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The Growing Prevalence of Emergency, Disaster, and Other Ad Hoc Farm Program Payments: Implications for Agri-Environmental and Conservation Programs

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The use of emergency, disaster, and other ad hoc sources of income support to American farmers escalated dramatically between 1991 and 2002, increasing year-to-year uncertainty about the magnitude and distribution of farm program benefits. Ad hoc payment mechanisms, while meeting needs now apparently unsatisfied by other farm programs, have the potential to substitute for or conflict with agri-environmental and conservation program goals. Federal budget constraints likely make continued growth in ad hoc payment schemes unsustainable, raising questions about what will take their place. There is ample room for new research on how alternative farm program approaches and program combinations interact to affect stewardship behavior and associated agri-environmental outcomes.

Key Words: agri-environmental programs, disaster assistance, emergency assistance, farm income support, farm programs, green payments

The idea of supporting the livelihood of American farmers has been advocated since Thomas Jefferson's administration, though the predominate forms of and mechanisms for income support have varied greatly over time. During our nation's first century, agriculture was boosted through subsidized development of an agriculturally oriented infrastructure. Tariffs helped support domestic prices for commodities in the 1800s. Direct farm commodity price-support programs were enacted in the early years of the Great Depression. Supply control mechanisms were added to price supports as part of the Roosevelt Administration's New Deal, and survived until provisions of the 1996 Federal Agriculture Improve-

ment and Reform (FAIR) Act began a process of "decoupling" farm payments from commodity production.

Policy reform in American agriculture has been a difficult process (Orden, Paarlberg, and Roe, 1999), as any radical change requires, in words attributed to John Jay Chapman, "taking a bone away from a dog."¹ To the extent that reforms enacted since 1996 have reduced potential for automatic farm income support payments, they may have created incentives for new ways of transferring income to farm households and their related stakeholders.

As we move forward into the 21st century, a larger and larger proportion of federal support to the farm sector is coming from sources that anticipate or react to a potpourri of "emergency" or disaster situations. From 1991–1997, annual distributions related to emergencies and disasters averaged roughly \$1.4 billion, while from 1998–2002, the average was

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¹ The full quote, according to *Bartlett's Familiar Quotations*, is: "People who love soft words and hate iniquity forget this; that reform consists in taking a bone away from a dog."

Table 1. Federal Government Payments to Farmers, Absolute Amount and Percentage of Total Payments, 1991–2002

Year	PROGRAM TYPE					
	Traditional Commodity ^a		Conservation ^b		Disaster, Emergency, Ad Hoc ^c	
	Amount (\$ billion)	Percent (%)	Amount (\$ billion)	Percent (%)	Amount (\$ billion)	Percent (%)
1991	6.20	73.8	1.87	22.3	0.33	0.9
1992	6.00	64.0	1.91	20.4	1.46	15.6
1993	9.82	72.3	1.97	14.5	1.81	13.2
1994	4.20	51.7	1.99	24.3	1.96	24.0
1995	4.68	53.0	1.92	23.5	1.57	19.2
1996	5.32	64.0	1.85	22.2	1.15	13.9
1997	5.57	63.8	1.74	20.7	1.30	15.5
1998	7.97	59.8	1.55	11.6	3.81	28.6
1999	11.96	53.2	1.60	7.1	8.91	39.6
2000	12.61	52.9	1.66	7.0	9.57	40.1
2001	10.29	45.7	1.88	8.4	10.33	45.9
2002	6.80	54.5	1.95	15.4	3.95	31.1

^aIncludes Deficiency, Diversion, and Loan Deficiency payments, and/or Production Flexibility, Countercyclical, and Direct Program payments, as well as payments under periodic commodity programs such as the Peanut Quota Buyout. [Source: USDA/Farm Service Agency.]

^bIncludes payments under the Conservation Reserve Program and federal shares made as payments to producers under a variety of cost-share programs, such as EQIP, and federal payments for farmland protection. [Sources: USDA/Farm Service Agency; USDA/Natural Resources Conservation Service.]

^cIncludes Disaster program payments, payments made under emergency supplemental appropriations, Emergency Conservation Program payments, karnal bunt and other compensation payments, all Marketing Loss Assistance Program payments, and the federal share of crop insurance premiums paid, as proxied by the amount of the federal insurance premium subsidy provided by USDA's Risk Management Agency to insurance firms in the calendar year. [Sources: USDA/Farm Service Agency; USDA/Risk Management Agency.]

over \$7 billion per year. One must question whether farming has, indeed, become inherently more disaster-prone, or whether other forces are at work in creating this situation. Taking a closer look at what sorts of payments and programs comprise these transferred funds helps in thinking about potential reasons for the rise in ad hoc payments.

Composition of Federal Farm Program Payments

Table 1 reports federal agricultural emergency and disaster and ad hoc payments to the farm sector as a proportion of total transfers to farm operators, households, and landowners. Due to the very nature of emergency and disaster payments, one would expect their amounts to fluctuate from year to year. For example, the large increase seen between 1993 and 1994 can be attributed to payouts for losses suffered during 1993 floods—a natural disaster for farming and ranching. However, a trend seems to be emerging. Between 1991 and 1997, emergency, disaster, and ad hoc payments represented 14.6% of

total direct payments to producers, on average. By contrast, these payments represented an average of 37% of all federal government program payments to farmers in the years 1998–2002. Clearly, emergency, disaster, and ad hoc payments are playing a larger part in supplementing cash returns to production in recent years.

Figure 1 shows the composition of this growing proportion of emergency, disaster, and other ad hoc program payments to total payments. The smallest portion is contributed by Animal and Plant Health Inspection Service (APHIS) emergency program expenditures, but the rate of growth in APHIS emergency-related payments is particularly illustrative. The average annual amount paid to producers in the form of indemnifications for animals destroyed or compensation for destroyed plants falling under an “extraordinary” plant protection and quarantine emergency, went from \$10.4 million in 1991–1995, to \$131.7 million in 1996–2001. In the last three years for which data are available (1999–2001), the average annual expenditure was \$232.3 million, an enormous increase over former years.

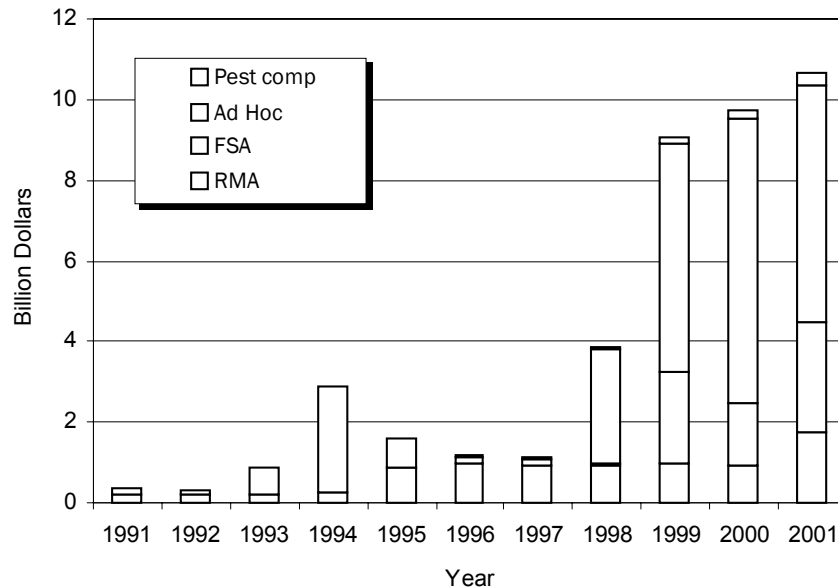


Figure 1. Composition of emergency, disaster, and ad hoc payments, 1991–2001

In analyzing this pattern, Economic Research Service economists (Lewandrowski and Roberts, 2003, and colleagues) have found some evidence that the prices of commodities for which producers receive compensation are negatively correlated with APHIS payments over time and/or space, at least for karnal bunt, citrus canker, and plum pox compensation payments—suggesting market forces may be influencing the designation of pest emergency situations.

The most variable year-to-year component of total emergency, disaster, and ad hoc payments are those payments originating with the Farm Service Agency (FSA) under existing legislative authority. These programs, including the Emergency Conservation, Crop Disaster, Emergency Feed, Livestock Emergency Assistance, Dairy Indemnity, Noninsured Assistance, Disaster Reserve, and general Disaster programs, are intentionally appropriated as backstops against unanticipated events. They operate only under predetermined conditions constituting an unexpected natural disaster or emergency which is weather, disease, or pest related, and which can be documented by those applying for assistance. The Noninsured Assistance program covers producers of crops who are not covered by insurance, while the other programs apply to insured and noninsured alike. Provision of disaster assistance to uninsured as well as insured producers persists despite periodic efforts by some in the Federal Legislative and

Executive branches to reduce disaster payments to crop producers by tying eligibility to the purchase of insurance, or in other ways increasing consistency among programs (Glauber and Collins, 2002).

Insurance premium subsidies, which, on average, over time, are basically equivalent to the federal share of indemnity payments made to producers, have steadily increased as the number of commodities covered by insurance options has expanded, and the portion of the premium covered by federal subsidies has risen. The number of crops covered doubled between 1990 and 2000. Large increases in the premium subsidy level occurred in 1994 and 2000. The consequential rising payments are represented by the “RMA” portions of the bars in figure 1.

But the big “bump” in emergency, disaster, and ad hoc payments is observed after passage of the 1996 FAIR Act. Between 1998 and 2003, the largest single source of supplemental emergency assistance has been provided to farmers for a variety of reasons through special acts or as special additions to normal appropriations. Especially prominent is the designation of “market losses” as an emergency or disaster. For example, the \$5.9 billion “Emergency and Market Loss Assistance” supplemental budget appropriation of 1998 included \$2.9 billion to “compensate farmers for the loss of markets for 1998 crops,” as well as \$200 million for the loss of dairy markets. So begins a recent history of compensation for specific commodities’

“loss of markets” through federal direct payments to the producers of those commodities.

Not surprisingly, the commodities covered by market loss assistance have routinely included those program crops for which deficiency payment mechanisms were eliminated by the 1996 FAIR Act. But an increasing number of other commodities are being covered as well. A special Agricultural Economic Assistance Act of 2001 authorized direct payments for loss of markets in not only the traditional program crops, but also soybeans and other oilseeds, tobacco, peanuts, cottonseed, wool and mohair, and specialty crops. Northeastern producers also got noticed in 2001, through authorization of \$20 million for cranberry market loss, and “not less than \$30 million” to purchase cranberry juice concentrate and frozen cranberry juice. In 2002, apple producers received their own \$75 million in appropriations for market losses.

The (\$3.1 billion) 2003 Agricultural Assistance Act provides several striking examples of the extent to which the designation of compensable losses to agricultural producers appears to be broadening. That Act made a \$10 million grant to Texas “to assist agricultural producers who suffered losses during crop year 2002 due to failure of Mexico to deliver water to the United States,” and authorized another several million dollars to reimburse agricultural producers in the vicinity of Malaga, New Mexico, for losses incurred due to the application of a particular herbicide by the federal government on or near their farms. Precedent thus suggests “disasters” now include circumstances caused by domestic or foreign governments’ actions, as well as market conditions and natural events.

Characterizing Recent Trends

Based on the information summarized in table 1 and figure 1, and the preceding discussion, recent trends in emergency/disaster assistance can be characterized by the following factors:

- Program multiplication;
- Increasingly broad definition of emergencies and disaster; and
- An ex post, ad hoc, and supplemental nature.

Currently, there are simply more disaster and emergency programs, even of a traditional nature, than ever before. The multiplication of eligible program recipients has been ongoing for federal crop insurance, but the expansion of potential pay-

ment recipients is a relatively new phenomenon for crop pest damage compensation programs, for example.

As Barnett (1999) notes, there is a long history of increasing levels of assistance and progressively more liberal eligibility criteria in U.S. agricultural disaster programs, attributable, in part, to rent-seeking behavior. But expansion beyond “natural” into market and political sources of disaster is unusual, if not unprecedented, prior to 1996.

The ex post, ad hoc, budget supplemental characteristics of recent assistance packages make it more difficult for producers to anticipate exactly what they might be eligible to receive in any given year. More rules of the game are subject to year-to-year variation than under traditional, pre-announced programs. On the other hand, the fact that an increasingly broad range of circumstances have been deemed worthy of compensatory assistance in recent years may also create expectations on the part of producers that any source of loss will be compensated in the future. So, while uncertainty is increased, there is a possibility the character of current trends also shifts risk toward the upside.

Potential Explanations for Growth in Emergency/Disaster Funding

The traditional explanation for crop insurance subsidization and disaster assistance to agricultural producers is market failure due to the inherent riskiness of farming and ranching, coupled with risk aversion by producers. This explanation seems grossly insufficient in accounting for the recent growth trend and its characteristics.

One potential explanation for why new definitions of “disaster” may have become necessary is embodied in the strictures imposed upon farm assistance by the FAIR Act. As federal programs coupled to crop production have been phased out by the FAIR Act, policy makers may be searching for alternative mechanisms to maintain income support payments to those farmers who previously received deficiency payments. To some extent, Production Flexibility payments do this, but they do not provide payments consistent with increasing yields, or costs of production. The possibility that Market Loss Assistance payments are making these historical program participants “whole” again is supported by the observation that market loss assistance was originally applied only to producers of those historical program crops (corn, sorghum, oats, barley, wheat, rice, and cotton) and to dairy

producers. Program crops continue to reap the greatest share of appropriations for market loss assistance.

Moreover, ad hoc programs, especially Market Loss Assistance, may be seen as a mechanism for broadening the distribution of farm income support beyond program crop producers in response to rent-seeking behavior. Livestock and specialty crop producers, for the first time in a long history of farm programs, now receive market-based relief from the federal government. In fact, the concept of market loss assistance is a rent seeker's dream. Groups seeking inclusion in the program have ample incentive and an increasing array of examples on which to base their arguments for inclusion.

Innes (2003) sums up one motivation for broadly defined disaster relief as "politically optimal obfuscation." Politically obscured policies are defined as inefficient transfers which promote lawmakers as well-meaning, while obscuring income redistribution to politically favored groups. It is not difficult to envision federal agricultural emergency, disaster, and ad hoc payments in this light. Helping out in times of emergency provides a halo effect, regardless of the efficiency and distributional consequences it engenders.

Implications for Agri-Environmental and Conservation Programs

If the present trend of increasing proportions of farm support being provided in the form of emergency, disaster, and ad hoc payments continues, one can imagine a number of direct and indirect effects on agri-environmental and conservation programs' support and effectiveness. The most immediate direct effect is simply that, in a constrained budget universe (which usually characterizes the Congress during times of large-scale federal budget deficit), transfers flowing from one source will offset or substitute for transfers flowing from another source. In other words, disaster/emergency/ad hoc program funds are substitutes for agri-environmental and conservation program funds.

If, as casual empiricism suggests, the revealed preference of federal lawmakers is to assure more and more broadly distributed agricultural producers receive income support, and if one assumes that "green" payments can provide income support, then the two program types are direct substitutes. If the motivation for increased emergency funding is politically optimal obfuscation, and it is more difficult to tailor the distribution of agri-environmental/

conservation program funds to politically important rent seekers, then they are imperfect substitutes. In either case, reference to the statistics reported in table 1 reveals conservation payments as a proportion of total federal payments to farmers have dropped as the proportion of disaster, emergency, and ad hoc payments has increased.

Perhaps more indicative of the substitution effect are the provisions of recent supplemental budget laws. The 2001 Supplemental Appropriations Act diverted \$45 million rescinded from the Agricultural Conservation Program to provide ad hoc funding for a variety of purposes. The 2003 Agricultural Assistance Act assured no net new cost by transferring \$3.1 billion out of the recently authorized Conservation Security Program to cover the supplemental (mostly market loss assistance) emergency funding.

Indirect Effects

Indirect effects of increasing emergency funding on agri-environmental goals and conservation programs are likely more substantial than any direct effects. These indirect effects arise from circumstantial evidence indicating emergency/disaster payments will affect agri-environmental quality in manners similar to that demonstrated for crop insurance, and from the potential influences of compensation for political "disasters" on the proclivity for and effectiveness of environmental regulation.

The conflicts between subsidized crop insurance and agri-environmental quality are well documented. Subsidized crop insurance distorts production practices on land in production by increasing the use of risk-increasing inputs and potentially decreasing the use of risk-reducing inputs (Horowitz and Lichtenberg, 1993; Quiggen, 1992). Overall, the use of all types of inputs is likely to rise because the revenue-enhancing character of subsidized crop insurance induces an increase in acreage (Chambers and Quiggen, 2001). The dominating extensive margin effects of subsidized crop insurance on crop mix and the location of production are especially critical to environmental quality related to nonpoint source pollution (Wu, 1999). Insurance availability at less than an actuarially based premium rate encourages production of crops which pose inherently higher risk to the environment, and further encourages production in areas where comparative advantage is lower than would be observed in the absence of subsidized insurance. These low comparative advantage sites are associated with high

environmental risk when the source of production risk comes from weather volatility, storm severity, a pest- or disease-conducive environment, or soil fragility.

Whether emergency, disaster, and ad hoc program payments are complements to or substitutes for crop insurance, increases in their use can be expected to mimic the adverse environmental quality aspects of subsidized insurance. They perform similar revenue-enhancement and risk-reducing functions, as does crop insurance. Even if the payments given to producers under emergency authority are more wealth-enhancing than risk-reducing, the emerging expectation of their receipt may, for risk-averse producers, increase risky production activity (as per findings of Chavas and Holt, 1990). Such effects are likely for Market Loss Assistance (MLA) payments which, because they are tied to market conditions, have an insurance effect as well as a wealth effect (Adams et al., 2001). While their effect on net production is likely to be minimal, the environmental implications of where and how production takes place in this new MLA payment situation have yet to be investigated.

There is potentially a self-perpetuating and inherently accelerating nature to the bundle of emergency, disaster, and ad hoc programs emerging in the late 1990s, at least in the short run. If expectations of MLA payments encourage more risky production activity, more natural losses, as well as market-based losses, will be perpetuated; these, in turn, may lead to greater crop insurance payouts. Basically, there could be fewer and fewer risk-based moderating influences on even risk-averse producers' choices, making "disasters" of all types more likely, and politically motivated rescue actions through ad hoc measures ever more necessary. From an agri-environmental standpoint, this is particularly critical in light of the observation that conservation program funding may decrease as a result of its acting as a substitute for emergency/disaster and ad hoc funding. There may well be a situation in which a growing need emerges to fund programs supporting environmentally friendly farming, while the availability of funds for such purposes diminishes.

On the other hand, even as environmental risk increases, broadening the definitions of "emergency" and "disaster" to include the adverse outcomes of government actions may also make environmental regulation more likely (or at least more palatable). Consider, as an example, the Klamath River case. In 2001, regulatory requirements of the Endangered

Species Act (ESA) led to the diversion of Klamath River Basin water from agricultural uses to wildlife protection. Producers dependent on irrigation lost revenue as a result. Under the 2001 Supplemental Appropriations Act (Section 2104), however, the government's actions in carrying out federal ESA law were deemed an emergency requiring compensation to farmers in the region. Thus, \$20 million in financial assistance was authorized in payments to producers in the Klamath Basin. Another way of looking at this example is that a "taking" was given back.

If negative repercussions for agricultural producers of environmental regulation are eliminated via emergency/disaster payments, the probability of enacting new environmental legislation, or enforcing existing laws more forcefully, would seem greater than in the absence of compensation for economic "disasters" arising from government actions. Alternatively, if compensating for "takings" is perceived to increase the cost of environmental regulation, budgetary pressure could lessen support for environmental regulation. In either case, once again, any loss of conservation funding through a "substitution" effect with emergency/disaster funding will have an impact because agricultural conservation programs can substitute for environmental legislation, or complement it (as, for instance, dedication of Environmental Quality Incentive Program funds to livestock-producing recipients complements EPA's enacting new Clean Water Act regulations that affect confined animal operations).

Conclusions and Future Policy Analytical Needs

Clearly, ad hoc emergency/disaster assistance is meeting some need(s) that other programs do not satisfy. But growth in the programs providing this assistance, through addition of eligible producers and increasingly liberal interpretation of what constitutes an emergency/disaster, is ultimately unsustainable over the long run in a budget-constrained world. Agricultural and resource economists have roles to play in better understanding the political economy in which the trends described herein arise, and in designing replacement policy mechanisms.

Basic research to determine the political preferences revealed through the resultant distribution of ad hoc emergency/disaster funds would help identify what has been motivating the increase in use of this producer payment mechanism, and define the distributional criteria that would have to

be addressed in some way by any new payment policy scheme. Then, the agri-environmental as well as agricultural economic impacts of alternative means of meeting revealed preferences could be assessed and compared.

Various policy responses to the trends discussed above are getting discussion from the agricultural economics community. Some pundits (e.g., Ray, De la Torre Ugarte, and Tiller, 2003) propose a return to supply control as the means to escape the political dilemmas posed by the combination of FAIR Act constraints and budget deficit limits on spending. Innes (2003), who models, in a political economy framework, “the government’s ex post urge to bail out farmers in times of financial distress” as a constraint on the design of efficient ex ante government farm policy, advances a different approach. Asking how the government can design an ex ante farmer insurance program that eliminates any political incentive for ex post relief, and raises economic welfare, Innes suggests a customized revenue insurance scheme backed up by output subsidies which counter the underproduction incentives created by government revenue assurance elsewhere. While addressing distributional issues nicely, this scheme has untested, potentially strong implications for agri-environmental quality that warrant further study. Green payment programs offer yet another ex ante strategy which could be designed to meet environmental objectives as well as political objectives. But, as Claassen et al. (2001) point out, the tradeoffs between farm income and environmental goals could be very hard to balance in contemplating such a design.

All in all, the combination of long-standing farm support patterns, newly satisfied groups of agricultural rent seekers, continued agri-environmental problems, and complex political preferences in a risky environment, poses great challenges to policy makers and those whose analysis informs them. There is ample room for clever thinking on the part of our profession regarding policy adjustment possibilities and the economic and environmental implications of each alternative.

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