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Report to the Ranking Minority Member, Committee on Agriculture, House of Representatives

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AGRICULTURE IN TRANSITION

Farmers' Use of Risk Management Strategies

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Resources, Community, and
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The Honorable Charles W. Stenholm
Ranking Minority Member
Committee on Agriculture
House of Representatives

Dear Mr. Stenholm:

Recent changes in both federal agricultural programs and international agricultural markets have increased the potential economic risks faced by the nation's farmers. The Federal Agriculture Improvement and Reform Act of 1996, commonly known as the 1996 farm bill, encouraged farmers to make production decisions in response to market forces. It also helped farmers who were eligible for payments through federal commodity programs to reduce their reliance on federal support by providing "transition" payments, which are gradually declining over a 7-year period. At the same time, U.S. farmers have faced increased global competition, new technology, and volatile weather patterns. In light of these changes, the 1996 farm bill required the U.S. Department of Agriculture (USDA), in consultation with the Commodity Futures Trading Commission, to educate farmers about the tools available for managing risks. These risk management tools primarily include crop insurance to provide compensation if crop yields are substantially lower than expected and forward contracts to enable farmers to lock in a price for their crop or livestock production prior to harvest or slaughter. Farmers can also engage in hedging by buying or selling futures or options contracts on a commodity exchange, such as the Chicago Board of Trade, to reduce the risk of receiving lower prices for crops or livestock. (App. I describes each of these risk management tools in more detail.)

Concerned about the level of knowledge farmers have about available federal and private-sector tools for managing risk and the adequacy of USDA's initiatives to prepare farmers to use these tools, you requested that we examine USDA's efforts to educate farmers about risk management. Specifically, you asked us to (1) provide information on the extent of farmers' use of risk management tools and (2) identify educational programs and projects USDA has directed or initiated to prepare farmers for managing risks and to determine the groups or individuals who have participated in or been served by these programs. To address the first objective, we obtained data from USDA's Agricultural Resource

Management Study for 1996, the most current year in which USDA surveyed farmers about their use of risk management tools.[1]

Results in Brief

In 1996, about 42 percent of the nation's 2 million farmers used one or more risk management tools to limit potential income losses resulting from falling market prices or production failures, according to USDA estimates. The use of these tools varied by farmers' level of sales and primary commodity (crop or livestock). In particular, the use of crop insurance and forward contracts to reduce risk was more prevalent among farmers (1) with at least $100,000 in annual sales of agricultural products than among those with annual sales under $100,000 and (2) whose primary crops were corn, wheat, and cotton than among those who primarily grew other crops. Furthermore, of those farmers who received USDA transition payments--a key population affected by the 1996 farm bill's shift away from federal commodity programs--and had sales of at least $100,000, at least 70 percent purchased crop insurance, at least 66 percent used forward contracts, and at least 34 percent engaged in hedging in 1996.

In fiscal year 1998, USDA obligated $5 million for four educational initiatives to prepare farmers for managing risk. First, to develop government and private sector partnerships to foster risk management education, USDA sponsored a series of risk management conferences targeted at bankers, agricultural educators, crop insurance agents, commodity brokers, and grain elevator operators--people in a position to influence and/or educate farmers. However, these initial conferences reached only a relatively small percentage of these target groups' members; for example, only about 2 percent of all U.S. crop insurance agents attended. USDA intends to use partnerships with private sector organizations to further expand its educational outreach activities. Second, USDA awarded 17 risk management education and research grants that are primarily designed to develop risk management education curriculums for training such diverse groups as farmers with less than $20,000 in annual income, farmers who grow specific crops in individual states or regions, crop insurance agents, and grain elevator operators across the country. The expected completion dates for these projects range from the summer of 1999 through the fall of 2001. Third, USDA provided funding to supplement land grant universities' risk management

[1]While USDA's National Agricultural Statistics Service conducts this survey each year, it did not include risk management questions in its 1997 survey.

education efforts. Finally, USDA contracted with the University of Minnesota to develop an Internet website library that, as of January 1999, contained over 700 risk management publications and other education materials for farmers.

Background

Farming has always been a risky endeavor, and farmers have always had to manage risk as a part of doing business. Over the years, the federal government has played an active role in several ways to help mitigate the effects of production losses and low prices on farm income. For example, USDA's Risk Management Agency (RMA) administers the federal crop insurance program to protect farmers against major production losses. Under this program, RMA subsidizes the federal multiple-peril crop insurance program, which allows insured farmers to receive an indemnity payment if production falls below a certain level. In addition, to help protect farmers against the risk of low crop prices, USDA's Farm Service Agency administered price- and income-support programs for farmers who grew certain crops--corn, wheat, grain sorghum, barley, oats, cotton, and rice.

The 1996 farm bill changed the government's role. It replaced the income-support programs with "production flexibility contracts" that provide for fixed but declining annual payments to participating farmers from 1996 through 2002.[2] These government payments--known as transition payments--are not tied to market prices, and participating farmers are not restricted with regard to the type or amount of crops that they plant, as they were in the earlier programs. Furthermore, unlike the deficiency payments of the last 6 decades, the transition payments do not rise in years when crop prices are low, nor do they fall in years when prices are high. As shown in table 1, the 1996 farm bill specified that transition payments would total about $36 billion over the 7-year period, declining from about $5.6 billion in 1996 to about $4 billion in 2002.

[2]Only land enrolled in the federal commodity programs at the time the 1996 farm bill was enacted is eligible to receive transition payments.

Table 1: Transition Payments by Commodity, Fiscal Years 1996-2002

Dollars in millions

Commodity	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	Total
Corn	$2,574.5	$2,488.9	$2,680.8	$2,589.7	$2,371.1	$1,908.9	$1,852.5	**$16,466.4**
Wheat	1,462.7	1,414.1	1,523.1	1,471.3	1,347.1	1,084.5	1,052.5	**9,355.3**
Upland cotton[a]	647.8	626.3	674.5	651.6	596.6	480.3	466.1	**4,143.2**
Rice	471.8	456.1	491.3	474.6	434.5	349.8	339.5	**3,017.6**
Grain sorghum	284.6	275.2	296.4	286.3	262.1	211.0	204.8	**1,820.4**
Barley	120.3	116.3	125.3	121.0	110.8	89.2	86.6	**769.5**
Oats	8.4	8.1	8.7	8.4	7.7	6.2	6.0	**53.5**
Total	**$5,570.0**	**$5,385.0**	**$5,800.0**	**$5,603.0[b]**	**$5,130.0**	**$4,130.0**	**$4,008.0**	**$35,626.0**

Note: Figures may not add to total due to rounding.

[a]Upland cotton constituted 98 percent of all U.S. cotton production in 1995.

[b]Excludes about $3 billion in emergency agricultural assistance enacted in Oct. 1998.

Source: USDA.

By giving farmers increased flexibility in deciding which crops to plant, the 1996 farm bill allows them to choose the particular crop or combination of crops that they believe offers the best chance to maximize their profits and offset the decline in income resulting from lower government payments. However, the increased flexibility in planting decisions brings other risks. For example, small increases in expected profits may lead many farmers to decide to increase the acreage devoted to a particular crop. This, in turn, could result in the increased production of the crop nationwide and ultimately in lower prices as a result of the greater supply.

Section 192 of the 1996 farm bill required that USDA, in consultation with the Commodity Futures Trading Commission (CFTC), educate farmers in managing the financial risks inherent in producing and marketing agricultural commodities. The act specified that, as a part of such education activities, USDA may develop and implement programs to assist and train farmers in using (1) forward contracts, which enable farmers to lock in a price for their crop or livestock production prior to harvest or slaughter, (2) crop insurance, which ensures compensation if crop yields are substantially lower than expected, and (3) hedging--buying or selling futures or options contracts on a commodity exchange, such as the Chicago Board of Trade--which reduces the risk of receiving lower prices for crops or livestock. The act authorized USDA to use its existing

research and extension authorities and resources to implement this provision.

In March 1997, the Secretary of Agriculture organized a steering committee to direct the government's education activities for managing agricultural risk. The steering committee is chaired by RMA's administrator and includes a CFTC commissioner; the administrator of USDA's Cooperative State Research, Education, and Extension Service (CSREES); and the director of USDA's National Office of Outreach. These agencies have different responsibilities. RMA primarily administers the federal crop insurance program; the 1996 farm bill expanded its authority to include a broader risk management perspective. CFTC, which regulates commodity futures and options trading in the United States, also develops and maintains research and informational programs concerning futures and options trading for farmers, commodity market users, and the general public. CSREES develops and conducts agricultural research, higher education, and extension programs to provide education and technical assistance to farmers and the general public. USDA's National Office of Outreach is responsible for ensuring that information, technical assistance, and training are available to all USDA customers, with an emphasis on underserved populations.

Farmers' Use of Risk Management Tools Varied by Size of Farming Operation and Commodity

USDA's 1996 Agricultural Resource Management Study (Phase 3), based on a statistical sample of farmers, found that about 42 percent of the nation's 2 million farmers used at least one of the risk management tools--forward contracts, crop insurance, or hedging--to manage their income risk. In 1996, a substantially greater percentage of farmers with agricultural sales of at least $100,000 (large-scale farmers) used each risk management tool than did farmers whose agricultural sales were less than $100,000 (small-scale farmers).[3] Similarly, a greater percentage of farmers whose primary crops were corn, wheat, or cotton purchased crop insurance and used forward contracts than did farmers who grew other field crops. (App. II provides detailed data on farmers' use of risk management tools by sales level, commodity, geographic region, and the receipt of USDA transition payments.)

[3]In analyzing farmers' use of risk management tools on the basis of farm sales, we included farmers with sales between $100,000 and $250,000 in the large-scale farmer category because these farmers behaved like other large-scale farmers in using risk management tools. We also established a separate category for farms operated by nonfamily corporations, cooperatives, or hired managers because specific level-of-sales data were not readily available for these farms.

A Greater Percentage of Large-Scale Farmers Used Risk Management Tools Than Did Small-Scale Farmers

Table 2 shows that, among all U.S. farmers, a substantially greater percentage of large-scale farmers used each risk management tool than did small-scale farmers in 1996. Among large-scale farmers, at least 52 percent purchased crop insurance, at least 55 percent used forward contracts, and at least 32 percent engaged in hedging.[4] In contrast, no more than 16 percent of small-scale farmers purchased crop insurance, no more than 29 percent used forward contracts, and no more than 22 percent engaged in hedging. Available data were insufficient to determine whether large-scale farmers hedged with futures or options contracts to a greater extent than small-scale farmers in 1996.

Table 2: Percentage of Farmers Who Used Each Risk Management Tool, by Farm Sales Level, 1996

			Range		
Farm sales level	**Percent of all farmers[a]**	**Percent of agricultural sales[a]**	**Percent using crop insurance**	**Percent using forward contracts**	**Percent using hedging**
Large-scale farmers	**17.3**	**76.3**	**52-64**	**55-67**	**32-44**
$500,000 and over	2.9	37.2	41-67	52-74	34-54
$250,000-$499,999	4.8	19.5	56-76	49-71	32-52
$100,000-$249,999	9.6	19.6	47-63	55-67	23-45
Small-scale farmers	**80.3**	**15.5**	**10-16**	**21-29**	**16-22**
Less than $100,000	26.1	9.5	19-29	33-45	21-33
Limited resources[b]	14.5	1.0	[c]	8-26	6-20
Retirement[d]	13.0	1.2	2-10	13-33	6-32
Residential lifestyle[e]	26.7	3.8	5-13	13-23	8-18
Corporate farmers[f]	**2.4**	**8.2**	**0-74**	**4-56**	**3-39**
All farmers	**100.0**	**100.0**	**19-24**	**28-35**	**19-25**

Note: Exact percentages are not known because only a sample of farmers was surveyed. As a result, we provide a range based on 95-percent confidence intervals for the use of risk management tools. For example, we estimate that between 41 percent and 67 percent of farmers with sales of at least $500,000 purchased crop insurance. See table II.2 in app. II for more detailed information about farmers' use of each risk management tool.

[a]See table II.1 in app. II for confidence intervals for each category's number of farmers and sales.

[4]An exact percentage of farmers who used each risk management tool is not known because only a sample of farmers was surveyed. To provide a conservative estimate of usage, we have used the lower bound of the range of usage based on 95-percent confidence intervals.

[b]An operator who has household income under $20,000, farm assets under $150,000, and gross farm sales under $100,000.

[c]A reliable estimate was unavailable from USDA's study data.

[d]The operator's primary occupation is retired.

[e]The operator's primary occupation is "other"--neither farming nor retired.

[f]Operated by nonfamily corporations, cooperatives, or hired managers.

Source: USDA's Economic Research Service.

Table 3 shows that at least 70 percent of those large-scale farmers who received transition payments purchased crop insurance, at least 66 percent used forward contracts, and at least 34 percent engaged in hedging in 1996. However, the minimum extent of usage was even greater among farmers who had more than $500,000 in sales and received transition payments--at least 73 percent purchased crop insurance, at least 78 percent used forward contracts, and at least 50 percent engaged in hedging in 1996.

Table 3: Percentage of Farmers Who Used Each Risk Management Tool Among Those Who Received Transition Payments, by Farm Sales Level, 1996

			Range		
Farm sales level	**Percent of all farmers[a]**	**Percent of agricultural sales[a]**	**Percent using crop insurance**	**Percent using forward contracts**	**Percent using hedging**
Large-scale farmers	**11.1**	**44.3**	**70-84**	**66-78**	**34-50**
$500,000 and over	1.6	17.9	73-87	78-86	50-66
$250,000-$499,999	3.3	13.1	80-92	57-83	33-57
$100,000-$249,999	6.2	13.3	61-83	64-78	23-51
Small-scale farmers	**12.8**	**5.8**	**42-68**	**37-55**	**18-40**
Less than $100,000	6.7	3.8	49-73	36-56	18-42
Limited resources[b]	1.2	0.4	c	d	d
Retirement[e]	2.1	0.4	d	c	c
Residential lifestyle[f]	2.8	1.2	32-72	34-60	6-40
Corporate farmers[g]	**0.5**	**2.2**	**85-97**	**66-86**	**28-68**

Notes: Exact percentages are not known because only a sample of farmers was surveyed. As a result, we provide a range based on 95-percent confidence intervals for the use of risk management tools. For example, we estimate that crop insurance was purchased by between 73 percent and 87 percent of farmers with sales of at least $500,000 who received transition payments. See table II.4 in app. II for more detailed information about farmers' use of each risk management tool.

[a]Percentages do not add up to 100 percent because farmers who receive transition payments are a subset of all U.S. farmers. See table II.3 in app. II for the confidence intervals for each category's number of farmers and sales.

[b]The operator has household income under $20,000, farm assets under $150,000, and gross farm sales under $100,000.

[c]USDA is required to protect the privacy of respondents by withholding data if it receives too few responses in a particular category.

[d]A reliable estimate was unavailable from USDA's study data.

[e]The operator's primary occupation is retired.

[f]The operator's primary occupation is "other"--neither farming nor retired.

[g]Defined as operated by nonfamily corporations, cooperatives, or hired managers.

Source: USDA's Economic Research Service.

A Larger Proportion of Farmers Who Primarily Grew Major Field Crops Used Crop Insurance and Forward Contracts Than Did Other Farmers

As table 4 shows, among all U.S. farmers, a greater percentage of those whose primary crop was corn, wheat, or cotton purchased crop insurance and engaged in forward contracting than did farmers who grew other field crops or raised livestock in 1996. Among farmers who primarily grew corn, wheat, and cotton, at least 54 percent purchased crop insurance and at least 50 percent used forward contracts.[5] In contrast, among farmers who primarily raised other field crops, 43 percent at most purchased crop insurance and 45 percent at most used forward contracts. In addition, hedging was used by at least 35 percent of cotton farmers, which was a higher percentage than for farmers who grew other field crops in 1996. However, available data were insufficient to determine whether corn and wheat farmers engaged in hedging with futures or options contracts to a greater extent than did farmers who primarily raised other crops or livestock.

[5]An exact percentage of farmers who used each risk management tool is not known because only a sample of farmers was surveyed. To provide a conservative estimate of usage, we used the lower bound of the range of usage based on 95-percent confidence intervals.

Table 4: Percentage of Farmers Who Used Each Risk Management Tool, by Principal Commodity, 1996

			Range		
Commodity[a]	Percent of all farmers[b]	Percent of agricultural sales[b]	Percent using crop insurance	Percent using forward contracts	Percent using hedging
Corn	5.7	11.2	54-82	53-77	29-55
Wheat	2.0	3.1	76-98	50-64	14-32
Cotton	0.8	3.3	73-97	63-89	35-57
Other field crops[c]	27.8	25.9	29-43	29-45	18-30
Beef and hogs	38.6	14.6	4-6	20-30	15-25
Dairy	4.6	14.5	26-44	15-35	10-26
Poultry	1.3	9.0	3-7	11-43	7-33

Note: Exact percentages are not known because only a sample of farmers was surveyed. As a result, we provide a range based on 95-percent confidence intervals for the use of risk management tools. For example, we estimate that between 54 percent and 82 percent of the farmers who primarily grew corn purchased crop insurance.

[a]Excludes data on farmers who primarily grew vegetables, fruit, nuts, greenhouse, and nursery crops or who raised other livestock. See table II.6 in app. II for more detailed information about these farmers' use of each risk management tool.

[b]Percentages do not add to 100 percent because certain specialty commodities are excluded. See table II.5 in app. II for confidence intervals for each commodity's number of farmers and sales.

[c]Includes soybeans, rice, grain sorghum, barley, and oats.

Source: USDA's Economic Research Service.

Table 5 shows that, among corn farmers who received transition payments, at least 54 percent purchased crop insurance, at least 61 percent used forward contracts, and at least 31 percent engaged in hedging in 1996. Among wheat farmers who received transition payments, at least 81 percent purchased crop insurance, at least 46 percent used forward contracts, and at least 15 percent engaged in hedging. Among cotton farmers who received transition payments, at least 88 percent purchased crop insurance, at least 59 percent used forward contracts, and at least 25 percent engaged in hedging.

Table 5: Percentage of Farmers Who Used Each Risk Management Tool Among Those Who Received Transition Payments, by Principal Commodity, 1996

			Range		
Commodity[a]	Percent of all farmers[b]	Percent of agricultural sales[b]	Percent using crop insurance	Percent using forward contracts	Percent using hedging
Corn	4.4	10.0	54-88	61-85	31-63
Wheat	1.7	2.8	81-101[c]	46-60	15-29
Cotton	0.6	2.8	88-100	59-91	25-61
Other field crops[d]	9.9	20.4	65-85	49-77	21-43
Beef and hogs	4.3	6.6	16-54	29-75	23-73
Dairy	1.9	5.2	58-78	15-51	14-46
Poultry	0.1	0.7	17-77	11-59	2-32

Note: Exact percentages are not known because only a sample of farmers was surveyed. As a result, we provide a range based on 95-percent confidence intervals for the use of risk management tools. For example, we estimate that between 54 percent and 88 percent of the corn farmers who received transition payments purchased crop insurance.

[a]Excludes data on farmers who primarily grew vegetables, fruit, nuts, nursery, and greenhouse crops or who raised other livestock. See table II.8 in app. II for more detailed information about these farmers' use of each risk management tool.

[b]Percentages do not add up to 100 percent because farmers who receive transition payments are a subset of all U.S. farmers. See table II.7 in app. II for confidence intervals for each commodity's number of farmers and sales.

[c]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[d]Includes soybeans, rice, grain sorghum, barley, and oats.

Source: USDA's Economic Research Service.

USDA Focused Risk Management Education Efforts on Developing Public and Private Partnerships

To prepare farmers for managing their risks, USDA has focused primarily on developing regional or state partnerships of government, university, and private organizations to foster a risk management educational program. The university partners developed and implemented a series of regional and local risk management conferences targeted initially at groups that influence farmers--bankers, crop insurance agents, grain elevator operators, and agricultural educators. USDA expects that these individuals will provide farmers with specific information for using risk management tools as the program continues. During fiscal year 1998, USDA also awarded 17 grants for risk management education projects, provided funding to land grant universities to promote additional risk management

education efforts, and funded the development of an electronic risk management education library.

In fiscal year 1998, USDA obligated $5 million of RMA's $10 million for crop insurance research to RMA's risk management education initiatives--amounting to about $2.50 per U.S. farmer. These funds were the predominant source of risk management education funding within USDA. In comparison, a CSREES official told us that CSREES typically obligates only about $100,000 per year, primarily for specific risk management education projects. The official noted that land grant universities may also use a portion of their general CSREES education funding to support risk management education projects; however, the amount that universities spent in fiscal year 1998 is not known. For fiscal year 1999, USDA has allocated $1 million of RMA's $3.5 million for crop insurance research to risk management education.

USDA's Conferences and Regional Partnerships

In response to the 1996 farm bill's requirement that it educate farmers about managing their production and marketing risks, USDA used a September 1997 national risk management education summit to initiate a series of 20 national and regional risk management education conferences. USDA's conferences focused on developing partnerships with "third-party influencers" in an effort to leverage the available government funds to train those who are in a position to educate farmers on risk management tools. According to USDA's director of risk management education, the training would enable third-party influencers to demonstrate to farmers how the various tools fit together in an overall risk management and marketing plan. These individuals interact frequently with farmers and are in a position to influence the risk management decisions farmers make. For example, land grant college or extension service educators provide various training and advisory services to farmers on both the production and business aspects of farming. Crop insurance agents meet with farmers several times during the year as the farmers decide on insurance coverage levels and provide the agents with information on acres planted and final crop production levels. The bank or farm credit services loan officers meet with farmers to discuss business plans and arrange for operating loans. Commodity brokers interact with farmers who choose to engage in hedging with futures or options. Farmers interact with grain elevator operators when they sell their crops on either a cash or forward contract basis. According to RMA, the conferences helped participants to gain information and knowledge about areas outside their own expertise. For example,

commodity brokers learned more about crop insurance, and crop insurance agents learned more about the futures market.

As of December 1998, USDA's major conferences had reached a relatively small percentage of the target groups' members. Table 6 shows that 335 (2 percent) of about 15,000 crop insurance agents in the United States had attended a USDA-sponsored risk management conference. Similarly, only 251 bankers and 96 grain elevator operators had attended the conferences, although there are about 3,200 agricultural banks and about 10,000 grain elevators in the United States. About 20 percent of the conference attendees were USDA or other government agency employees, rather than members of the groups influencing farmers.

Table 6: USDA Risk Management Education Conference Attendance, September 1997 through December 1998

Target group	Number attending	Percent of attendees
Farmers	528	19.6
Bankers	251	9.3
Crop insurance agents	335	12.5
Grain elevator operators	96	3.6
Commodity brokers	119	4.4
Agricultural extension educators	410	15.3
USDA and other government employees	542	20.2
Other	408	15.2
Total	**2,689**	**100.0[a]**

[a]Figures do not add to total because of rounding.

Source: USDA.

Conference speakers generally presented broad, overview information about a number of farm management areas without providing detailed information addressing specific problems in any single area. According to RMA officials, providing overview information was appropriate because it enabled participants to appreciate how their specialty area interacts with other areas for the benefit of farmers. USDA also expanded the scope of the conferences to discuss more than the two risk areas that the 1996 farm bill had identified--producing and marketing agricultural commodities. Sections of the conferences also addressed tools for reducing financial risks, legal risks, and human resource risks,[6] in addition to tools for reducing production and marketing risks. RMA officials noted that financial, legal, and human resource risks are also significant concerns for farmers.

RMA officials consider the risk management conferences to be a first step in developing regional and state partnerships with USDA, universities, and private organizations to provide risk management education to farmers. USDA has designated five land grant university educators as regional coordinators of its risk management education program. (App. III identifies, for each region, the coordinator's university affiliation, the associated RMA regional service offices, and the states covered.) The regional coordinators are responsible for (1) working with private sector partners, including bankers, crop insurance company representatives, and farmer organizations, to develop regional and local conferences, meetings and other training efforts and (2) serving as a focal point for providing information about the risk management education opportunities in each region. State and local educational activities, training sessions, and events sponsored by these partnerships have begun to reach additional farmers and individuals who influence farmers' decisions.

In fiscal year 1998, USDA spent $1.5 million to support the risk management conferences and initiate regional partnerships, including about $300,000 for the conferences, $250,000 for publications and materials, $133,000 for the regional coordinating offices, and $45,000 for an evaluation project. USDA also spent about $350,000 for special outreach projects designed to enhance the risk management skills of small and

[6]Farmers' financial risks include the risk that affordable credit will not be available or that cash flow will be inadequate. Farmers' legal risks include liability arising from their farming activities, the need to choose an appropriate business structure, and the need for estate planning. Finally, farmers' human resource risks include various challenges arising from hiring, training, compensating, and supervising workers.

minority producers in areas described as underserved by traditional risk management tools and $50,000 to sponsor a Future Farmers of America essay contest on risk management.

Risk Management Education Grants

In addition to sponsoring conferences and developing regional partnerships, USDA awarded a series of risk management education and research grants totaling $3 million. In February 1998, USDA issued a request for proposals in the Federal Register. Subsequently, a peer review team, working under the risk management education steering committee, evaluated 107 proposals requesting over $19 million. In June 1998, USDA awarded 17 risk management education grants, ranging from $19,172 to $250,000, and averaging about $178,000. USDA awarded 12 grants to land grant colleges and universities, 3 to other educational entities, 1 to a crop insurance industry organization, and 1 to a grain elevator industry organization. Most of the grants included additional public and private sector partners who agreed to participate in the projects with the primary grantees. With expected project completion dates ranging from the summer of 1999 through the fall of 2001, the projects are currently ongoing, and thus, in many cases, the training phase has not begun.

The grant projects target diverse audiences--ranging from farmers with limited resources,[7] farmers growing specific commodities in individual states or regions, and dairy farmers to crop insurance agents and grain elevator operators across the country--and were for diverse purposes. For example, the grantees focused on different geographic coverages: seven planned national coverage, four targeted regional audiences, and six directed their efforts in a single state. Similarly, some of the grantees focused on particular groups: four targeted limited resource or minority farmers, one focused on the risk management needs of citrus farmers, and one focused on dairy farmers. Typically, the projects focused on training, including a curriculum development phase, a "train the trainer" phase, and a series of seminars or workshops. However, two grants provided for research about farmers' use of and need for risk management tools. (App. IV provides information about the grantees, grant amount, and objectives for each of the 17 grants.)

[7]Limited resource farmers are those with household income under $20,000, farm assets under $150,000, and gross farm sales under $100,000.

Funding Risk Management Education at Land Grant Universities

As a third element of its risk management education initiative in fiscal year 1998, USDA provided $362,000, divided among 96 land grant colleges and universities, to promote and augment their risk management education programs. According to USDA, these funds enabled the cooperative extension system to reach farmers during the winter of 1998-99 with a substantial risk management curriculum, including (1) regional video teleconferences, (2) small producer workshops at the local level, and (3) fact sheets, teaching guides, and classroom visual aids adapted to agricultural conditions in a particular state.

Electronic Library

In the fourth part of its response to the legislative mandate, USDA entered into a $200,000 contract with the University of Minnesota to develop an Internet website that provides an electronic library of risk management education materials. As of January 1999, the website contained over 700 risk management publications, presentations, decision aids, and other materials either resident on the site or linked to it. This information is useful to farmers as well as to the groups that influence them. On average, about 60 individuals per day made use of the website in January 1999.

Agency Comments

We provided the U.S. Department of Agriculture with a draft of this report for review and comment. We met with Agriculture officials, including the Administrator of the Risk Management Agency, who stated that the agency agreed with the report and that the report was balanced and accurate. However, the Department believed that the report should (1) provide more detailed information on how the $5 million for risk management education initiatives was spent, (2) discuss the Risk Management Agency's regional and local risk management conferences in the context of its broader effort to establish public and private partnerships, and (3) discuss the Risk Management Agency's efforts to provide risk management education through land grant universities as a separate initiative. We revised the report to more fully identify the various education initiatives that the Risk Management Agency has funded, explain that one of the purposes of the agency's conferences was to foster public-private partnerships, and identify the support for the outreach efforts of land grant universities as a separate initiative. In addition, the Department provided comments to improve the report's technical accuracy, which we incorporated as appropriate.

Scope and Methodology

To determine the extent to which various groups of farmers have used risk management tools, we obtained national agricultural survey data from USDA's Agricultural Resource Management Study (Phase 3) for 1996--formerly called the Farm Costs and Returns Survey. The 1996 survey, based on a statistical sample, provides the most current, comprehensive data on farmers' use of risk management tools. About 7,300 farmers responded to the risk management questions. The 1997 study did not include specific questions about risk management strategies because it was designed to accommodate questions required by the 1997 agricultural census. USDA's Economic Research Service, which recently published an analysis of the 1996 survey data,[8] provided the statistical data for this report.

To identify education programs and projects USDA has directed or initiated to prepare farmers for managing risk, we interviewed and obtained documentation from USDA headquarters and regional officials, as well as from regional risk management coordinators. To determine the groups or individuals who have participated in or been served by these programs, we interviewed and obtained documentation from cognizant USDA officials, academicians, and other private sector organizations involved in planning and carrying out risk management seminars and other educational and research efforts. We also interviewed representatives of farmer organizations about RMA's approach.

[8] Managing Risk in Farming: Concepts, Research, and Analysis, Economic Research Service, Agricultural Economic Report Number 774, March 1999.

We performed our work from June 1998 through February 1999 in accordance with generally accepted government auditing standards. We did not, however, independently verify data obtained from USDA officials and documents. USDA's Agricultural Resource Management Study data are the only comprehensive data available that examine farmers' use of risk management tools.

We are sending copies of this report to Representative Larry Combest, Chairman, House Committee on Agriculture, and appropriate congressional committees. We are also sending copies to the Honorable Dan Glickman, the Secretary of Agriculture; the Honorable Jacob Lew, Director, Office of Management and Budget; and other interested parties. We will also make copies available upon request.

Please contact me at (202) 512-5138 if you or your staff have any questions about this report. Major contributors to this report are Richard Cheston, Mary Kenney, Renee McGhee-Lenart, and Robert R. Seely, Jr.

Sincerely yours,

Robert E. Robertson
Associate Director, Food
and Agriculture Issues

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Abbreviations

CFTC	Commodity Futures Trading Commission
CSREES	Cooperative State Research, Education, and Extension Service
RMA	Risk Management Agency
USDA	U.S. Department of Agriculture

Descriptions of Risk Management Tools

The following are brief explanations of the three risk management tools discussed in our report:

- Crop insurance: Protects participating farmers against the financial losses caused by events such as droughts, floods, hurricanes, and other natural disasters. Federal crop insurance offers farmers two primary types of insurance coverage. The first--called catastrophic insurance--provides protection against the extreme losses of crops for the payment of a $60 processing fee, whereas the second--called buyup insurance--provides protection against the more typical smaller losses of crops in exchange for a premium paid by the farmer.
- Forward contract: A cash market transaction in which two parties agree to buy or sell a commodity or asset under agreed-upon conditions. For example, a farmer or rancher agrees to sell, and a local grain elevator or packing plant agrees to buy, the commodity or livestock at a specific future time for an agreed-upon price or on the basis of an agreed on pricing mechanism. With this agreement, a farmer locks in a final price for a commodity prior to harvest or slaughter.
- Hedging: The purchase or sale of a futures contract or an option on an organized exchange, such as the Chicago Board of Trade. A hedge is a temporary substitute for an intended subsequent transaction in the cash market to minimize the risk of an adverse price change. For example, corn farmers interested in locking in the sale price of all or part of their crops would sell corn futures as a temporary substitute for the cash market sale they intend to make at a later date. The sales transaction is carried out through a commodity broker. More specifically:
  - Futures contract: An agreement for the purchase or sale of a standardized amount of a commodity, of standardized quality grades, during a specific month, on an organized exchange and subject to all terms and conditions included in the rules of that exchange.
  - Option: The right, but not the obligation, to buy or sell a specified number of underlying futures contracts or a specified amount of a commodity, currency, index, or financial instrument at an agreed-upon price on or before a given future date.

Other tools are also available to help farmers manage their risks. For a brief discussion of these tools, see "Risk Management: Farmers Sharpen Tools to Confront Business Risks," Agricultural Outlook, March 1999.

Use of Risk Management Tools by All Farmers and Farmers Who Received Transition Payments

This appendix provides detailed information that we obtained from the U.S. Department of Agriculture's (USDA) Economic Research Service concerning farmers' use of risk management strategies. This information is based on the 1996 Agricultural Resource Management Study; about 7,300 farm operators responded to the risk management questions. Using the data the Service provided, we calculated confidence intervals.[1] The Economic Research Service's estimates and associated confidence intervals are presented in tables II.1 through II.12.

Table II.1: Number of U.S. Farmers and the Value of Their Agricultural Sales, by Farm Sales Level, 1996

		Confidence interval			Confidence interval (Dollars in millions)	
Farm sales level	**Number of farmers[a]**	**From**	**To**	**Agricultural sales[a] (Dollars in millions)**	**From**	**To**
Large-scale farmers	**346,577**			**$137,155.2**		
$500,000 and over	58,823	43,489	74,157	$66,913.4	$51,970.3	$81,856.6
$250,000-$499,999	95,485	74,337	116,633	$35,042.1	$27,613.8	$42,470.3
$100,000-$249,999	192,269	150,062	234,476	$35,199.7	$27,981.4	$42,418.0
Small-scale farmers	**1,615,087**			**$27,882.5**		
Less than $100,000	524,820	441,500	608,140	$17,070.6	$13,754.6	$20,386.5
Limited resources[b]	291,659	208,770	374,548	$1,857.7	$984.4	$2,731.1
Retirement[c]	261,428	199,428	323,428	$2,166.2	$1,361.3	$2,971.1
Residential lifestyle[d]	537,180	418,206	656,156	$6,788.0	$4,926.1	$8,649.8
Corporate[e]	**47,238**	**18,536**	**75,940**	**$14,696.7**	**$10,333.2**	**$19,060.2**
All farmers	**2,008,902**	**1,780,530**	**2,237,274**	**$179,734.4**	**$152,055.2**	**$207,413.5**

[a]The numbers in this column are point estimates.

[b]Defined as operator has household income under $20,000, farm assets under $150,000, and gross farm sales under $100,000.

[c]Defined as operator's primary occupation is retired.

[d]Defined as operator's primary occupation is "other"--neither farming nor retired.

[1]Since a sample (called a probability sample) was used to develop our estimates, each estimate has a measurable precision, or sampling error, which may be expressed as a plus/minus figure. A sampling error indicates how closely we can reproduce from a sample the results that we would obtain if we were to take a complete count of the universe using the same measurement methods. By adding the sampling error to and subtracting it from the estimate, we can develop upper and lower bounds for each estimate. This range is called a confidence interval. Sampling errors and confidence intervals are stated at a certain confidence level—in this case, 95 percent. For example, a confidence interval at the 95-percent confidence level, means that in 95 out of 100 instances, the sampling procedure used would produce a confidence interval containing the universe value we are estimating.

[e]Defined as operated by nonfamily corporations, cooperatives, or hired managers.

Source: USDA's Economic Research Service.

Table II.2: Percentage of Farmers Who Used Each Risk Management Tool, by Farm Sales Level, 1996

Farm sales level	Percent using crop insurance[a]	Confidence interval (Range)	Percent using forward contracts[a]	Confidence interval (Range)	Percent using hedging[a]	Confidence interval (Range)
Large-scale farmers	**58**	**52-64**	**61**	**55-67**	**38**	**32-44**
$500,000 and over	54	41-67	63	52-74	44	34-54
$250,000-$499,999	66	56-76	60	49-71	42	32-52
$100,000-$249,999	55	47-63	61	55-67	34	23-45
Small-scale farmers	**13**	**10-16**	**25**	**21-29**	**19**	**16-22**
Less than $100,000	24	19-29	39	33-45	27	21-33
Limited resources[b]	9	(1)-19[c]	17	8-26	13	6-20
Retirement[d]	6	2-10	23	13-33	19	6-32
Residential lifestyle[e]	9	5-13	18	13-23	13	8-18
Corporate[f]	**37**	**0-74**	**30**	**4-56**	**21**	**3-39**
All farmers	**22**	**19-24**	**32**	**28-35**	**22**	**19-25**

[a]The numbers in this column are point estimates.

[b]Defined as operator has household income under $20,000, farm assets under $150,000, and gross farm sales under $100,000.

[c]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[d]The operator's primary occupation is retired.

[e]The operator's primary occupation is "other"--neither farming nor retired.

[f]Operated by nonfamily corporations, cooperatives, or hired managers.

Source: USDA's Economic Research Service.

Table II.3: Number of Farmers Who Received Transition Payments and the Value of Their Agricultural Sales, by Farm Sales Level, 1996

		Confidence interval			Confidence interval (Dollars in millions)	
Farm sales level	**Number of farmers[a]**	**From**	**To**	**Agricultural sales[a] (Dollars in millions)**	**From**	**To**
Large-scale farmers	**223,336**			**$79,665.4**		
$500,000 and over	32,166	25,546	38,786	$32,214.3	$25,142.6	$39,285.9
$250,000-$499,999	66,072	50,920	81,224	$23,470.2	$18,548.0	$28,392.3
$100,000-$249,999	125,098	92,733	157,463	$23,980.9	$17,870.6	$30,091.2
Small-scale farmers	**256,460**			**$10,519.6**		
Less than $100,000	134,238	100,034	168,442	$6,886.2	$4,510.8	$9,261.7
Limited resources[b]	25,000	(1,117)[c]	51,117	$735.8	($63.2)[c]	$1,534.9
Retirement[d]	41,803	8,620	74,986	$785.1	$131.1	$1,439.0
Residential lifestyle[e]	55,419	31,522	79,316	$2,112.5	$1,164.3	$3,060.7
Corporate[f]	**9,826**	**5,608**	**14,044**	**$3,912.4**	**$2,202.4**	**$5,622.5**

[a]The numbers in this column are point estimates.

[b]Defined as operator has household income under $20,000, farm assets under $150,000, and gross farm sales under $100,000.

[c]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[d]Defined as operator's primary occupation is retired.

[e]Defined as operator's primary occupation is "other"--neither farming nor retired.

[f]Defined as operated by nonfamily corporations, cooperatives, or hired managers.

Source: USDA's Economic Research Service.

Table II.4: Percentage of Farmers Who Used Each Risk Management Tool Among Those Who Received Transition Payments, by Farm Sales Level, 1996

Farm sales level	Percent using crop insurance[a]	Confidence interval (Range)	Percent using forward contracts[a]	Confidence interval (Range)	Percent using hedging[a]	Confidence interval (Range)
Large-scale farmers	**77**	**70-84**	**72**	**66-78**	**42**	**34-50**
$500,000 and over	80	73-87	82	78-86	58	50-66
$250,000-$499,999	86	80-92	70	57-83	45	33-57
$100,000-$249,999	72	61-83	71	64-78	37	23-51
Small-scale farmers	**55**	**42-68**	**46**	**37-55**	**29**	**18-40**
Less than $100,000	61	49-73	46	36-56	30	18-42
Limited resources[b]	[c]	[c]	15	(14)-44[d]	11	(9)-31[d]
Retirement[e]	30	(14)-74[d]	[c]	[c]	[c]	[c]
Residential lifestyle[f]	52	32-72	47	34-60	23	6-40
Corporate[g]	**91**	**85-97**	**76**	**66-86**	**48**	**28-68**

[a]The numbers in this column are point estimates.

[b]Defined as operator has household income under $20,000, farm assets under $150,000, and gross farm sales under $100,000.

[c]USDA is required to protect the privacy of respondents by withholding data if it receives too few responses in a particular category.

[d]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[e]Defined as operator's primary occupation is retired.

[f]Defined as operator's primary occupation is "other"--neither farming nor retired.

[g]Defined as operated by nonfamily corporations, cooperatives, or hired managers.

Source: USDA's Economic Research Service.

Table II.5: Number of U.S. Farmers and the Value of Their Agricultural Sales, by Principal Commodity, 1996

		Confidence interval			Confidence interval (Dollars in millions)	
Commodity	**Number of farmers[a]**	**From**	**To**	**Agricultural sales[a] (Dollars in millions)**	**From**	**To**
Corn	113,710	86,520	140,900	$20,218.5	$15,502.8	$24,934.3
Wheat	40,062	24,515	55,609	$5,496.6	$3,460.5	$7,532.8
Cotton	16,719	10,755	22,683	$5,936.2	$3,853.5	$8,018.9
Other field crops	558,805	468,994	648,616	$46,612.6	$38,116.0	$55,109.1
Fruits/nuts/ greenhouse/nursery	117,309	80,061	154,557	$17,891.9	$11,895.2	$23,888.5
Vegetables	33,261	16,702	49,820	$10,004.7	$6,906.4	$13,102.9
Beef and hogs	774,893	636,683	913,103	$26,276.1	$21,126.0	$31,426.2
Dairy	92,806	58,063	127,549	$25,980.5	$15,898.0	$36,063.1
Poultry	26,696	18,533	34,859	$16,215.6	$12,814.8	$19,616.3
Other livestock	234,641	177,154	292,128	$5,101.7	$3,431.8	$6,771.6
All farmers	**2,008,902**	**1,780,530**	**2,237,274**	**$179,734.4**	**$152,055.2**	**$207,413.5**

[a]The numbers in this column are point estimates.

Source: USDA's Economic Research Service.

Table II.6: Percentage of Farmers Who Used Each Risk Management Tool, by Principal Commodity, 1996

Commodity	Percent using crop insurance[a]	Confidence interval (Range)	Percent using forward contracts[a]	Confidence interval (Range)	Percent using hedging[a]	Confidence interval (Range)
Corn	68	54-82	65	53-77	42	29-55
Wheat	87	76-98	57	50-64	23	14-32
Cotton	85	73-97	76	63-89	46	35-57
Other field crops	36	29-43	37	29-45	24	18-30
Fruits/nuts/ greenhouse/nursery	19	11-27	34	19-49	23	9-37
Vegetables	13	4-22	26	9-43	20	4-36
Beef and hogs	5	4-6	25	20-30	20	15-25
Dairy	35	26-44	25	15-35	18	10-26
Poultry	5	3-7	27	11-43	20	7-33
Other livestock	3	1-5	20	11-29	15	7-23
All farmers	**22**	**19-24**	**32**	**28-35**	**22**	**19-25**

[a]The numbers in this column are point estimates.

Source: USDA's Economic Research Service

Table II.7: Number of Farmers Who Received Transition Payments and the Value of Their Agricultural Sales, by Principal Commodity, 1996

		Confidence interval			Confidence interval (Dollars in millions)	
Commodity	Number of farmers[a]	From	To	Agricultural sales[a] (Dollars in millions)	From	To
Corn	89,184	66,110	112,258	$18,029.8	$13,294.5	$22,765.2
Wheat	33,619	20,836	46,402	$4,959.0	$2,917.9	$7,000.1
Cotton	12,449	7,764	17,134	$4,987.1	$3,110.3	$6,863.8
Other field crops	198,856	151,695	246,017	$36,638.5	$29,888.2	$43,388.8
Fruits/nuts/ greenhouse/nursery	[b]	[b]	[b]	[b]	[b]	[b]
Vegetables	10,803	(1,605)[c]	23,211	$2,774.3	$1,866.2	$3,682.3
Beef and hogs	85,571	42,132	129,010	$11,937.4	$9,363.7	$14,511.1
Dairy	37,975	24,429	51,521	$9,294.2	$6,051.7	$12,536.8
Poultry	1,810	746	2,874	$1,330.4	$712.4	$1,948.3
Other livestock	16,391	7,878	24,904	$2,927.2	$1,383.9	$4,470.5

[a]The numbers in this column are point estimates.

[b]USDA is required to protect the privacy of respondents by withholding data if it receives too few responses in a particular category.

[c]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

Source: USDA's Economic Research Service.

Table II.8: Percentage of Farmers Who Used Each Risk Management Tool Among Those Who Received Transition Payments, by Principal Commodity, 1996

Commodity	Percent using crop insurance[a]	Confidence interval (Range)	Percent using forward contracts[a]	Confidence interval (Range)	Percent using hedging[a]	Confidence interval (Range)
Corn	71	54-88	73	61-85	47	31-63
Wheat	91	81-101[b]	53	46-60	22	15-29
Cotton	94	88-100	75	59-91	43	25-61
Other field crops	75	65-85	63	49-77	32	21-43
Fruits/nuts/ greenhouse/nursery	c	c	c	c	c	c
Vegetables	22	(38)-82[b]	26	(49)-101[b]	18	(33)-69[b]
Beef and hogs	35	16-54	52	29-75	48	23-73
Dairy	68	58-78	33	15-51	30	14-46
Poultry	47	17-77	35	11-59	17	2-32
Other livestock	32	11-53	47	8-86	10	3-17

[a]The numbers in this column are point estimates.

[b]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[c]USDA is required to protect the privacy of respondents by withholding data if it receives too few responses in a particular category.

Source: USDA's Economic Research Service.

Table II.9: Number of U.S. Farmers and the Value of Their Agricultural Sales, by Geographic Region, 1996

Region	Number of farmers[a]	Confidence interval From	Confidence interval To	Agricultural sales (Dollars in millions)[a]	Confidence interval (Dollars in millions) From	Confidence interval (Dollars in millions) To
Northern Plains[b]	189,484	128,205	250,763	$22,700.0	$16,515.6	$28,884.4
Corn Belt[c]	361,955	310,167	413,745	$36,863.2	$30,360.5	$43,365.8
Lake States[d]	191,563	150,262	232,864	$15,555.0	$11,835.5	$19,274.5
Mountain[e]	103,976	80,947	127,005	$13,368.7	$8,364.0	$18,373.4
Pacific[f]	131,155	112,646	149,664	$27,756.1	$21,663.1	$33,849.1
Appalachia[g]	315,386	253,570	377,202	$14,630.2	$10,214.2	$19,046.2
Southeast[h]	145,283	103,709	186,857	$13,597.2	$8,986.6	$18,207.7
Delta[i]	132,219	89,978	174,460	$10,103.6	$7,707.4	$12,499.8
Northeast[j]	114,539	47,864	181,214	$11,027.6	($38.8)[k]	$22,093.9
Southern Plains[l]	323,342	230,181	416,503	$14,132.9	$10,337.9	$17,927.8
All farmers	**2,008,902**	**1,780,530**	**2,237,274**	**$179,734.4**	**$152,055.2**	**$207,413.5**

Note: Does not include Alaska and Hawaii.

[a]The numbers in this column are point estimates.

[b]Includes Kansas, Nebraska, North Dakota, and South Dakota.

[c]Includes Illinois, Indiana, Iowa, Missouri, and Ohio.

[d]Includes Michigan, Minnesota, and Wisconsin.

[e]Includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

[f]Includes California, Oregon, and Washington.

[g]Includes Kentucky, North Carolina, Tennessee, Virginia, and West Virginia.

[h]Includes Alabama, Florida, Georgia, and South Carolina.

[i]Includes Arkansas, Louisiana, and Mississippi.

[j]Includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

[k]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[l]Includes Oklahoma and Texas.

Source: USDA's Economic Research Service.

Table II.10: Percentage of Farmers Who Used Each Risk Management Tool, by Geographic Region, 1996

Region	Percent using crop insurance[a]	Confidence interval (Range)	Percent using forward contracts[a]	Confidence interval (Range)	Percent using hedging[a]	Confidence interval (Range)
Northern Plains[b]	45	33-57	42	28-56	27	16-38
Corn Belt[c]	33	23-43	42	36-48	25	17-33
Lake States[d]	30	22-38	35	24-46	25	15-35
Mountain[e]	24	17-31	28	21-35	18	13-23
Pacific[f]	16	10-22	31	23-39	25	18-32
Appalachia[g]	14	10-18	26	18-34	19	10-28
Southeast[h]	12	8-16	32	23-41	28	19-37
Delta[I]	11	7-15	33	15-51	27	9-45
Northeast[j]	11	2-20	21	12-30	17	11-23
Southern Plains[k]	11	4-18	21	11-31	14	8-20
All farmers	**22**	**19-24**	**32**	**28-35**	**22**	**19-25**

Note: Does not include Alaska and Hawaii.

[a]The numbers in this column are point estimates.

[b]Includes Kansas, Nebraska, North Dakota, and South Dakota.

[c]Includes Illinois, Indiana, Iowa, Missouri, and Ohio.

[d]Includes Michigan, Minnesota, and Wisconsin.

[e]Includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

[f]Includes California, Oregon, and Washington.

[g]Includes Kentucky, North Carolina, Tennessee, Virginia, and West Virginia.

[h]Includes Alabama, Florida, Georgia, and South Carolina.

[i]Includes Arkansas, Louisiana, and Mississippi.

[j]Includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

[k]Includes Oklahoma and Texas.

Source: USDA's Economic Research Service.

Table II.11: Number of Farmers Who Received Transition Payments and the Value of Their Agricultural Sales, by Geographic Region, 1996

		Confidence interval			Confidence interval (Dollars in millions)	
Region	Number of farmers[a]	From	To	Agricultural sales[a] (Dollars in millions)	From	To
Northern Plains[b]	88,850	61,335	116,365	$19,344.4	$13,240.1	$25,448.7
Corn Belt[c]	155,848	119,193	192,503	$29,060.7	$23,535.7	$34,585.7
Lake States[d]	65,424	46,061	84,787	$10,689.5	$8,363.9	$13,015.1
Mountain[e]	26,745	16,523	36,967	$6,376.7	$4,089.5	$8,663.9
Pacific[f]	11,159	8,250	14,068	$5,240.5	$3,751.1	$6,729.8
Appalachia[g]	52,344	15,718	88,970	$6,434.5	$3,937.4	$8,931.6
Southeast[h]	18,539	6,294	30,784	$4,095.0	$1,719.2	$6,470.7
Delta[i]	14,361	9,632	19,090	$4,116.0	$2,962.3	$5,269.6
Northeast[j]	14,996	(2,845)[k]	32,837	$2,396.8	($1,145.3)[k]	$5,939.0
Southern Plains[l]	41,354	21,172	61,536	$6,343.4	$2,874.6	$9,812.2

Note: Does not include Alaska and Hawaii.

[a]The numbers in this column are point estimates.

[b]Includes Kansas, Nebraska, North Dakota, and South Dakota.

[c]Includes Illinois, Indiana, Iowa, Missouri, and Ohio.

[d]Includes Michigan, Minnesota, and Wisconsin.

[e]Includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

[f]Includes California, Oregon, and Washington.

[g]Includes Kentucky, North Carolina, Tennessee, Virginia, and West Virginia.

[h]Includes Alabama, Florida, Georgia, and South Carolina.

[i]Includes Arkansas, Louisiana, and Mississippi.

[j]Includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

[k]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[l]Includes Oklahoma and Texas.

Source: USDA's Economic Research Service.

Table II.12: Percentage of Farmers Who Used Each Risk Management Tool Among Those Who Received Transition Payments, by Geographic Region, 1996

Region	Percent using crop insurance[a]	Confidence interval (Range)	Percent using forward contracts[a]	Confidence interval (Range)	Percent using hedging[a]	Confidence interval (Range)
Northern Plains[b]	84	75-93	65	55-75	39	26-52
Corn Belt[c]	67	52-82	64	47-81	35	20-50
Lake States[d]	70	57-83	49	35-63	30	14-46
Mountain[e]	66	52-80	41	21-61	20	9-31
Pacific[f]	63	42-84	62	43-81	41	24-58
Appalachia[g]	32	(7)-71[h]	62	40-84	52	18-86
Southeast[i]	68	46-90	58	40-76	33	24-42
Delta[j]	57	41-73	77	67-87	58	45-71
Northeast[k]	29	(32)-90[h]	25	(32)-82[h]	16	11-21
Southern Plains[l]	75	55-95	48	29-67	28	8-48

Note: Does not include Alaska and Hawaii.

[a]The numbers in this column are point estimates.

[b]Includes Kansas, Nebraska, North Dakota, and South Dakota.

[c]Includes Illinois, Indiana, Iowa, Missouri, and Ohio.

[d]Includes Michigan, Minnesota, and Wisconsin.

[e]Includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

[f]Includes California, Oregon, and Washington.

[g]Includes Kentucky, North Carolina, Tennessee, Virginia, and West Virginia.

[h]Confidence interval calculations are not exact because of the small sample size or other characteristics of the sample results.

[i]Includes Alabama, Florida, Georgia, and South Carolina.

[j]Includes Arkansas, Louisiana, and Mississippi.

[k]Includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

[l]Includes Oklahoma and Texas.

Source: USDA's Economic Research Service.

Regional Coordinators for Risk Management Education

Region/institution	Cognizant RMA regional service office(s)	States covered
Northeast/ University of Delaware	Raleigh, North Carolina	Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina
Southeast/ Auburn University	Valdosta, Georgia	Alabama, Georgia, South Carolina, Florida, Puerto Rico
Midsouth/ Texas A&M University	Jackson, Mississippi, and Oklahoma City, Oklahoma	Kentucky, Tennessee, Arkansas, Mississippi, Louisiana, Oklahoma, Texas, New Mexico
Midwest/ University of Nebraska	Springfield, Illinois, St. Paul, Minnesota, and Topeka, Kansas	Minnesota, Wisconsin, Iowa, Michigan, Illinois, Indiana, Ohio, Nebraska, Kansas, Missouri, Colorado
West/ Washington State University	Billings, Montana, Spokane, Washington, and Sacramento, California	Alaska, Hawaii, Washington, Idaho, Oregon, California, Nevada, Utah, Arizona, Montana, Wyoming, North Dakota, South Dakota

Source: USDA.

Project Descriptions of the Risk Management Education Grants

Integrated Risk Management Education ($248,461)
Grantee: South Central Technical College (North Mankato, Minnesota)

The objective of this project is to develop an integrated risk management education curriculum and deliver it via educational programs for farmers in Minnesota, North Dakota, and South Dakota. The project will develop local educational teams of agricultural professionals.

Understanding Farmer Risk Management Decision Making and Educational Needs ($243,388)
Grantee: Mississippi State University

The objective of this project is to develop the knowledge base to guide the design and implementation of effective risk management programs for agricultural producers. The project will identify the risk management objectives of diverse agricultural producers, investigate perceptions and understanding of risk management tools and strategies, examine the factors influencing choices of risk management strategy, and study how information and analysis influence producers' perceptions and risk management choices.

Risk Management Education With Focus on Producers and Lender Stakeholders ($250,000)
Grantee: Pennsylvania State University

The objective of this project is to help farmers and lenders manage risks and expand the understanding of risk management with a focus on farmer liquidity constraints. The project will develop and distribute a risk management curriculum to farmers, provide training and workshops, improve risk management financial expertise with workshop applications tailored to lenders, and use computers and telecommunications in risk management education.

Managing Risks and Profits for the National Grain Industry: A Whole-Farm Approach ($72,180)
Grantee: Ohio State University Extension Service

The objective of this project is to create and deliver information and analytical tools to help grain farmers and agribusinesses manage their risks and profits for entire farms. The project will create and revise risk management programs for whole-farm assessment, analyze profit levels and cash-flow risks, create a risk management center at Iowa State

University, measure the risk tolerance of farm operators, and analyze the effectiveness of innovative information delivery systems.

National Program for Integrated Dairy Risk Management Education and Research ($129,600)
Grantee: Ohio State University

The objective of this project is to focus public and private expertise on generating understandable, useful, and results-oriented knowledge and tools for the dairy industry. The project will develop a risk management educational curriculum for dairy producers, conduct symposia and regional training workshops, develop relevant computer software, and distribute information electronically.

Optimal Grain Marketing: Integrated Approach to Balance Risks and Revenues ($232,800)
Grantee: National Grain and Feed Foundation

The objective of this project is to develop information on commonly available risk management tools coupled with an assessment of how such tools can be expected to perform. The project will reach 500 elevator operators and 20,000 farmer customers with a standardized methodology for evaluating new products, with an emphasis on the use of cash contracts.

Agricultural Risk Management Education for Small and Socially Disadvantaged Farmers ($229,808)
Grantee: Virginia State University Cooperative Extension Service

The objective of this project is to create risk management educational materials and help socially disadvantaged and limited-resource farmers in Virginia, Maryland, Delaware, and North Carolina understand how to manage risk. This project will nurture a partnership between the private crop insurance industry and certain land-grant colleges in the four states, providing a model for similar efforts elsewhere. The project will also integrate risk management education into outreach, training, and technical assistance programs for small-scale farmers.

Delivery of Agricultural Risk Management Education to Extension Officers and Small-Scale Farmers ($150,000)
Grantee: Alcorn State University

The objective of this project is to develop and implement risk management education for students, extension agents, small-scale farmers, limited-resource cooperatives, industry groups, and community-based organizations within 28 Mississippi counties. It will help small-scale farmers limit their exposure to marketing, financial, and legal risks.

Georgia Agricultural Risk Management Education Program ($250,000)
Grantee: Georgia Department of Education

The objective of this project is to train producers and agribusinesses in risk management. The project will train young farmers to provide risk management assistance and provide instructional material and technology to increase managerial skills in agricultural operations. It will provide risk management training for minority, limited-resource farmers, and migrant workers in 134 Georgia counties and establish a certified risk management program for farm workers.

Pacific Northwest Risk Management Education Project ($236,339)
Grantee: Washington State University

The objective of this project is to help Pacific Northwest cereal grain producers improve and apply risk management skills. The project will develop a research-based educational curriculum to increase understanding of risk management tools and integrate areas of risk management in a decision-making process for small grain producers. The project will deliver a producer-oriented risk management program to more than 1,000 grain producers.

Risk Management Research and Education for the Florida Citrus Industry ($19,172)
Grantee: University of Florida Cooperative Extension Service

The objective of this project is to develop appropriate risk management tools and strategies for citrus growers in 32 southern Florida counties. This project will help growers to understand their increased exposure to risk and to use risk management tools and strategies.

Risk Management Education: A Risk-Management Club Approach ($150,000)
Grantee: Kansas State University

The objective of this project is to extend applied risk management information to agricultural producers and agricultural businesses in Kansas. The project will establish local risk management clubs and survey club members to determine risk perceptions, risk management skill levels, and educational needs. It will plan and conduct educational meetings, and carry out follow-up evaluations to measure the effectiveness of the risk management club approach.

Leveraging Risk Management Education Using Crop Insurance Agents ($166,500)
Grantee: National Crop Insurance Services

The objective of this project is to broaden the understanding of risk management principles among more than 15,000 crop insurance agents nationwide. The project will train crop insurance agents in risk management and foster a partnership involving extension specialists, crop insurance agents, and socially disadvantaged and limited-resource farmers. The project will begin a conference series on risk management modeled after one in North Dakota.

Economic Performance and Producer Use of Market Advisory Service Products ($250,000)
Grantee: University of Illinois Cooperative Extension Service

The objective of this project is to provide producers of corn, soybeans, and wheat with an objective, comprehensive evaluation of the economic performance of crop market advisory services. It will describe subscribers' use of market advisory services, current risk management practices, and the educational needs of crop producers.

Comprehensive Risk and Business Planning: A Case Plan Approach ($106,841)
Grantee: University of Nebraska

The objective of this project is to help producers and others in risk management consulting and educational efforts understand comprehensive business planning. Participants will learn to prepare business plans for each commodity to address various situations. The project will encourage producer groups to develop comprehensive risk management and business plans, and will create and maintain an online forum on risk and financial management.

Develop AgRisk 2000 ($206,150)
Grantee: University of Illinois Cooperative Extension Service

The objective of this project is to develop and provide a comprehensive risk management tool that which can be used by farmers, lenders, and service providers to evaluate pre-harvest risk management strategies. The project is targeted at producers located in the Corn Belt, Wheat Belt, Delta Region, and Southern States.

Risk Management Education for Limited-Resource Latino Family Farmers in California's Central Coast ($85,000)
Grantee: Association for Community Based Education

The objective of this project is to improve the risk management skills of limited-resource Latino family farmers in California's central coast. The project will improve the farmers' capacity to understand the risk associated with their business, analyze risks and use information in problem-solving and decision-making, and incorporate risk management education into a small-farm production and management curriculum.

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