AGRICULTURE* (1996).

6. See, e.g., FLA. AGRIC. STATS. SERV., *CITRUS CHEMICAL USAGE* (2000).

7. *Norton Calls for Incentive-Based Species Program*, ENDANGERED SPECIES & WETLANDS REP., Mar. 2001, at 3.

animal wastes on the land, exposing soils to wind and water erosion, sucking water out of rivers and aquifers, and all the other traits of modern farming? And regardless of how well they care for their land, the bottom line is that farming has significant adverse offsite impacts, as runoff and wind carry pollutants, wastes, and sediments to distant lands and waters. This is stewardship of the land?

Nevertheless, the answer to the conference's second theme question is complicated by the fact that the agriculture industry is convinced it is green enough, that it has been the first and best steward of the land. The farm lobby uses this complete fiction to justify their position that any further "greening" of farming should be at taxpayer expense. For example, in his recent defense of proposed bloated farm subsidy legislation, the President of the American Farm Bureau Federation stated that "[f]armers want to *continue* to be good stewards of the land, but they need the financial assistance provided in this bill to help offset the costs of new [environmental] regulations."⁸ Convincing farmers that getting greener will be good for them, and that they should bear any of the cost, is going to be a difficult task. They associate getting greener with higher costs and tougher times. And, notwithstanding the hope and good intentions that lie behind the conference's second theme question, farmers have every reason to believe that will be the case. It was the case, after all, for every other industry that has undergone environmental regulation.

To be sure, there is a growing number of examples of the "green-green" phenomenon—cases in which getting environmentally greener actually yielded higher financial green. But these cases generally are found in those other industries, industries that have already gone through a long phase of paying dearly for environmental greening. Believe me, no one in the steel industry, or the petrochemical industry, or the power industry, looks back on the growth of environmental regulation in the 1970s and 1980s as having been a big plus for the bottom line. Today, however, now that these industries have passed through the massively costly initial greening phase and into the "second generation" of environmental policy, there are numerous instances in which environmental efficiency and production efficiency go hand in hand, such that green-green outcomes really do happen.

Alas, the agriculture industry is not there yet, because it hasn't yet entered even the "first generation" of environmental policy. Its

8. Bob Stallman, *Subsidies are Justified*, USA TODAY, Jan. 15, 2002, at 12A (emphasis added). Mr. Stallman did not specify to which purported environmental "regulations" he was referring.

growth in this respect has been stunted by widespread industry advocacy and government endorsement of the “first stewards of the land” rhetoric. Even in the more environmentally mature industries, green-green outcomes are infrequent. Companies devote considerable effort to finding them. Any hope that they will be frequent along the road to greening agriculture is dangerously naive, perhaps even irresponsible.

The bottom line is this: If we are serious about developing the first generation of a coherent positive body of environmental law and policy for agriculture—one that actually acknowledges and mitigates the environmental harms agriculture causes—we need to accept that it is going to cost dearly. Who pays the costs, of course, is another matter—which leads us to the final theme question.

C. How Can the Law Help Influence the Green Development of the Agricultural Industry Sector?

I do not mean to suggest by my previous statements that we should ignore economic efficiency when formulating the first generation of environmental policy for agriculture, but only that the initial slug of law designed to green the agriculture industry will be costly. To complicate matters, it will be very difficult to incur these costs while living up to the “no harm” policy embodied in Administrator Whitman’s policy declaration and followed for decades of agricultural policy. We find ourselves, as a result, in the seemingly intractable position of having (1) afforded farming a virtually complete safe harbor from environmental regulation, and (2) paid farmers to do what little we have asked of them on the way toward greening their industry. In short, while other industries operate under a “polluter pays” ethic, agriculture operates under a bizarre “polluter gets paid” policy. Now, as we begin to realize that some very serious improvements are needed in the environmental performance of agriculture, this legacy of safe harbor and subsidy will haunt us relentlessly.

1. The Safe Harbor Problem

The first element of the “no harm” policy is that, whenever possible, farms should be protected from the effects of programmatic environmental regulation—air, water, and other pollution control regulations designed to apply across the board to industries. Farms are either specifically excluded from such legislation, or subtly left out of the regulation’s sweep. This system of active and passive “safe harbors” includes, to name a few:⁹

- exemption of irrigation return flows from Clean Water Act permitting
- exemption of farm stormwater runoff from Clean Water Act permitting
- exemption of “normal farming” from wetlands protection laws
- exemption of “normal farming” from chemical release reporting laws
- failure to include farms in most state air pollution control implementation plans
- protection of farming from nuisance claims

Farms, in other words, have hardly felt the brunt of what other industries have experienced since the major federal and state environmental legislation began in the 1970s, and this has been *by design*. Small wonder that farming now ranks among the most polluting of industries.

2. The Subsidy Problem

The second element of the “no harm” policy requires that someone other than the agriculture industry pay the costs of the embarrassingly small amount of greening that has been expected of the agriculture industry in exception to the first element. Indeed, the meager accomplishments that agricultural policy has made toward greening the agriculture industry have managed to abide by the “no harm” policy through a remarkably straightforward technique—we don’t simply pass the costs off to another industry or the government, we actually pay farmers to do the right thing. The greening of agriculture has been, in other words, a gravy train for agriculture.

So-called second generation environmental policy advances the use of “incentive-based” regulatory instruments such as market

9. These and other farm safe harbors from environmental regulation are detailed in my previous work. Ruhl, *supra* note 3.

trading programs and sliding scale taxes. But these programs all involve a negative incentive embedded in a regulatory context; the incentive is in how the regulatory impact might be dampened depending on the actor's behavior. When used in the agricultural policy context, however, "incentive-based" is a euphemism for outright *subsidy*. Virtually every environmental accomplishment farm advocates point to as evidence of the greening of agriculture is packaged in a positive-incentive subsidy payment—the so-called "green payments" programs—and most of the policy proposals for more greening of agriculture are derivations on that theme.

Indeed, perhaps the biggest obstacle in the way of intelligent answers to the conference's three theme questions for agriculture is our nation's hopelessly byzantine farm subsidy program.¹⁰ The public is outraged over recent news that Scotty Pippen and Ted Turner receive farm subsidies; it ought to be outraged not over *who* receives them, but *why*. What began as an emergency income support and food security program in the Depression era has, after decades of commodity interest lobbying, become an annual \$20 billion entitlements program.¹¹ And although Florida ranks 36th in overall farm subsidy support,¹² the U.S. sugarcane commodity sector, for which Florida is the top producing state, receives disproportionately large price supports.¹³

While we tried to end farm subsidies a few years ago with the "Freedom to Farm" program, we failed. Indeed, farm subsidies have grown to new heights.¹⁴ So, I will accept the political reality that the law, if it is going to do anything in the short term on the greening front for agriculture, ought to focus on transforming the farm subsidy program into a more comprehensive, rational green-payment program.

10. For an excellent history of the emergence of the farm subsidy program, see Anne B.W. Effland, *U.S. Farm Policy: The First 200 Years*, AGRIC. OUTLOOK, Mar. 2000, at 21.

11. NORMAN MEYERS & JENNIFER KENT, PERVERSE SUBSIDIES 44-50 (2001).

12. Mike Schneider, *Florida No. 36 in Farm Subsidies*, TALLAHASSEE DEMOCRAT, Sept. 10, 2001, at 5B.

13. MEYERS & KENT, *supra* note 11, at 47.

14. See Thomas Fogarty, *Freedom to Farm? Not Likely*, USA TODAY, Jan. 3, 2002, at 1B.

IV. CONCLUSION – WHERE TO GO FROM HERE

Let us leave reality for a moment and suppose a world in which the “no harm” rule is suspended, so that we can speak of greening agriculture without having to limit our field to voluntary programs and green payment programs. What path should the environmental law of agriculture take?

I would not argue for a moment that the appropriate response to that question is to treat agriculture like the steel industry for purposes of policy design. Farming is a geographically dispersed and highly variable industry, which will greatly complicate any effort to regulate and monitor farming practices as we do for most other industries. Also, the vast majority of farms are fairly marginal economic operations, suggesting that at some point added regulatory burdens will indeed have the effect of driving some farms out of business. On the other hand, this was true of many other industries that weathered their first generation of environmental regulation while agriculture watched from the sidelines. And the nation’s agriculture industry has grown far beyond our nation’s food needs; rather, today the industry is so interested in chasing export markets—markets in which it is not always the most efficient competitor—that its economic swings are tied primarily to prices in *other countries*.¹⁵ The question, therefore, is whether we have the political will to cause the farming industry some pain, but the ingenuity to do so with some sense of efficiency.

Recently, I spent several long days with over thirty people representing a broad, bipartisan array of interests in agricultural policy brainstorming answers to these issues. The World Wildlife Fund and American Farmland Trust sponsored our work. Participants included farmers, policy analysts from the U.S. Department of Agriculture and various state and local agriculture agencies, representatives from environmental groups and policy analysis organizations, agricultural consultants, agricultural lenders, and academics from a variety of disciplines. Three very broad but instructive themes emerged from our work.¹⁶

First, we agreed that any agricultural policy for agriculture must satisfy four criteria, which we dubbed the “four-sided pyramid.” The policy must promote, or at least not undermine: (1) productive efficiency; (2) economic viability; (3) social responsibility;

15. As Farm Bureau President Bullard put it, “farm producers will not see a big increase in their income this year. One reason is farmers continue to face a stagnant export market.” Stallman, *supra* note 8.

16. For a complete report of the session’s work, see WORLD WILDLIFE FUND ET AL., WORKSHOP PROCEEDINGS, THE MIDWEST REGION COMMODITIES AND THE ENVIRONMENT WORKSHOP (2001), available at http://www.farmlandinfo.org/MCRE_Workshop.

and (4) environmental compatibility. This, of course, sounds very much like the “green-green” outcome I contend will be so elusive for the greening of agriculture. But I took it as a victory that environmental compatibility wound up as one of the co-equal four sides. And surely these criteria are the right criteria for testing any agricultural policy, the difficult issue being which criteria is most important when not all can be served.

Second, we identified five major structural obstacles to achieving the four criteria. The first is that the farming industry has become overly specialized. Subsidy programs favor certain crops. Markets for alternative crops are poorly defined as a result, and it is financially risky to diversify. Growing corn in the midwest is a no-brainer, but what if a farmer wants to branch out? Good luck. Another obstacle is that the agriculture industry is concentrating horizontally and integrating vertically with no real limits in place. Subsidies promote excessive farm enlargement, and the threat of anti-trust prosecution does not exist. Another structural constraint is that farm policy is very difficult to develop in the systems-based model most ecological thinking suggests is needed. The effects of specialization and concentration combine to form a highly fragmented, intensely interest-based industry that makes designing system-wide policies difficult. Moreover, the boundaries of most political jurisdictions bear little relation to the geographical reality of the environmental impacts of farms, thus exacerbating the challenge of regulating effectively. The final two constraints resonate in the points I have already developed above—that the subsidy programs long ago smothered any sense of “polluter pays” ethic in agriculture, and that farmers are so averse to any thought of environmental regulation that they will resist even innovative, efficient policy proposals.

Finally, we turned to the theme of solutions, which seemed an awesome task given the four competing policy criteria we imposed and the five intractable policy obstacles we acknowledged. Given how prominently the subsidy program loomed as a source of more than one obstacle, we focused attention there. Two compelling threshold themes emerged. First, it is the commodity-based nature of the subsidies that makes them so insidious. Subsidies in general may indeed be a useful policy tool if decoupled from commodities and redirected toward the environment. Second, the long history of the subsidy program has not only agriculture to blame. Consumers seldom complain of low food prices. And farmers have relied, not entirely unreasonably, on the subsidy system to justify loans and make investments. Thus, some equitable means of achieving the proposed decoupling is needed. We thus devised a three-step policy proposal:

1. Phase out commodity-based subsidies, shifting the phased out increments each year to a green-subsidy fund.
2. Offer a one-time commodity subsidy “buy out” to those currently receiving the subsidies, in the form of a bond the recipient can retain for its assured income or trade.
3. Transform green subsidies to expand from their habitat conservation focus to a focus on farm practices, using measures of ecosystem services and best management practices as the basis for subsidy rewards.

We used what little time was left to flesh out these proposals, though we achieved nothing concrete. Having advocated more in the way of regulation of agriculture in the past, though proposing to do so through information and market based instruments rather than blunt command-and-control proposals,¹⁷ I was not entirely satisfied by the workshop’s narrow focus on green payments. Yet I could appreciate the inequity of simply cutting off the subsidy program altogether, and the idea of tying subsidies to actual environmental performance is novel and interesting—an improvement at the very least on the current system. In the end, it may be that we never achieve a “polluter pays” ethic for farming, but the workshop proposal does suggest that agriculture may be ready for a “polluter doesn’t get paid” policy. That alone would mark the beginning of a new day in the nation’s environmental policy of agriculture.

Epilogue: On May 13, 2002, three months after I delivered the foregoing remarks, President Bush signed into law the Farm Security and Rural Investment Act of 2002, also known as the 2002 Farm Bill. Without going into detail regarding the bill’s provisions, it amounts to surrender on the issue of commodity payments, leaving the “Freedom to Farm” policy a distant memory, and advances the transformation of green payments toward a performance based program by baby steps at most. Fittingly, when he signed the bill President Bush remarked that “For farmers and ranchers, for people who make a living on the land, every day is Earth Day. There’s no better stewards of the land than people who rely on the productivity of the land.” The White House, Office of the Press Secretary, Press Release: Remarks by the President upon Signing the Farm Bill (May 13, 2002). Suffice it to say that I would deliver the same remarks today unaltered.

17. See Ruhl, *supra* note 3.