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Emerging Issues in Public Policy

Highlights of the 2000 National Public Policy Education Conference

Albany, New York
September 17-20, 2000

Farm Foundation

Subjects of Previous Conferences

1990 An Evolving Public Policy Education • Safe Food and Water: Risks and Tradeoffs • Balancing Environmental and Social Concerns with Economic Interests in Agriculture • Structural Change in Food Industries and Public Policy Issues • Toward a New Europe

1991 Global Competitiveness, Productivity and Social Impacts • Public Policy Education Methods • Policy for Environment and Economic Development • Rural Resource Development and Work Force Productivity • Political Economy of the Dysfunctional Family

1992 Public Policy Education in the 1990s • Agriculture and Environmental Policymaking: Issues, Actors, Strategies • The Rural Social Infrastructure • Domestic Consequences of Evolving International Trade Policy

1993 The Status of Agriculture and Rural America • An Evolving Public Policy Education • Health Care Reform • Public Issues Education and the NPPEC Environmental Policy: The Legislative and Regulatory Agenda

1994 Ethical Perspectives in Public Policy Education • Transition of Food and Agricultural Policy • Building Human Capitol: Reforming Education • Environmental Policies • Local Impacts of Trade Policy • Financing K-12 Education • Sustainable Rural Policy

1995 Citizen Involvement • Renegotiating the Social Contract • Environmental Policy Trends: Implication for Agriculture and Natural Resource Use • Food Safety Policy • 1995 Farm Bill Update • Sustainablility and Industrialization: Conflicting or Complementary

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1997 The Future of Land Grant Universities • Agricultural Policy at the End of the 20th Century • Industrialization of Agriculture • Administering Environmental Law: Impacts on Private Landowners and Public Uses • The Changing Nature of Rural Communities

1998 Land Use Conflicts at the Rural-Urban Interface • Food Safety Policy and Issues • Agricultural International Trade Policy • Consequences of Devolution • Extension Accountablility • Gaming

1999 Trade Policy, Agriculture and Rural Communities • The Impacts of the Food Quality Protection Act (FQPA) • Immigration and the Changing Face of Rural America • Supporting Families by Strengthening Communities • Regulation of Concentrated Animal Feeding Operations • Innovative Extension Land Use Policy Programs

A full proceedings of the National Public Policy Education Conference was published as the serial, *Increasing Understanding of Public Problems and Policies* (1951-1998). Copies of proceedings from previous conferences are available. Contact Farm Foundation for more information.

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This publication was produced by Farm Foundation for the pursuance of public policy education and understanding, with permission of the speakers.

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David P. Ernstes, Editor
February 2001

Emerging Issues in Public Policy

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- Introduction **2**
- Fifty Years of Public Policy Education **3**
- Biotechnology, Food, and the Environment **5**
- How FAIR 2002? **10**
- The Emerging Food Supply Chain **13**
- Financing and Delivering Rural Health Care **15**
- Land Use/Water Quality - Watershed Management **20**
- Small Farms **24**
- The Graying of America **28**
- 2000 Public Policy Education Awards **30**

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Introduction

For the past 50 years, the National Public Policy Education Committee, in cooperation with Farm Foundation and state extension services, has sponsored the National Public Policy Education Conference. This executive summary is designed to stimulate interest in public policy issues, to provide educators and other interested parties with a quick review of the major presentations given at the 2000 National Public Policy Education Conference, and to serve as a resource for policy education programs.

This text and copies of speaker papers and presentations are available via the Internet on Farm Foundation's home page (***http://www.farmfoundation.org***).

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Fifty Years of Public Policy Education

R.J. (Jim) Hildreth, *Farm Foundation (ret.).*

The National Public Policy Education Conference came about from a need that was identified in 1949, by Farm Foundation managing director Frank Peck, to "explore ways and means of increasing the knowledge and stimulating interest of rural groups in public policy subjects important to rural life and public well-being." In that year, Peck convened a Chicago meeting of extension specialists in agricultural economics; heads of agricultural economics departments; administrators of agricultural extension services and colleges of agriculture; Farm Foundation staff; as well as consultants from the University of Chicago, Federal Extension Service, USDA and Bureau of Agriculture Economics, USDA. Out of this meeting, the National Public Policy Education Committee was founded.

After holding several regional workshops in 1950, the Committee resolved "That the committee sponsor a national agricultural policy conference early in the fall of 1951, preferably during the first two weeks in September, this conference to be designed primarily for those actively working in the fields of public policy." With the passing of this motion, the National Public Policy Education Conference was born.

The first conference was held at Allerton Park, Monticello, Illinois, on September 12-13, 1951. A general format for the conferences was established early: a three and one-half to four day conference with sufficient discussion time to explore issues with speakers; and including one-half day for presentation of methodology.

The guiding educational philosophy of the conference was also defined early. At the January 25, 1952, meeting of the National Committee, it was "agreed that its responsibility logically is presentation of alternatives and their economic implications to enable people to make a decision regarding what policy they would like to have." That proposition has been the guiding principle of the conference and of the individual participants in their state programs.

Since the National Public Policy Education Conference was designed primarily for those actively working in the field of public policy education, conference notices were initially sent to the land grant extension directors. To facilitate and encourage development of capacity for public policy education in all states, Farm Foundation provided transportation support for one individual from each land grant, selected by the extension directors, to attend the conference. As the conference's value was recognized, attendance increased as additional persons from many states attended, at state expense. Additionally, federal extension service, other USDA agencies, nonprofit organizations and non-land grant universities have sent participants at various times. In 1998, Farm Foundation discontinued blanket transportation support for one member from each land grant to attend the conference. Since that time, Farm Foundation has provided grants for travel assistance on an application basis.

In the last 50 years, the National Public Policy Education Conference has grown to include the important public policy education work done in the 1890 institutions and in family and consumer

sciences, as well as rural community issues. The topics explored at this conference have mirrored the national issues of the time, anticipated new concerns, and explored education methods to achieve increased understanding of policy issues.

Agricultural policy issues have been consistent session themes throughout the history of the conference, especially in years leading up to new federal agricultural policy legislation, such as the 1988 session, "Priority Issues for a New Farm Bill" and this year's session, "How FAIR 2002?" After legislation was enacted, sessions over the years have covered the implementation of the provisions of specific farm bills. Also, the consequences of past policies have been evaluated in the discussion of new policy options. In the earlier years of the conference, policies of specific commodities have been addressed, such as the 1953 session on "Wheat Price Policy in the United States." Starting in the 1970s, food policy was integrated into farm policy as evidenced in the 1976 session, "Food and Agricultural Policy."

International trade policy and issues have been consistent themes throughout the history of the conference. In fact, the importance of trade is evident in the "International Affairs" session in the original 1951 conference. Trade was anticipated as an issue in the 1960s, years before U.S. agriculture became dependent on world markets. Agricultural trade issues remained a consistent session theme at the conference throughout the 1980s-90s.

Resource and environmental issues began to receive prominence in the 1970s and this has continued ever since. The conference addressed "The Environment and Quality of Life" in a 1970 session and "Energy Policy" in the 1974 and 1977 sessions. In the 1980s-90s, sessions such as 1988s "Emerging Resource Issues" and 1997s "Administering Environmental Law: Impacts on Private Landowners and Public Uses" have focused on the evolution of environmental policy from a national concern to a local impact.

The conferences also have a history of examining the implications for agriculture and rural areas of the political process and overall economic policy issues. The 1951 "Inflation" session and the 1953 "How the Political Process Works" session illustrate that these topics were of interest from the start. This interest has continued with examples such as the 1985 session on "Tax Policy Revision" and the 1996 session on "Changing Federalism."

Structural issues have been both anticipated and addressed since the 1970s. Sessions such as 1971s "Struggle for Control of the Food System"; 1972s "Who Will Control Agriculture?"; 1978s "Policy Options for Small Farms"; 1980s "Dispersed vs. Concentrated Agriculture"; 1990s "Structural Changes in Food Industries and Public Policy Issues"; and 1997s "Industrialization of Agriculture" illustrate the continuing importance of structural issues. These sessions also illustrate the changing nature of structure and industrialization issues as a food system concern.

The National Public Policy Education Committee has strived to select speakers to present divergent points of view of topics at the conference. Additionally, a hallmark of the conference has been allowing time for extensive discussion and interaction between the speakers and the conference attendees.

Since 1950, the NPPEC has ably served the needs of land grant and state extension policy educators as a means of improving citizens' and leaders' knowledge of policy issues, alternatives, and consequences. How well it will serve in the future depends on your involvement. Policy reality is changing and you must meet the new opportunities for policy education.

Biotechnology, Food, and the Environment

Greg Traxler, *Auburn University*. The long-promised biotechnology revolution in American agriculture appeared to be at the brink of realization as genetically modified (GMO) varieties of herbicide insect resistant cotton and corn, and herbicide tolerant soybean and corn varieties were introduced in rapid succession in 1996 and 1997. By the 1999 crop year, a third of the U.S. corn and cotton area and more than half of the soybean area were planted to GMO varieties. The rapid rate of adoption of this new technology is unprecedented in agriculture, suggesting that farmers saw significant benefits from the new seeds.

The future of GMOs is much less clear today than it appeared to be two years ago. Consumer resistance in Europe and Japan has resulted in a boycott of GMO soybean and corn in human food. At present, the boycott does not apply to the use of GMO grain in animal feed -- the major source of final demand for soybeans and corn. In 1998, just 27 percent of the U.S. soybean crop was exported as unprocessed beans, and 2 percent was exported as oil. Up to the 1999 harvest, the boycott applied to this relatively small share of the demand for soybeans was not sufficient to cause widespread price discounts to be applied to GMO soybeans. Similarly, only 19 percent of the U.S. corn crop is exported as grain, and only 1 percent goes to the European Union. So, again, reports of farmers receiving a discount for GMO corn (or a premium for non-GMO corn) were relatively rare. However, consumer attitudes toward GMOs remain unpredictable, particularly given the vocal opposition from non-governmental organizations (NGOs) such as Greenpeace. GMO grain may become discounted in the market should U.S. consumers follow suit with their European counterparts, or should consumers in the United States or Europe extend their boycott to the consumption of meat from animals fed GMO grain.

> "By the 1999 crop year, a third of the U.S. corn and cotton area and more than half of the soybean area were planted to GMO varieties."

A second issue of concern is the distribution of benefits from the introduction of GMOs. The seed industry has undergone a wave of consolidation since 1997, and seed industry concentration ratios are now high in some markets. What does this imply for the distribution of benefits of transgenic products among U.S. farmers, foreign farmers, U.S. and foreign consumers, and industry? Results of empirical studies of *B.t.* cotton and Roundup Ready® (RR) soybeans suggest that benefits are widely shared. U.S. farmers received the largest single share of benefits from *B.t.* cotton, averaging 45 percent of total benefits in the years 1996, 1997 and 1998. The share going to industry was 36 percent. Consumers captured 19 percent of benefits through lower food prices. Consumers also captured a larger share of the benefits, 46 percent, from RR soybeans, with farmers and industry capturing 21 percent and 27 percent respectively. Foreign farmers received five percent of total benefits.

The final issue is that of the U.S. lead in the science and business of agricultural biotechnology. The United States has approximately 74 percent of the world GMO area, 80 percent of the world agricul-

tural biotechnology investments, and has conducted 78 percent of the world field tests. This strong position in investments and field trials suggests that the United States is likely to maintain its lead in the use of GMOs for some time. It may also suggest that foreign markets may be difficult to open to U.S. GMOs until their own farmers are positioned to share in the benefits.

Ian M. Sheldon, *The Ohio State University.* The debate over genetically modified organisms (GMOs) in the European Union (EU) provides an interesting microcosm of the important regulatory issues and consumer concerns that are now beginning to surface in public discussions and media coverage of GMOs in the United States. As a result, the case of the EU provides a means by which we can highlight the key issues in the debate over biotechnology, and also allows one to spell out the notion that this debate is about competition between different "rights" that are likely to be resolved only through inter-government negotiations and international bodies such as the World Trade Organization (WTO).

Until June 1998, under Council Directive 90/220, the European Commission of the EU had approved 12 genetically modified (GM) crops that could be either planted in or imported into the EU, including several varieties of *B.t.* corn and Roundup Ready® soybeans. Since that time, the EU has imposed a moratorium on the approval of additional transgenic crops due to widespread consumer concerns over the safety and environmental impacts of such crops. In a recent issue of the British medical journal *The Lancet* (July 22, 2000), it was reported that the EU Commission was planning to end this moratorium, and to continue with its process of approving new GMO varieties. European Commissioner for Health and Consumer Protection, David Byrne, acknowledging that such varieties do not currently pose a threat to safety. In addition, the Commission is likely trying to avoid a legal challenge to their position by the biotechnology industry in terms of the EUs commitment only to impose barriers to food imports based on "sound science" under the Sanitary and Phytosanitary (SPS) Agreement of the WTO.

The move by the EU to restart its approval process for genetically modified crops would appear, however, to be in contradiction to the other regulatory positions it is taking on GMOs. Under Regulation 258/97, amended in October 1999, the EU requires mandatory labeling of any food product that contains at least one percent or more residual of recombinant DNA. Interestingly, this is in direct contrast to the United States, where the Food and Drug Administration (FDA) currently does not require labeling of foods containing genetically modified ingredients unless there is either a risk of causing allergic reactions among consumers, or the food contains a protein that was never present in the non-genetically modified version.[1] The logic of the FDAs position is that any food product that is substantially equivalent to its conventional version, and is considered safe for human consumption, should not be subject to mandatory labeling because of the process of genetic modification.

In addition to its labeling requirements, the EU is also pushing hard for the concept of the "precautionary principle" to be embedded into the rules of the WTO as they relate to food safety regulations and international trade. This principle is based on the notion that individual countries may adopt stricter food safety standards with respect to imports when there is insufficient evidence currently available about the risks to human health and the environment associated with those imports. In a European Commission white paper, published in February of this year, it was pointed out that this principle has been widely used in international treaties relating to the environ-

[1] Currently, there are bills in the U.S. House of Representatives and Senate that would require mandatory labeling in the U.S. of foods containing genetically modified ingredients.

ment, such as the 1992 Rio Declaration, and was most recently adopted in the Biodiversity Protocol. In addition, the Commission suggests that language relating to this principle is already contained in the WTOs SPS Agreement, Article 5(7).

While there has been a good deal of debate concerning support by the EU for such a principle, and whether it is inherently protectionist, it does essentially reflect the level of public and political concern being expressed in the EU about the potential safety and environmental risks associated with GM foods. Even though the EU Commission has approved several GMOs, under Article 16 of Directive 90/220, individual member countries such as Austria and Luxembourg chose to ban the import of a variety of *B.t.* corn in February 1997 on the grounds that they had established new evidence of risk.[2] More recently, Italy also placed a ban on the use of four varieties of genetically engineered corn due to concerns over potential health and environmental risks (*Reuters*, August 4, 2000).

The EU Commission, therefore, is trying to maintain a difficult balance between the political constraints being placed on individual member countries by their electorates, and their international obligations under the WTO. In other words, the Commission can continue to approve GMOs, and avoid charges of erecting non-tariff barriers to trade, but it does not necessarily mean that European consumers will want to buy and consume GMOs.

What are the specific concerns that European consumers have about GM ingredients in their food? First, many European consumers feel that genetic modification of crops is "unnatural" as it violates some innate law of nature. From an ethical standpoint, many consumers and other observers do not accept the proposition that genetic engineering of crops is just a logical extension of traditional plant breeding. They question the ethical basis for biotechnology, wondering about the morality of interferring with the genetic structure of species through the introduction of genes from unrelated species. Public figures, such as Britain's Prince Charles, have also weighed in with their opinions in this debate:

> "If literally nothing is held sacred anymore, what is there to prevent us treating our entire world as some 'great laboratory of life' with potentially disastrous long-term consequences?" (HRH Prince Charles, *British Broadcasting Corporation*, May 2000)

Second, many European consumers consider GMOs to be both unsafe for human consumption and harmful to the environment. Despite the fact that there is as yet no reputable scientific evidence that existing GM crops are unsafe for human consumption, consumer surveys in Europe consistently indicate that respondents are concerned about the safety of GMOs (*Reuters*, September 25, 2000). In addition, the expectation that GM crops are harmful to the environment has resulted in several instances of activist groups damaging fields in Europe where such crops are being used in field trials. Most recently, there was public pressure to destroy canola fields in Britain, France, Germany, and Sweden when it was found that the crop had been grown from seeds mistakenly contaminated with a transgenic canola (*New York Times*, May 19, 2000).[3]

Third, there are strong feelings in Europe about the possibility that genetic engineering of crops will allow for increased corporate control of the agricul-

[2] *B.t.* corn is designed to produce a pesticide aimed at eradicating a destructive insect, the European Corn Borer. The "new risk" associated with such corn was based on a study showing that beneficial insects also died when feeding on the European Corn Borer (*Environmental Entomology*, 1998).

[3] There are two key environmental impacts of GM crops that have received widespread coverage in the scientific and popular media: non-target species could be harmed by crops modified to produce their own pesticide; and crops that are modified to be resistant to certain herbicides may confer the same resistance on weedy relatives.

tural sector and, in particular, control by U.S. multinational firms. For example, Monsanto has come under particularly strong attack for its marketing of biotechnology products in Europe. Activists have torn up Monsanto test plots in Britain, and the company has routinely been referred to as the "biotech bully boy" by the British media (*The Wall Street Journal*, May 11, 1999). In many ways, the public backlash against biotechnology, and United States-based firms in particular, seems to be part and parcel of an underlying movement in several European countries against what is perceived to be a U.S. "cultural invasion."

Essentially, the strong anti-biotechnology consensus among a majority of EU consumers, non-governmental organizations (NGOs) such as Friends of the Earth, and public figures such as British royalty, suggests that this is mainly a consumer-driven movement as opposed to an explicit attempt by the EU authorities to raise non-tariff barriers to trade. The basic overriding concern of consumers is that in the case of GM foods, they are being expected to bear all of the risk with very little benefit to them as consumers. Claims about weed-free soybean fields in the United States simply carry no weight. In addition, the European consuming public seems to have an increasingly post-modern view in the sense that there is a high degree of pessimism/skepticism about public statements by the scientific community on the benefits and safety of biotechnology. Hence, it is hardly surprising that groups such as Greenpeace have often filled the information vacuum over biotechnology, which has subsequently been fueled by the European popular media who typically present very simplified views of the issue as they fight out their daily circulation wars. For example, British tabloid newspapers are credited with coining the term "Frankenstein food."

It should also be noted that EU consumers are also very distrustful of statements by scientists and government about food safety in the wake of some highly publicized food scares in Europe over the past decade -- most notably the mad-cow disease case in Britain (*The Economist*, June 19, 1999). In the late 1980s, stories began to appear in the British media suggesting a connection between a brain disease in cattle, Bovine Spongiform Encephalopathy (BSE), and increased incidence of a human version known as Creutzfeldt-Jakob Disease. Initially, British government scientists stated there was no link between the bovine and human brain diseases but subsequently, in 1996, the British government indicated that such a link was possible. This had a major impact on the confidence of British consumers in the claimed safety of the food system, and resulted in an import ban throughout the EU on imports of British beef. This issue is still in the public spotlight, with increases in deaths due to Creutzfeldt-Jakob Disease being reported in several European countries, and concerns that BSE may be present in cattle in EU countries other than the UK (*www.cnn.com*, August 4, 2000). Even though BSE has nothing to do with genetic engineering, it is considered symptomatic of modern farming methods, of which biotechnology is just another example.[4]

It would be foolish, however, to dismiss European concerns over GMOs as being irrational and not based on the available scientific evidence and, therefore, in violation of the WTOs SPS Agreement. Yet, the public stance of the United States has, up till now, pretty much been to view this as a matter of consumer sovereignty. In addition, the food manufacturing and retailing industry in the EU has taken consumer concerns over GMOs very seriously. For example, NestlJ and Unilever, two of Europes largest food manufacturers, both announced plans in 1999 to supply GM-free food, following the decision by leading European food retailers, such as Sainsburys

[4] A simple change in the food chain caused the disease. Cows, which are ruminants, were fed dietary supplements containing the rendered body parts of other cows and sheep -- the latter often suffering from brain disease known as "scrapie."

to remove GM ingredients from their own label food products and, also, to label branded food products that are known to contain such ingredients. This does not mean these leading firms believe biotechnology is unsafe. Firms are merely protecting their investments in brand equity from the possibility of a consumer boycott of their products. Interestingly, there has also been a series of widely publicized cases of U.S. food manufacturing firms deciding to end the use of GM ingredients in their branded food products in response to increasing U.S. consumer concerns over their use, including Gerber (baby food), IAMS (pet food), Frito Lay (snack foods), and McDonald's (potatoes).[5]

In conclusion, the current debate in the EU over the safety and environmental impact of GM crops, and the implications for their regulation, are a useful means by which one can highlight the key issues that are also beginning to surface in other developed countries such as the United States. In many ways, this debate can, and has been, characterized as a clash of "rights."

The first right is the legal right to develop and export products subject only to barriers incorporated into current WTO schedules. In other words, some would argue that Europe's concerns about GMOs are not based on "sound science" and, therefore, their moratorium on further approvals of GM varieties, and their use of the precautionary principle with respect to biotechnology, is in violation of their international obligations under the SPS Agreement of the WTO. The second right is that of national governments to restrict access to their markets due to health and safety issues in cases where there is insufficient knowledge about the risks associated with new technologies such as genetic engineering. Essentially, the EU is pushing application of the precautionary principle to trade in GM crops, and food containing GM ingredients, and claims it is already enshrined in the WTO agreements, although they also state they do not want to see unwarranted recourse to the principle as a disguised form of protectionism.

The claims to these two rights clearly represent an important challenge to the WTO. In addition, resolution of this clash of rights may also have important implications for the right of less developed countries to evaluate and use genetically modified crops in the future. Recent forecasts suggest that the world's population will increase 35 percent by 2020, 95 percent of that growth being in the developing countries, and that if the Malthusian trap is to be avoided, agricultural productivity will have to increase.

Some observers suggest that biotechnology may hold the key to these increases in agricultural productivity, and hence food security for the developing countries. While it may be premature to make such claims, it would certainly be unfortunate if the potential to develop transgenic crops for future use in the developing countries were hindered by the current concerns of consumers in the developed world. Some in the developing world are offended by the notion that they are deemed unable to assess the potential consequences of biotechnology and, hence, that they should be denied the technology (Hassan Adamu, Nigerian Minister of Agricultural and Rural Development, *Washington Post*, September 11, 2000).

Additional Resources:

AgBioForum, a magazine devoted to the economics and management of agro-biotechnology:
http://www.agbioforum.org/

Ag BioTech InfoNet:
http://www.biotech-info.net/

[5] On the day of this presentation, it was announced that taco shells being marketed by Kraft Foods under the Taco Bell brand name were found to contain a variety of Bt corn, StarLink®, not yet approved for human consumption by the Environmental Protection Agency, due to concerns over potential allergic reactions (Reuters, September 18, 2000). Subsequently, Kraft Foods recalled the product, and Aventis, suppliers of StarLink®, have agreed to purchase this year's crop in order to keep it out of the food supply chain (Associated Press, September 29, 2000). In addition, Safeway also announced a recall of its brand of taco shells after tests indicated they contained StarLink (New York Times, October 12, 2000).

How FAIR 2002?

Barry L. Flinchbaugh, *Kansas State University.* The 1996 FAIR Act (Freedom to Farm) was a distinct departure from previous history. It ended supply management, transferred price risk management from the government to the producer, and established a schedule of fixed declining payments decoupled from price and production. Its goals were to allow the farmer the flexibility to farm the marketplace rather than government programs and to maximize U.S. competitiveness in agricultural export markets.

In order to achieve the majority vote, the marketing loan program was retained at levels that economic models predicted would not be used during the life of the law. Freedom to Farm was passed during prosperous times for farmers and was predicted on the premise that booming exports would at least partially replace government payments in agriculture's income stream. Exports reached a record $60 billion in 1996, and net farm income reached $55 billion.

The author of Freedom to Farm, then chairman of the House Committee on Agriculture, now Senator Pat Roberts (R-Kansas), viewed it as an experiment and so he wrote into the law the 21st Century Commission on Production Agriculture. The commission's charge is to study the impact of the FAIR Act, review the appropriate role of the federal government in support of production agriculture, and develop specific recommendations for legislation to achieve the appropriate role.

The chairs of the House and Senate agriculture committees each appointed four commissioners in consultation with the ranking minority members. They jointly appointed me as chair. Additionally, President Clinton appointed three members.

Commissioners include farmers (rice, cotton, wheat, feed grains, oilseeds), agribusiness executives, the presidents of the American Farm Bureau Federation and the National Farmer's Union, and a university professor. The commission held six field hearings nationwide and has conducted study sessions on risk management, economic concentration, trade, conservation, small and low resource farms, and safety net issues. The commission has listened to farmers, ranchers, farm organization leaders, agribusiness executives, agricultural economists, government officials, scientists and university professors. An interim statistical report of the state of the agricultural economy was issued as per the statutory requirement. The final report will be issued in late February 2001.

Initially, the commission established four policy goals:

- Production of an abundant supply of high quality agricultural products at reasonable prices.
- Maintain a prosperous and productive economic climate for the farmer producers of that supply of agricultural products.
- Maintain the family-farm type organization as part of the production system of the supply of agricultural products.
- Realization of a high quality of life for all individuals living in rural areas and be in the process of ascertaining a succinct list of appropriate roles for the fed-

eral government in the 21st Century production agriculture.

Is the 1996 FAIR Act working? I offer the following comments:

- The most exciting and contentious part of the Act is the safety net.
- There is widespread agreement on planting flexibility.
- Political support is strong.
- Therefore, it is unlikely that the safety net will be recoupled to specific crop acreage.

> "Do we continue down the market-orientation road or do we reverse course? Time will tell!"

Since 1996, wheat acreage is down approximately 16 percent, feed grain acreage is up 2 percent, oilseed acreage is up 17 percent, and cotton acreage initially declined, but has since rebounded.

The 1996 farm bill, it could be argued, was poorly timed. It was necessary to cap payments in the budget battles of 1995-96 in order to get a farm bill passed. The Asian Crisis hit abruptly in 1998 and weather patterns around the world have produced record or near record crops and carry-overs. Exports declined 18 percent to $49 billion in 1999. The marketing loan, which was deliberately set at levels that would not kick in according to the models, kicked in screaming. Also, gross farm sales declined rapidly.

Freedom to Farm payments were increased 50 percent in 1998, and doubled in 1999 and 2000 through emergency appropriations. Economic circumstances and political reality quickly changed the declining schedule of fixed decoupled payments. Government payments reached approximately $23 billion in 1999 and could set a record in 2000.

Where to from here? How FAIR 2000? I believe a "four-wheeler" has started down the road with the following components:

- Marketing Loan.
- Farm Savings Account.
- Crop/Revenue Insurance.
- Counter Cyclical Income Payment.

Four billion dollars remain in the current budget baseline for 2003. That $4 billion could be retained in the form of an agricultural market transition account (AMTA). Contentious issues include:

- The level of the marketing loan and the alignment among commodities; specifically oilseeds and feed grains.
- Distribution of payments, i.e., current production vs. historical bases including payment limitations.
- The level of decoupling in a counter-cyclical income payment should be crop specific as proposed in Representative Charlie Stenholm's (D-Texas) SIP Program? Or, should it be on aggregate gross sales or net cash income of the program crops? This is an option that the commission is exploring.

Of course, underlying all the economics and political rhetoric is the expansion of trade and the current round of two talks. The basic question: Do we continue down the market-orientation road or do we reverse course? Time will tell!

Lou Swanson, *Colorado State University.* In the first half of the 20th Century, rural America, through the extractive industries, held essentially what is the low end service jobs of today. It was the employment sponge from 1900 to the 1940s-50s.

In 1920, 48 percent of the U.S. population was rural. Only 31 percent of the population lived in places with a population over 50,000. Among the rural population, 60 percent lived on a farm, and nationally, 27 percent of the labor force was in farming.

> " In 1939, almost 40 percent of sales were controlled by the top 5 percent of farms. By 1987, this number was 55 percent and it continues to climb."

Today, we have had a transformation in the economic base in which we have moved from extractive industries in agriculture to a service-based and manufacturing-based economy. Government employment far outstrips employment in extractive industries.

There has been a class transformation in rural America. In the past, the majority of those employed in farming owned some portion of the land and their equipment, or had power over the management process or their labor. Today, the majority of people work for someone else.

Farming in the United States has had a dual farm structure -- a small percentage of the farms produce a large percentage of the value. In 1939, almost 40 percent of sales were controlled by the top 5 percent of farms. By 1987, this number was 55 percent and it continues to climb.

The transformation costs of the social and economic changes in rural America were unequally distributed regionally and according to social class. Winners include commercial farms and the commodity organizations which represent them. Losers include Southern sharecroppers and tenants, unskilled farm workers, and the environment.

Several crisis periods helped yield an agricultural policy at the beginning of the century. There were successive depressions and recessions in agriculture and in fishing, mining, and forestry. World War I was a boom period in agriculture. The Great Depression began for agriculture shortly after World War I. The United States farm sector was already experiencing contractions in foreign markets and a loss of demand in domestic markets, which pushed farm prices down as early as 1921-22. The crisis deepened and spread into the larger economy. By 1933, when President Roosevelt took office, the United States was in a true economic crisis in almost every sector of the economy.

What is interesting about the New Deal was that is was an emergency farm policy based upon a partnership between a rapidly expanding federal government and local boards. They were temporary programs. It was assumed that once the crisis had subsided, the market disciplined structures from before the New Deal would return.

The post-New Deal policies were, in retrospect, industrial transition policies. Since the benefits went to farmers who owned land, a large portion of the population of rural America was not a part of those programs.

Additional Resources:

21st Century Commission on Production Agriculture: *http://www.agcommisson.org*

The Emerging Food Supply Chain

Marvin L. Hayenga, *Iowa State University*.
There are several reasons for producers, processors, and input suppliers to shift from cash markets to vertical linkages:

- Capturing profits from farming or processing (with ownership).
- Reducing risks.
- Lowering costs.
- Assuring adequate inputs or markets.
- Acquiring capital.
- Responding faster to changing consumer demands.

Vertical integration is modest in agriculture (maybe 8 percent). Most vertical integration is by producer cooperatives or is producer-initiated. Agricultural cooperatives market 30 percent of farm output. Similarly, production and marketing contracts are widespread in agriculture. They involve 35 percent of production (2/3 marketing contracts, 1/3 production contracts) and involve all sizes of producers.

> "The pork sector has dramatically shifted to marketing contract linkages. Spot market volume has dropped below 30 percent. Pork production contracts account for over 40 percent of volume."

Grain marketing systems are dominated by generic commodity cash markets and forward contracts, with very small volumes of contract-dominated specialty grain and oilseeds. But, the genetically modified organism (GMO) controversy and new value-added GMO products are likely to be a driving force toward a greater reliance on contract linkages. Little vertical integration into land ownership is likely.

Recent livestock marketing system changes have stirred controversy. Some cattle feeders fear that captive supplies will impact their market prices, though their volume is only moderate. The pork sector has dramatically shifted to marketing contract linkages. Spot market volume has dropped below 30 percent. Pork production contracts account for over 40 percent of volume. Large-scale producers are the primary contractors. Marketing contracts now comprise 1/4 of cattle and over 1/2 of hogs acquired by packers. Most beef and pork marketing contracts are formula-priced and linked to cash market prices. Innovative pork marketing contracts offering risk shifting are becoming more pervasive—window contracts, production cost plus, etc. Value-added producer alliances linked to branded products are growing—especially in beef.

Serving the needs of branded product merchandisers and more demanding customers, and food safety concerns are becoming more important reasons for contracting by packers. Assured plant space, easier to acquire capital, and lower price risk are the most important reasons producers cite to contract. Pricing is being tied to value more closely in most contract links.

Implications of tighter coordination include more responsive systems to consumer demands, lower transactions and operational costs, and lower or transferred risks, including improved food safety. Greater U.S. global competitiveness may result with contract participants primarily realizing the advantages.

Issues include concerns about thinner markets, independent producers or processors remaining competitive, and market access. Will contract suppliers have preferential treatment that is not justified? Will processors use contract supplies to exert market leverage? Fair treatment of contract growers some-

times may become an issue (e.g., the poultry industry), and possible grower bargaining disadvantages at contract renewal may be a regional problem. Should Congress and the states impose major restrictions on these emerging market links?

Greater demands on the food system are forcing changes in industry organization. More change should be expected in the livestock and grain sectors that lagged behind many others. Producers need to consider whether they should fight or try to abolish these systems, or capture part of the benefits.

John C. Bernard, *University of Delaware*. As advances and products derived from biotechnology have come to play a major role in agriculture, many concerns and issues have appeared. Among these is the increased corporate ownership of genetics and the resulting potential for the monopolization of the gene pool. This discussion focuses on three specific areas within this category: the different forms of ownership, with particular emphasis on biotechnology patents; ownership concentration; and the resulting concerns of different industry participants.

The three forms of ownership to consider are: material transfer agreements (MTA), plant breeder rights (PBR), and patents.

MTAs are bilateral agreements based on contract law. Typical agreements allow research use, with another agreement required for commercialization. Little information is available on the extent of their use, but anecdotal evidence suggests they are widespread.

PBRs have a long tradition in the United States. They grant patent-like protection but with important exemptions for use of protected varieties in breeding efforts and allowing farmers to save seed. Thus, rights over genetic material are limited under PBRs although, under current law, developers of any new variety based on another's initial variety is required to gain the latter's permission prior to commercialization.

It is patents, though, that have become the preferred and most controversial method for protecting biotechnology property rights. The ability to gain such patents has been part of an overall expansion of what can be patented in the United States. Some milestones include the first patent on a plant, granted in 1985, for a traditionally bred corn, and the first for an animal in 1988 for a transgenic mouse. Biotechnology patents can also be granted covering research tools and methods, modified genes, gene sequences, and Expressed Sequence Tags (EST).

> "Ownership concentration in the sector is high, with the top four U.S. and European firms owning 47 percent of genomics patents, and the United States four-firm concentration of pending Plant Variety Protection Certificates standing at 77 percent in 1998."

The property rights conferred by these patents are strong. While inventors are required to publically describe and reveal their inventions, farmers cannot save seed from patented plants, nor can the patented invention be used in other research. These facts, coupled with the newness and overlapping nature of many biotech patents, has led to frequent court action.

The companies involved in legal actions are also involved in numerous strategic alliances and research agreements, which can lead to the monopolization of the gene pool among a select group. Ownership concentration in the sector is high regardless, with the top four U.S. and European firms owning 47 percent of genomics patents, and the United States four-firm concentration of pending Plant Variety Protection Certificates standing at 77 percent in 1998. Since then, a series of mergers and acquisitions has likely increased concentration figures.

Additional Resources:

Policy Issues in the Changing Structure of the Food System: Homepage for a 2000 American Agricultural Economics Association Preconference Workshop:
http://www.farmfoundation.org/changing-structure.htm

Financing and Delivering Rural Health Care

Lois Wright Morton, *Iowa State University*.
Rural health policy has its foundations in the science of what is known about population health and health care systems, past and current experiences with legislation, regulations, programs and intervention practices, and politics. As partners in the land grant system, we all are keenly aware of the role that science plays in building new knowledge. Creation of knowledge encompasses determinants and root causes of health, as well as the organization of health care systems in response to issues of human health. This year's headline was the mapping of the human genome. This mapping offers new possibilities for solving the mysteries of chronic illness and fatal diseases and expands the development of medical interventions and technologies. It also raises the specter of higher medical costs for these specialized technologies and ethical consumer and community dilemmas. If I have a cancer or a mental illness gene that is likely to require medical care, should my health and life insurer place me in a high risk pool and charge me more? If this information is encoded in a health profile, should my employer have access? What responsibilities do we as citizens have to collectively share in the health costs and benefits of those with whom we share a community and/or nation?

Investigations into the determinants of health have taken two distinct pathways: genetics and environment, or nature and nurture. A recent *New England Journal of Medicine* report on the longitudinal Swedish study of twins and cancers provides us with new information about the causality of a variety of cancers. Significant genetic contributions to cancer rates of different types of cancers ranging from prostrate, colon, uterine, breast, and skin varied from 42 percent to 28 percent to no significance at all. The remaining variation was explained by factors in our environment and interaction effects between environment and genetics. This is important to think about as we invest in public policy education. While this was a cancer example, it will only be a short time before we are able to disaggregate genetic and environment effects on other diseases. Our environment clearly plays a critical role in the health of the population, including rural populations. It will be some time before we can alter our genetic make-up, however, we can act now to influence our environment. Environmental health policy issues range from water and air quality to crime, employee stress, poverty and inequality, occupational hazards, and health care infrastructures.

Research and intervention policies and practices relating to health and the environment have two distinct strains: individual and community/institutional. The first focuses on the individual and specific responses to disease. This includes the linking of lifestyles (e.g., smoking, eating, and exercising) and individual choices to health outcomes and consumer choice of health insurance, medical care, and compliance with health care provider recommendations. The health care system responses to individual diseases have included innovative medical technologies, drug therapies, telemedicine, and disease-specific centers of excellence. The second focus is the socioeconomic conditions of communities that affect health and the institutions of health care. New research on

root causes of disease point to social conditions of inequality, poverty, race, income, and social status.

There are policy implications to both of these strains. Land grant university educators are particularly well positioned to respond to individual decision making and consumer choice. While we have focused educational efforts on changing individual behaviors, including nutrition, consumer education, land conservation and animal management to improve water quality, there are public policy issues of which rural consumers need to be aware. This includes legislative initiatives to protect consumer rights relating to privacy of personal health information, billing and debt collection regulations regarding health care usage, agreements among physicians, hospitals, and health insurers that impact patients, employee rights to privacy of health information and limited access of employers, discrimination policies and practices relating to age, gender, income, and health including Medicaid and Medicare insurance coverage, and incentive payments and guidelines for land and farm management practices. Nutrition policies have included a national agenda for better eating patterns (RDA and food pyramid), nutritional labeling, safe handling practices, and branding of fruits and vegetables. Unresolved policies relating to health involve genetically modified foods, irradiation, and harmonization of food standards with the European Union and other countries from which we import foods.

> "As we restructure our health care system, I believe we have three models to choose from: market-driven, agency-directed, and citizen-led."

The decisions of individuals in the practice of health prevention and selection of health care services are nested in community and national institutions and organizations. Community and regional conditions of income inequality, concentrations of minority populations, and poverty have all been linked to population health outcomes. The coastal plains of North and South Carolina and Georgia have stroke death rates twice as high as the rest of the country. Socioeconomic factors, culture of food, and race are contributors. Public policy education needs to include ways that citizens can mobilize to put issues like this on a "top" priority list—finding causes and then interventions to lower mortality of at-risk populations.

We, as educators, are comfortable in talking about the science of health and intervention policies and practices. We are less comfortable when it comes to discussing the politics of health and our health care system. Yet, it is the politics that move what is known into mainstream legislation and programming. As we restructure our health care system, I believe we have three models to choose from: market-driven, agency-directed, and citizen-led. How and when we apply these models has important implications to the kind of policy education needed. The market-driven model consists of producer-consumer relationships that need informed and educated consumers to produce an efficient and effective health care system. The agency directed model solves some of the distribution issues that market models based on ability to pay are unable to deal with. However, this model requires citizens that have confidence in their public institutions and mechanisms of accountability for use of public dollars. The last model, citizen-led, is based in American concepts of democracy and the belief that health and health care systems should be socially constructed by citizens who actively participate and partner with private health care firms and employers, as well as governments, to create community and national level responses. This model takes the science of what is known

and program practices and provides the political citizen support for responding to rural health issues. It requires high levels of information flows and incentives for citizens to get involved in the health functions of their communities. It means we as public policy educators need to find ways to get people off their couches and involved in the public process of deciding how health care is organized in their community, state, and nation.

Forrest W. Calico, *U.S. Department of Health and Human Services.* Health care is an integral part of a much larger rural challenge. It can be approached by focusing on four principles. First, the system is the solution. Second, health care must improve the health status of the community. Third, health care is community-based. Fourth, health care is of major economic importance to rural communities. While there are critical federal and state roles and responsibilities in rural health care financing, we must also focus on the unique solutions that can only be implemented at the community level.

The functions of the Federal Office of Rural Health Policy include the following:

- Strengthen rural health care capacity nationwide.
- Educate, avoid unintended consequences for rural populations, and coordinate rural health efforts.
- Administer grants at both the state and community level.
- Produce research to enlighten policy and publish new information.
- Proactively influence policy in a way that is favorable to rural health by participating in the regulatory process and providing information to congressional staff members.
- Enter into partnerships with many and varied public and private entities that share similar goals.

A number of rural health issues can be noted, including interdependency of services, low operating margins, and fragmented approaches to solutions. Examples of the inadequacy of current Medicare reimbursement policies can be identified, including various services provided in rural communities. Policy opportunities include a low volume adjustment for rural reimbursement, and an equity in disproportionate share payments and the wage index.

"The major driver of political action is the continuing growth of health care costs as a percent of the gross domestic product. This results primarily from demographic changes in the nation, technological advances, and the sometimes unrealistic expectations of all of us."

Policy makers often operate from the assumption that rural communities are like small urban environments which frequently causes adverse consequences for the rural environment.

The major driver of political action is the continuing growth of health care costs as a percent of the gross domestic product. This results primarily from demographic changes in the nation, technological advances, and the sometimes unrealistic expectations of all of us. The debate has generally focused on reducing the flow of resources into health care rather than on improving the effectiveness of the process of care, of the system which delivers care, and of the knowledge base of the population.

I propose that health care, particularly in rural communities, be approached in a different

way—specifically, that we develop organized systems of care that are tailored to the expressed needs and interests of the individual community that a health care system serves.

It is appropriate that communities expect their health care systems to provide certain benefits to the community. These include friendly, convenient, and supportive service; demonstrable economic benefit; improvement of the health status of the community; leadership in community development; and contribution of social capital. A system of health care which could provide these benefits would have the following characteristics: based in a democratic community process; fully integrated across the continuum of care; focused on continuous improvement of quality, service, and the process of care; and optimizing care from the perspective of the patient and family. Perhaps the most important part of solving the financial problems of health care in rural communities is to assure that the community population chooses to use their local facilities rather than out-migrating to urban providers.

> "Rural is not small urban, and the managed care approach in which health care becomes an 'extractive industry' from the rural perspective is unacceptable."

A comprehensive, multi-level approach is required to provide both long-and short-term solutions for health care in rural America. Rural is not small urban, and the managed care approach in which health care becomes an "extractive industry" from the rural perspective is unacceptable. Quality, access, and cost management all require the presence of locally excellent services. Defining services which should be financed locally will in part be locally determined but, in general, these must include: primary care; emergency services; home health; behavioral health; inpatient care of appropriate complexity; long-term care, public health; telecommunications; emergency transportation; and effective technology (note that rural health care is not a low-tech environment). All these services must be well integrated to function as a true continuum from the perspective of the patient.

There are many solutions which can only be achieved by Congress. We must continue to address these and to strive for a coherent national rural policy which includes good health care for rural communities. Advocacy for these solutions must come from members of active and informed communities. At the same time, many solutions can be achieved by concerted action at the community level, and these endeavors must be ongoing while national approaches are hammered out. Local leadership is critical, and this group can, and must, help develop that leadership and an environment in communities conducive to local problem solving. This includes health care.

Ken Oakley, *Lake Plains Community Care Network*. Typical discussions relating to rural health service delivery tend to focus on issues surrounding access, availability, and affordability of direct services to be found/not found within the local system. I believe we need to shift attention to a secondary consideration which is of growing concern in rural America: issues surrounding access, availability, affordability of personal health insurance coverage (or lack thereof), and how the status of coverage also impacts upon the delivery of care.

There are currently some 44 million uninsured Americans. This represents approximately 20 percent of the nation's population under age 65. The number is growing at a rate of approximately one million per year. Eighty-five percent of uninsured individuals are found within employed

households. Nearly 35 percent of the uninsured who do work are offered insurance benefits through their employer, but they decline coverage.

This growing number of uninsured adults in America is actually of as great a concern (if not greater) in rural areas as it is in urban areas. This is primarily true again because of issues of affordability: there are fewer insurance options and there are less service options.

Rural and urban populations tend to have very similar risk profiles. Yet, in many parts of the county, the cost of health insurance coverage for similar products can be as much as 20 percent higher in rural areas. Rural America is almost by default a "small market" insurance environment and thus, fewer companies choose to offer plans in these areas. This is because:

- Higher per unit administrative costs.
- Less potential for upside financial gains (small market volume).
- Greater potential for downside insurance risk (adverse selection, pent up demand, occupational risk assumptions).
- Greater likelihood of governmental intervention (community rating regulations, "all comers" provisions, and medical underwriting limitations or exclusions).

When companies do write plans, they tend to be more costly, contain higher deductibles and provide fewer benefits.

"Premium cost" is the number one barrier to an individual or employer purchasing health insurance coverage. Such costs are typically higher (and/or the benefit package less) in rural America. At the present time, there is no compelling incentive to have the insurance community change this. Those without coverage seek care in the nearest emergency room, or they do not seek care at all. Emergency care costs four to five times more than the same care provided in a physician's office. This is a charge directed to those least able to pay. Non-critical emergency care tends to be symptom-oriented -- not cause-oriented. As a result, treatment is sometimes superficial and without follow-up.

Rural emergency room care is rarely offered by more than a single community provider. There is no sharing of "charity care" responsibilities among organizations. "Charity care" and bad debt are no longer synonymous. Those individuals without a health insurance connection are the individuals most likely to pay premium/retail prices for their prescription drugs. It is estimated that 30 percent of all prescriptions given to uninsured individuals go unfilled because of costs.

There are several local alternative response options in New York:

- ***The Lake Plains Community Care Initiative.*** A four county community-driven/empowered attempt to establish a new locally directed and controlled insurance option.
- ***HealthForAll, Inc.*** An eight county (urban and rural) initiative seeking to partner with the NYS Insurance Department in the 2001 rollout of the State's new "Healthy New York" program for the currently uninsured.
- ***The Lake Plains Rx Discount Card Program.*** A project intended to bring prescription drug discount opportunities to community participants currently paying full retail prices.

Additional Resources:

Lois Wright Morton. *Health Care Restructuring: Market Theory vs. Civil Society.* Westport, CT: Auburn House, 2000.
http://info.greenwood.com/books/0865693/086569303x.html

Federal Office of Rural Health Policy:
http://www.ruralhealth.hrsa.gov/

Lake Plains Community Care Network:
http://www.lakeplains.org/

Land Use/Water Quality - Watershed Management

Keith Porter, *Cornell University*. For the last 80 years, Americans have drunk water from their taps with confidence that the water is safe. The confidence has justification. For example, over the period 1981 to 1994, there were only 363 reported outbreaks of water-borne disease, with just less than 500,000 cases of illness. Of that number, 400,000 were accounted for by the well-known outbreak of *Cryptosporidiosis* in Milwaukee in 1993.

Admittedly, a large number of cases of water-borne disease are likely to be unreported. For example, many rural residents use private wells that commonly lie outside the jurisdiction of a health department. It is generally recognized that the surveillance of water-borne diseases is inadequate.

Nevertheless, the water supply appears to be much safer than, for example, the food supply. According to a recent National Academy of Sciences report, possibly up to about 80 million illnesses and 9,000 deaths annually are attributable to food-borne risks in the United States. The estimated costs of these illnesses and deaths could be as much as $37 million. There are no comparable statistics for drinking water.

Despite this record, the public confidence in water safety appears to be waning. There is a fear that drinking water can contain anthropogenic chemicals that pose a risk of cancer. Popular films such as *A Civil Action* and *Erin Brockovitch* encourage such apprehensions. An increasingly recognized priority is trihalomethanes, which can be formed when organic material reacts chemically with chlorine during water treatment. Finally, there is increasing awareness of water-borne emerging diseases. The best known example of such disease is *Cryptosporidium parvum*. *Mycobacterium avium*, an opportunistic cousin of the cause of tuberculosis, is a less well-known opportunistic pathogen that is particularly a serious threat to individuals with deficient immune systems. Given these newly recognized risks, water suppliers seek new ways of securing the integrity of the water they supply.

The water engineer has traditionally relied upon four lines of defense, or barriers, against impure water:

1. Pristine and protected watersheds (or catchment areas).
2. Long-term storage of water prior to treatment (storage of raw or catchwaters).
3. Filtration.
4. Disinfection (usually chlorination).

Until recently, the greatest weight was given to the third and fourth barrier. The new concerns about water safety prompt misgivings about their sufficiency. Giving greater weight to the second barrier is a limited option since it would likely require increasing the volume of storage provided. The lack or cost of available land for larger reservoirs prevents this option from being widely pursued. That leaves the first option: the protection of watershed areas. This is a significant challenge to water policy. Traditionally, a protected or pristine watershed was considered to be a watershed without significant human activity or presence. Water

companies sought to acquire ownership of land in the watershed. Today, this option is increasingly impractical. The rising cost of rural land and pressure from increasing population mandates a new approach. Rather than exclusion of human activity, how can that activity be permitted while sustaining a high quality environment? This is the major question for environmentalism generally. In the case of water, can we have a living landscape and a well-protected waterscape?

Protection from pollution relies increasingly on three principles:

- Prevention at the source of potential pollution (Prevention at Source).
- Preventive management should be precautionary to allow for uncertainties (the Precautionary Principle).
- The cost of preventing pollution should be borne by the polluter (the Polluter Pays Principle).

Chester L. Arnold, *University of Connecticut.* Land use is the common thread that runs through some of the most vital issues facing America's communities today—issues like economic growth, natural resource protection, and quality of life. The need for more informed land use decisions has become a priority issue for agencies and organizations from the Environmental Protection Agency to the National Homebuilder's Association, and is manifested in new programs focused on "sprawl," "liveable communities," and "smart growth."

Evidence of the environmental, social, and economic impacts of poorly planned communities continues to mount, particularly at the urban-rural interface. Nonpoint source pollution, or polluted runoff, which has its genesis in land use, is now the number one water quality problem in the United States. The Nature Conservancy reports that up to one-third of the country's animal and plant species are at risk of extinction due mainly to habitat loss and degradation, and that freshwater aquatic species are among the most affected. The American Farmland Trust estimates that farmland is being lost to development at a rate of one million acres per year. Urban sprawl—the attenuated, land-consumptive pattern of suburban development that has dominated the American landscape since the advent of the interstate highway system after World War II—is a major concern of financial institutions and environmental agencies alike.

Confronting these problems, with few tools at their disposal, are local land use decision makers in communities across the country. Land use in the United States is predominantly a local issue. Land use policies are developed, and land use decisions are made, by elected and appointed officials at the county and municipal or town level. Most of these volunteers have little or no training in land planning or natural resource protection, and many lack professional assistance. The decisions made by these local officials will determine the look and feel of the country's landscape for decades to come. If water quality is to be protected, and agricultural and forested lands are to survive the onslaught of urbanization, this critical group of decision makers must be given the information and tools necessary to better plan their communities.

The NEMO Project. The *Nonpoint Education for Municipal Officials* (NEMO) *Project* at the University of Connecticut is an award-winning research and outreach program for local land use decision makers that addresses the links between land use and water quality. NEMO has existed since 1991, and was originally created by the University of Connecticut in partnership with the USDA/CSREES Water Quality

Program. The project is founded on the principles that water resource protection is a function of land use, that land use is locally controlled, and that the most effective and cost-effective way to effect changes to local land use policies is through research-based, professional outreach education.

NEMO has been a pioneer in the use of geospatial technologies like remote sensing (RS) and geographic information systems (GIS) to enhance and inform land use educational programs. Remote sensing-derived land use/land cover information, state agency water resource data layers, and tailored local analyses developed by the project team are manipulated in a GIS system and then folded into educational presentations targeting local officials and land owners. The emphasis is on the water quality impacts of land use decisions, and on helping decision makers to visualize alternatives for their communities. The educational presentations, on more than a dozen topics, are the foundation upon which the project is built. Although the project is developing a multi-media educational package to reach its target audiences in as many ways as possible, a key aspect of NEMO's approach is that the give-and-take of educational programs can be enhanced, but it can never be replaced by technological tools, no matter how interactive or sophisticated.

National NEMO Network. Interest in the NEMO educational model from colleagues in other states began in 1995 and has continued to the present. Currently, 17 states have a funded NEMO pilot project, with an equal number in the discussion or planning stages. NEMO adapters are typically multi-organization coalitions that include university-based outreach programs (cooperative extension and/or sea grant extension), state agencies, regional planning agencies, and nonprofit organizations. These projects are not University of Connecticut "clones," but are true adaptations tailored to the issues, landscapes, and land use decision-making process of each state context. The three key elements that these projects share are:

- A focus on **land use** impacts on water resources.
- An integrated **research/extension** approach.
- The use of **information technology** (RS, GIS, World Wide Web) to enhance the educational programs.

Most of the programs are concerned with the impacts of suburbanization on water resources, agricultural lands, and forest lands. A primary objective of the NEMO Project has been to go beyond assisting in the development of NEMO adaptations to create a National NEMO Network of project sharing information and educational tools. Supporting us in this endeavor is the National NEMO Network Interagency Work Group, an informal group of representatives from federal agencies and national organizations that are interested in dissemination of the NEMO model.

Thomas W. Simpson, *University of Maryland.* The state of Maryland enacted the Water Quality Improvement Act of 1998 (WQIA) as a policy response to fish kills and apparent human health problems resulting from an outbreak of *Pfiesteria piscicida* during 1997. The WQIA mandated nutrient management plans for all "agricultural operations" that grossed more than $2,500 per year. This included all farms, including small and part time, as well as nurseries and greenhouses.

Deadlines for obtaining and implementing plans vary with nutrient source. Agricultural

operations using inorganic nutrient sources must submit a plan based on both nitrogen and phosphorus content to the Maryland Department of Agriculture (MDA) by December 31, 2001. Those using organic nutrient sources on 10 acres or more, or 50 percent of their operation, whichever is less, must submit a nitrogen-based plan by December 31, 2001, and a nitrogen and phosphorus based plan by July 1, 2004. All the plans must be implemented within 12 months of the submission deadlines.

The Act also required fertilizer applications to certain non-agricultural lands to follow Maryland Cooperative Extension recommendations. These included all state-owned lands as well as commercial application to parcels of three acres or more. The WQIA was amended in 2000 to require commercial applications by an individual or corporation to a total of 10 or more acres per year to follow extension recommendations. The amendment brought most lawn care/service companies under the Act.

Regulations have been developed and implemented for the agricultural requirements of the Act but are still being developed for non-agricultural nutrient use, including the recent amendment. The regulation development process has been somewhat unique. A Nutrient Management Advisory Committee (NMAC) of more than 30 individuals, from all interest groups, helped develop the agricultural operation regulations. An existing Urban Nutrient Management Workgroup is helping to develop the non-agricultural guidelines and regulations that will also be considered by the NMAC.

The WQIA provided technical and financial assistance to help transition to nitrogen and phosphorus based nutrient management. These included additional extension nutrient management advisors and Conservation District staff, as well as cost-share for private sector development of plans. Tax deductions are allowed for the purchase of manure application equipment that can be applied precisely or at low rates. A tax credit was developed to partially offset the costs of fertilizer nitrogen that must be purchased in cases where manure applications will be limited to phosphorus rates. The state and poultry integrators are jointly funding a pilot poultry litter transport project that provides up to $20 per ton to transport litter from areas of excess to areas needing phosphorus.

An animal waste technology fund was established to foster development of alternative use technologies/businesses in the private sector. The Act required poultry companies to use phytase as a feed supplement to improve phosphorus use efficiency, but the state provided one-half of the costs of needed feed mill retooling. A research fund of $800,000 per year was established to expedite development and implementation of the science base needed to move to phosphorus-based manure applications, and to manage excess animal waste.

Additional Resources:

New York State Water Resources Institute, a program of the Center for the Environment at Cornell University:
http://www.cfe.cornell.edu/wri/

Nonpoint Education for Municipal Officials (NEMO):
http://www.canr.uconn.edu/ces/nemo/index.html

Small Farms

Bob Hoppe, *Economic Research Service.* *

Typically, farm classification schemes are one dimensional, focusing on one characteristic, such as sales class of the farm. The Economic Research Service (ERS) typology (figure 1), in contrast, is multidimensional, and considers the size of the farm and the occupation of the operator, which ERS has found useful in the past in understanding farms. In the case of limited-resource farms, the typology also considers the asset base of the farm, and total household income from farm and nonfarm sources. The typology extends traditional classification systems, is particularly useful in assessing business arrangements of farms, and reflects the basic heterogeneity of farms (especially small farms).

The ERS farm typology divides farms into more homogeneous groups to aid in policy discussions. Using more homogeneous categories based on a few key characteristics can help to target policy measures appropriately, including measures that seek to support income, stabilize commodity supplies, and protect natural resources.

A number of implications relevant to small farms can be drawn from the ERS typology:

- Targeting educational programs at specific groups of small farm operators will improve delivery. One approach may not be appropriate in all cases. For example, estate-planning education by extension could be useful to retired farmers. On the other hand, explanations of changes in commodity program legislation, could be very useful to high-sales small farms that specialize in cash grains.
- Small farms produce a large share of particular commodities. Nevertheless, production is concentrated among large family farms, very large family farms, and nonfamily farms. The nation relies on larger farms for most of its food and fiber.
- Commodity program payments are most relevant to high-sales small farms and large family farms. These farms receive about half of commodity program payments. Farm programs making payments proportional to production will necessarily provide benefits to farms producing the commodities in question.
- As custodians and managers of a large share of farmland, small farms are important in conservation policy and play a major role in meeting the amenity goals of society. Small farms currently receive about 82 percent of the payments from conservation programs.
- Some small farms gain access to assets and coordinate with other firms using the same techniques as larger farms. We cannot assume techniques such as contracting are solely tools of larger farms. Any regulations written regarding these techniques will affect many small farms.

* This section excerpts a paper and presentation by Bob Hoppe describing the ERS typology which is available on Farm Foundation's website at ***http://www.farmfoundation.org/2000NPPEC/nppecpapers.htm.***

Figure 1. The ERS Farm Typology

Small Family Farms (sales less than $250,000)	Other Farms
• **Limited-resource farms.** Small farms with sales less than $100,000, farm assets less than $150,000, and total operator household income less than $20,000. Operators may report any major occupation, except hired manager. • **Retirement farms.** Small farms whose operators report that they are retired.* • **Residential/lifestyle farms.** Small farms whose operators report a major occupation other than farming.* • **Farming-occupation farms.** Small farms whose operators report farming as their major occupation.* **-Low-sales.** Sales less than $100,000. **-High-sales.** Sales between $100,000 and $249,999.	• **Large family farms.** Sales between $250,000 and $499,999. • **Very large family farms.** Sales of $500,000 or more. • **Nonfamily farms.** Farms organized as nonfamily corporations or cooperatives, as well as farms operated by hired managers. *Excludes limited-resource farms whose operators report this operation.

- Compatibility with part-time farming is an important consideration if high-value enterprises are to be adopted by small farm operators—as suggested by many small farm advocates. Many small farms specialize in cattle for a very practical reason. Cow-calf operations require limited hours of work, with some flexibility as to when the work is performed.
- The nonfarm economy is critically important to households operating small farms. Except for the high-sales group, most households with small farms rely on off-farm sources for virtually all their income.
- Nevertheless, such measures as extension education, innovative marketing programs, and credit targeted specifically at small farms could help some small farm families increase their income. Trying to raise earnings from farming may be particularly appropriate for limited-resource farmers. Even modest improvements in household income could be important to these low-income farmers.

Commissioner Leon C. Graves, *Vermont Department of Agriculture, Food & Markets.* What is a small farm? There appears to be some consensus around the guideline of defining a small farm as one generating less than $250,000 in annual gross receipts, on which day-to-day labor and management are provided by the farmer and/or the farm family that owns the farm or productive assets.

This description of small farms includes approximately 94 percent of all United States farms. These farms own 75 percent of the total productive assets in agriculture and receive 41 percent of all agricultural receipts. This description includes 41 percent of all farmers who consider farming their primary occupation. An

equal percentage of farmers work part-time on the farm and rely on non-farm jobs as their primary source of income. Most of these farm units are usually referred to as "family farms" according to USDA's description of a small farm.

Small farms and family farms have been, and continue to be, vitally important to our diverse, environmentally and economically sound, food production system in this country. Small farms contribute significantly to our working landscape and provide the basis for strong rural communities and traditional rural lifestyles.

Support for small family farms has always been uppermost in my mind as the Vermont Agriculture Commissioner, and I know it is a concern of commissioners across the country. The majority of United States farms meet the USDA small farm definition. In many states, agriculture, manufacturing, and travel and tourism economic sectors constitute the vast majority of the gross state product. Farms are the core of many of our rural communities, and they add real meaning to the term working landscape.

In order to address the question of institutional service to the small farm sector, we must look at the various aspects of universities and state departments of agriculture.

Universities' traditional roles have centered around teaching, research, and the dissemination of information through extension activities. State departments of agriculture have traditionally been regulators of the industry. However, our roles have expanded with the addition of development and marketing activities. The Vermont Department of Agriculture, Food & Markets allocates about 80 percent of its resources to regulatory activities, and the balance to market development, promotion, and technical assistance.

Even though our traditional roles have been well defined and quite different, I believe that there are several common goals that we should pursue in assisting small farms. We should advocate and seek the adoption of policies that:

- Ensure profitability and economic viability.
- Promote good stewardship of our environmental and natural resources.
- Ensure the production of safe, healthy, and high quality food.
- Enable farm families to enjoy a quality of life comparable to non-farm families.
- Afford small farmers a greater opportunity to benefit from the sale of value-added farm products.
- Provide a competitive marketplace for the sale of farm produce and the purchase of inputs.
- Ensure access to adequate and affordable capital.
- Ensure access to relevant education, research, and technical assistance delivered in a timely manner.
- Encourage diversification and market development.
- Enable small farmers to utilize good risk-management tools.

Policy development has primarily been the responsibility of state government, however, I have always welcomed the help and support of university and extension leaders. With less than two percent of the U.S. population actively engaged in farming, we can use all the help we can get. Good farm policy, supported by sound science, is absolutely essential for small farm success.

We should spend less time trying to define sustainability and more time advocating economic viability. We should spend less time debating management philosophies, and more

> "We should spend less time trying to define sustainability and more time advocating economic viability. We should spend less time debating management philosophies, and more time looking for opportunities to further the goals of all farmers."

time looking for opportunities to further the goals of all farmers.

We should spend less time discussing the potential problems of large farms and more time convincing the public that we need all of our farms in order to provide the critical mass necessary to support our agricultural business infrastructure and produce the nation's food.

Commissioner Nathan Rudgers, *New York State Department of Agriculture and Markets*. Of the approximately 39,000 farms in New York, only 8,200 (22 percent) have sales of $100,000 or more. Almost half of all New York farms can be categorized as small.

Our philosophy in New York is to try to help producers be more competitive and profitable by either being the low-cost producer or getting closer to their markets. We are trying to reduce the cost of doing business in New York. Areas that we have addressed to help our lower cost producers are:

- Cutting farm property taxes up to 100 percent.
- Cutting workers' compensation rates for farmers more than 25 percent.
- Significantly reducing energy costs.
- Enacting $12 million worth of state and local sales tax exemptions for farm materials and equipment.

We also have several grant programs to make producers more efficient, competitive, viable, and profitable. Examples include our Grow NY development initiative; the Pride of New York generic marketing program; and the Farmland Viability Program, which funds local farmland protection plans.

To help local governments preserve large and small farms through farmland protection programs, we have awarded nearly $1.5 million of matching funds to 31 counties for farmland protection planning in the last five years. We have also awarded more than $27.5 million to 21 municipalities to purchase the development rights on over 50 farms. In 1999, we announced a record $12 million for farmland protection this year, a 56 percent increase over last year and the largest amount ever.

Additional Resources:

Economic Research Service Farm Structure Briefing Room:
http://www.ers.usda.gov/briefing/FarmStructure/index.htm
Vermont Department of Agriculture, Food & Markets:
http://www.cit.state.vt.us/agric/index.htm
New York State Department of Agriculture and Markets:
http://www.agmkt.state.ny.us/

The Graying of America

Douglas Wolf, *Syracuse University*. We are, at present (based on Census Bureau figures for 1998), a moderately "old" country. There are, in fact, 30 countries with older populations (measured as percent of the population 65 and older). Italy, with 17.6 percent of its population 65 and above, is presently the world's oldest country, followed by Sweden, Belgium, Greece, Spain, the UK, and Japan. In contrast, 12.7 percent of the U.S. population is 65 and above. The Baby Boom is, however, nearing the threshold of old age (starting in about 2010), after which time the U.S. population will age rapidly.

How we got to where we are, and much of the story concerning where we are headed, is captured by two demographic phenomena -- the Baby Boom and rising life expectancy:

- The Baby Boom is defined by the rising birth rate and rising absolute numbers of births from the late 1940s to 1960. Since then, the birth rate has remained comparatively stable, but the absolute numbers of births went up as the boomers themselves passed through childbearing ages.
- Since 1900, life expectancy at birth has risen dramatically, from just over 47 years (for males and females combined) to nearly 77 in 1997. However, life expectancy among those reaching age 65 grew much less over the same period, and not at all until around 1940. This is because most of the 20th Century gains in longevity resulted from reductions in infant and child mortality, not old age mortality. Since the 1960s, the gains at older ages are more visible.

We are well acquainted with the hot political issue of the day: the consequences of the population aging for the Social Security Trust Fund and the Medicare Trust Fund. I want to call attention to another issue, lurking further off in the future: the growing demand for publicly-funded, broadly-based, long-term care services.

The following factors relate to the demand for publicly-funded, long-term care services:

- There will be further increases in life expectancy. Are there limits to life expectancy?
- As we live longer, are we gaining healthy years or unhealthy years? There is a growing accumulation of evidence that the prevalence of disability, or of functional limitations, or "dependence," is declining since the early 1980s (we do not have data with which to reliably assess the situation in earlier years). The improvements are slight, possibly around one percent per year.
- Will these trends continue? If they do, will they be enough to offset the growth in the absolute numbers of older people? Under the most optimistic set of recent projections, extrapolating the improvements suggests that the population of elderly needing long-term care services will not grow, even as the overall older population grows. This is, however, based on relatively little empirical information and lots of heroic assumptions. The Congressional Budget Office, in contrast, projects that long-

term care expenditures will grow by 2.6 percent per year from 2000 and 2040.

- What about the supply of informal (family) caregivers? Several factors suggest a reduced availability, or willingness of family members (predominantly daughters) to continue to supply the large share of overall elder care that they have to date: higher levels of female employment; higher levels of divorce; and a rising share of childlessness.

There are very different levels of "grayness" in regions across the country. The oldest states are in the Midwest plains and in Florida. There are two ways that a local area can grow old: "aging in place," and in-migration of older people. The latter, particularly, happens in places characterized as "elder magnets." The former can be exacerbated by the out-migration of the young.

- In 1998, there were 52 counties (out of around 3,100) that were "old" (in the top quartile of percent 65 and older), and are experiencing high levels of in-migration of both young and old; these are counties that are "magnets" to people of all ages.
- There are 390 counties (about 12 percent of all counties) that are experiencing population loss and are at the same time "old" (again, judged by being in the top quartile of percent 65 plus). These counties are experiencing net losses of the "young" (persons 20-44). Note also that when young adults move out, they take with them part of the next generation. Such counties, while found in most states, are concentrated in midwestern states such as Kansas, Iowa, Nebraska, and North Dakota.
- What is it about a local area that attracts–or retains–people of retirement age? Some factors are: climate, amenities (such as coastline), and recreational features. Of lesser importance are fiscal factors such as taxation and public spending profiles and social/economic factors. Consequently, state and local governments are limited in what they can do to attract in-migrants.

Patricia Pollack, *Cornell University*. My research has addressed the amenities that attract, maintain, or increase the quality of life of older people in communities. I believe that aging is good business and communities should attract or retain their aging populations.

Unfortunately, the aging of the population is hardly the kind of crisis that is worthy of bold leadership at the local level. Current municipal officials have terms of office that are too short to be effective and which are often concerned with more pressing local issues. Although aging is a local issue, it is not as politically safe as other issues which already have a built-in constituency and an interest in the community. For instance, providing a home or housing options for the elderly would seem, on the face of it, to be politically safe, but at the root of the issue is a concern for property rights. Generally, few politicians at the local level want to stick their necks out and tackle property rights issues.

One innovative program which I have been involved with is Housing Options for the Elderly. It utilizes shared housing, accessory apartments, elder cottages, and home equity conversion to assist older Americans in finding affordable housing.

Additional Resources:

Liveable Communities: An Evaluation Guide:
http://research.aarp.org/consume/d16905_communities.html

Public Policy Education Awards

R. J. Hildreth Awards for Distinguished Career Achievement in Public Policy Education

The objective of this award is to recognize individuals who have demonstrated excellence in scholarship and public service through public policy education programs over their career.

A. L. "Roy" Frederick is respected as a distinguished policy educator for both his knowledge of the subject and his ability to convey complex issues to the public. Since the 1970s, Roy has worked with a wide range of citizens' interests, policymakers, and organizations. He has been a key advisor to Nebraska's Governors, Members of Congress, and to various organizations on agriculture and trade issues. Frederick is regularly asked to testify on legislative issues and provide briefings to policymakers. He has conducted statewide policy education programs on Nebraska ballot initiatives and constitutional amendments; worked with state and local policymakers and interests on tax policy and government finance issues; and with local school districts and citizen leaders on school consolidation issues. Roy has served on the North Central and National Public Policy Education Committees and has played a leadership role in Nebraska's efforts to extend the principles of policy education to colleagues and field staff. The impacts of Roy's programs are widely recognized for their contributions to the understanding of public issues in Nebraska. His efforts throughout his professional career reflect a devotion to quality, timeliness, and relevance.

(left to right) A. L. "Roy" Frederick, Barry Stryker, Warren Trock

Barry Stryker is recognized throughout Vermont for his many years of distinguished service to local government officials and citizen leaders. From 1983 to 1995, Barry provided leadership for Vermont's Town Officer Training Programs. Frequently, town officials work on a part-time, semi-volunteer basis and lack the institutional capacity enjoyed by larger metropolitan governments. This program provided training for 2,500 local officials annually. In 1989, Barry and several others initiated the Vermont Institute for Government, which became a non-profit organization that continues to sponsor policy forums and publications to help educate local officials and citizens. Stryker has served on the Northeast and National Public Policy Education Committees. Another of Barry's accomplishments includes leadership for Vermont's Rural Community Connectivity Project. This project successfully supported 93 municipal offices in training, connection to the Internet, and development of web pages for providing public information. Stryker's programs have often integrated leadership training and policy education principles in a fashion that has created stepping stones toward the development of a more informed citizenry. As a result of Barry's efforts throughout his career, Vermont has developed a continuing cadre of trained local officials and community leaders who step forward and tackle public policy issues.

Warren Trock is recognized for a 38-year distinguished policy research and education career that has impacted colleagues and citizens in Montana, Texas, and Colorado. During his 38-year career as an educator, Warren has exhibited a capability for research, classroom instruction, and extension that is noteworthy. He was first employed as an extension economist at Montana State University where he was active in farm management education. A move to Texas A&M offered opportunity for research and teaching with attention to issues and problems of resource development. Relocation to Colorado State University provided an opportunity to focus on agricultural and trade policy. Warren authored or co-authored numerous research and extension publications and has been active in development and presentation of programs dealing with issues and alternatives in policy formulation and administration. Trock earned a PhD in Agricultural Economics at Montana State University. While at Texas A&M, he was employed as a teacher and researcher and was promoted to Professor in 1973. Warren was employed at Colorado State University as an extension economist in 1975, and worked as an agricultural policy specialist until his retirement in 1996. Dr. Trock has been active in the educational efforts of committees of Farm Foundation, serving for several years on the Western Public Policy Education Committee, and chairing the National Public Policy Education Committee for one term. He has been especially involved in programs to train extension personnel in the methodology of policy education.

Outstanding Public Issues Education Program Awards

The objective of this award is to recognize outstanding achievement in policy education programs that have demonstrated excellence in scholarship, provided important public service, and demonstrated innovativeness within the policy education professional community.

(left to right) Robert Gorman, *NPPEC Chair;* Timothy W. Kelsey, *Pennsylvania State University;* Walt Armbruster, *Farm Foundation*

"Local Taxes in Our Community: Understanding Tax Reform in Pennsylvania"
Timothy W. Kelsey, Pennsylvania State University

This public policy education project commenced in 1997 as the Pennsylvania legislature began the process of creating new local tax policy alternatives. The first segment of this educational program included materials and presentations designed to help voters understand the proposed state constitutional amendment concerning property tax homestead exclusions and the potential implications for state and local tax policy. The second segment included materials, presentations, and regional in-service training sessions designed to help extension agents and citizens understand the subsequent 1998 legislation that outlined the specific tax policy options available to school districts and other local governments concerning the proposed Homestead/Farmstead exclusions. The third initiative was to provide detailed district-specific study materials for all school districts so they could calculate whether to place the tax reform issue before their respective electorates. The final initiative included a CD-ROM with data, a teachers manual, a publication series, a video, and in-service training programs for extension agents to help Local Tax Study Commissions and informal tax study groups to better understand local taxation in their own community, and to help them examine the impacts of the various alternatives authorized under the 1998 legislation.

"National Survey of State Animal Confinement Policies"

Andrew F. Seidl, Colorado State University; Mark A. Edelman, Iowa State University; Mellie Warner, Clemson University; Hal Harris, Clemson University; Nelson Bills, Cornell University; Charles Abdalla, Pennsylvania State University

During the Spring of 1998, Farm Foundation facilitated the organization of a national task force to discuss the public policy education needs regarding animal confinement issues and concerns. The task force concluded that each state appeared to approach an increasing number of concerns differently, depending upon their unique resource constraints and political context. Policy educators concluded that virtually no policy education materials were available—notwithstanding a few attempts by single states, organizations, and agencies to collect multi-state data on selected swine-producing states. As a result, $33,000 from extension services in 12 states, Farm Foundation, and USDA-CSREES were allocated to the Task Force for purposes of designing and implementing a survey of state animal confinement policies. The objective was to identify the big picture of what states were doing in response to the growing number of animal confinement concerns. The survey process identified appropriate university and state agency expertise to complete the surveys. A national Internet web site was created at Clemson University to provide a summary of survey results as well as detailed results from the 48 contiguous states -- by state and/or by topic. A summary of the results has been published and distributed widely to policymakers, state and federal agencies, and interest group leaders nationally and in several states. Survey results have been presented in a wide range of policy development discussions and policy evaluation settings at the state and national level, including Congressional and USDA briefing requests, state legislative briefings, interest group requests, and conference programs. The project epitomizes the value of the national policy education network by showing how policy educators can pool time and resources while partnering with USDA and Farm Foundation to develop a more comprehensive set of policy education and information resources for enhanced understanding of issues that are of local, state, and national concern.

(left to right) Robert Gorman, *NPPEC Chair;*
Charles Abdalla, *Pennsylvania State University;*
Mark A. Edelman, *Iowa State University;*
Hal Harris, *Clemson University;*
Nelson Bills, *Cornell University;*
Walt Armbruster, *Farm Foundation*

Additional Resources:

Information about previous Public Policy Education Award winners: ***http://www.farmfoundation.org/nppecawards.htm***

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The 51st National Public Policy Education Conference will be held in San Antonio, Texas, September 15-19, 2001. Contact Farm Foundation for information.

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