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Group risk plan insurance: An alternative management tool for farmers



In 1994, the Federal Crop Insurance Program will include a new product never before tried in the United States, the Group Risk Plan (GRP). GRP pays farmers only when county yields drop below a specified level. Harold Halcrow first developed the arguments for this type of insurance in his Ph.D. dissertation of 1947. Barnaby and Skees developed a 1990 *CHOICES* article on the need to try this alternative. Here we discuss the basic elements of this new program.

Policy Issues

For well over a half century, government officials have designed policies to reduce risk for crop producers uniquely exposed to natural elements. Recently, Congress has encouraged farmer contributions for risk management (e.g., Federal Crop Insurance), and since 1974, has provided ad hoc disaster assistance for a variety of crops.

Ad hoc disaster assistance averaged one billion dollars per year since 1988 (not including crop disaster assistance for the floods and drought of 1993). Simultaneously, the annual cost of the Federal Crop Insurance (FCI) program

averaged three-quarters of a billion dollars. Indemnities paid to farmers have exceeded premiums paid by farmers. The GAO attributes part of the government costs to farmer abuse of the program. Some farmers, according to GAO, "lost" their crops to cash in on FCI payments.

The Group Risk Plan

The Group Risk Plan dramatically departs from traditional approaches to crop insurance protection. GRP creates less paperwork and costs less than the traditional Actual Production History (APH) Program. GRP is based on the premise that when an entire county's crop yield is low, most farmers in that county will also have low yields. Therefore, GRP pays only when the yield of the entire county drops below a trigger yield chosen by farmers. Trigger yields are a function of the coverage level and the expected county yield set by Federal Crop Insurance Corporation (FCIC). Payment is based on the percentage decline below the expected county yield times the coverage level the individual farmer purchases, and the amount of protec-

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tion purchased.

GRP will be available for eight major crops—corn, soybeans, wheat, forage, grain sorghum, barley, cotton, and peanuts—in nearly 1,200 counties in 27 states across the U.S. Nearly 70 percent of the total acreage of these crops will be eligible in 1994.

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ers know expected county yields prior to planting.

While farmers will generally pay less for GRP than APH coverage, the programs are similar in many ways. The cost of both decreases or increases depending on the coverage level chosen by the farmer. Farmers in counties with higher yield risks pay higher premi-

um. Remember, GRP payments depend on county yields. If farm yields fall, but county yields don't, the farmer receives no insurance payment.

The likelihood that many farmers will have a bad year when GRP does not pay is very low. For their own piece of mind, however, producers may want to consider other alternatives that provide added protection. The private sector provides certain types of insurance to protect farmers against specific losses that may affect their farm yield without affecting the county yield. Producers may want to supplement their GRP policy with insurance against hail or field fires.

For relatively low-risk producers, the cost of insuring crops under the traditional Actual Production History (APH) program offered by the FCIC may have exceeded the risks.

cost of insuring crops under the traditional Actual Production History (APH) program offered by the FCIC may have exceeded the risks. Producers will now have a choice of APH or GRP. Of course, GRP will not be the best alternative for every farmer. It's generally most effective in reducing risk if the farm yields move closely with county yields. For farms in areas different from the rest of the county, APH may be a better alternative.

Producers may not purchase both GRP and APH coverage for the same crop in the same county for the same crop year.

GRP participants provide only information on crop acres planted by the acreage reporting date. The GRP makes payments based on county yields, so that evidence of individual farm losses and yield histories are not needed.

GRP uses an "expected" county yield to more accurately project county yields than would a simple average, as used by APH. GRP is calculated using over thirty years of county data from the National Agricultural Statistics Service (NASS) and includes adjustments for new technology, improved farming practices and other factors. Farm-

ers know expected county yields prior to planting. Just like APH, GRP premiums will be subsidized by FCIC.

In research that compares the current design of GRP with the current MPCIC program, over 60 percent of nearly 3,000 soybean farms would have received superior risk protection from GRP during the 1980s. These data were taken from 10 years of FCIC records for soybean farms from Louisiana to Minnesota (Hourigan).

Although unlikely, GRP partici-

Switching and Switching Back

Any APH premium discount is based on an individual's experience with APH. Since the GRP is based on county yields, individual premium discounts do not apply. If producers change back to APH at any time during the pilot test, prior premium discounts will be restored.

The APH program requires annual

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pants may receive a payment even without a loss. All GRP farmers receive a payment when the county yield (not the farmer's yield) falls below the chosen trigger yield. This provision encourages farmers to produce an economically optimal yield because the insurance payment is not based on their own yield, as is the case with APH insurance.

However, GRP producers may ex-

perience a loss and not receive a payment. Remember, GRP payments depend on county yields. If farm yields fall, but county yields don't, the farmer receives no insurance payment.

production records. If producers who decide to purchase GRP should switch back to APH from GRP, they will need to furnish reports for the missing years. Therefore, GRP purchasers should continue keeping production records.

An Example

Although GRP should prove effective for many growers, it may be especially

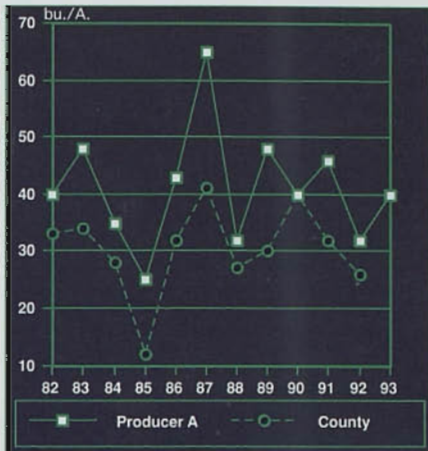


Figure 1. Producer A yields and county yields, 1982-1993.

effective for low-risk, high yield growers. That's because GRP allows producers to insure their crops at values that exceed the county average revenues by up to 50%. For example, if the expected county wheat yield is 31.5 bushels and the price set by FCIC for insurance purposes is \$2.80, the maximum protection that may be purchased is \$132 (50% more than the county average of \$88) per acre.

Payments are based on the percentage decline below the expected county yield, the coverage level selected, and the amount of protection purchased.

Producers may choose from six levels of coverage:

65%, 70%, 75%, 80%, 85%, or 90%.

The trigger yield is the level below the expected county yield at which GRP coverage begins. For example, if the expected county yield is 31.5 bushels and the farmer chooses a coverage level of 90%, the trigger yield is 28.4 bushels:

$$31.5 \times .90 = 28.4 \text{ (trigger yield).}$$

Using this same example, suppose the county yield drops to 20 bushels—a 29.5% shortfall:

$$(28.4 - 20) / 28.4 = .295 \text{ (shortfall).}$$

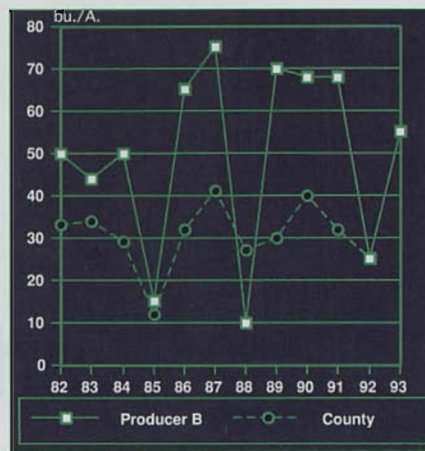


Figure 2. Producer B yields and county yields, 1982-1993.

If the farmer selected the \$132 maximum protection described previously, the farmer would receive an indemnity payment of \$39.04 per acre:

$$.295 \times \$132 = \$39.04.$$

If a county has substantial losses, FCIC may make a preliminary wheat payment as early as September. The final payment will be made after NASS releases its final report on actual county yields in the following April for most crops.

To see how the GRP insurance program compares to the traditional individually based APH program, consider yield information from two producers in Fergus Co., Montana. Both producers plant 600 acres of winter wheat. Yields for the past twelve years for the farmers and the actual county yields are presented in Figures 1 and 2. Based on the most recent ten years, producer A has an APH insurable yield of 40.7 bushels per acre while producer B's insurable yield is 50.1 bushels per acre. These compare to the expected county yield of 31.5 bushels per acre for 1994. The indemnities from the GRP program for producer A are specified in Table 1. These indemnity payments assume that the wheat price for insurance purposes was \$2.80 in 1993 dollars for the entire time period. During this time period, assuming the producer bought the maximum coverage available (90 percent), payments would have been received in three different years. As shown in Table 1, the producer's individual yield was sufficiently low to trigger individual APH payments in only one of those years. Based on producer A's average yield of 40.7 bushels, and the insurance wheat price of \$2.80, with maximum individual coverage, the producer would have received an indemnity of \$26,376 in 1985 (measured in 1993 dollars). While producer premiums will vary

Table 1. Yield shortfall, GRP payments, and APH payments for producer A, 1982-1992

Year	Bushels Below producer's average	GRP payment at 90%	APH payment
1982	0.7	\$0	N/A
1983	N/A	\$0	N/A
1984	6.7	\$0	N/A
1985	15.7	\$44,753	\$26,376
1986	N/A	\$0	N/A
1987	N/A	\$0	N/A
1988	8.7	\$1,587	N/A
1989	N/A	\$0	N/A
1990	0.7	\$0	N/A
1991	N/A	\$0	N/A
1992	8.7	\$10,425	N/A

Table 2. Yield shortfall, GRP payments, and APH payments for producer B, 1982-1992

Year	Bushels below Producer's average	GRP payment at 90%	APH payment
1982	0.1	\$0	N/A
1983	6.1	\$0	N/A
1984	0.1	\$0	N/A
1985	35.1	\$44,753	\$58,968
1986	N/A	\$0	N/A
1987	N/A	\$0	N/A
1988	40.1	\$1,587	\$67,360
1989	N/A	\$0	N/A
1990	N/A	\$0	N/A
1991	N/A	\$0	N/A
1992	25.1	\$10,425	\$42,168

between the two programs and across time, it is unlikely that the GRP premiums will be sufficiently higher than the APH premiums to offset the increase in indemnities. Thus, for this producer, GRP provides better risk protection than the APH Program.

Figure 2 shows the yields over the same time period for a second Fergus County farmer, producer B. This producer's yields are more erratic, relative to county yields. The indemnity payments under GRP that would have been received by this producer are the same as for producer A, a fundamental aspect of GRP. However, as also shown in Table 2, producer B's yield pattern would have triggered individual APH payments in each of the years that GRP paid indemnities. Given this producer's insurance yield of 50.1 bushels, and the \$2.80 insurance price, with maximum individual coverage, this producer would have received total individual APH insurance payments of \$168,504 over this time period. Again, the premium rates for producer B will vary between the two programs and across time. However, given the level of indemnities for each program, it is not clear that GRP is the best risk management alternative for this producer.

This simple example of two pro-

ducers with markedly different yield patterns points out two important aspects of GRP. First, all producers with the same coverage levels under GRP receive identical payments, regardless of their individual yields. Second, producers should analyze their individual situations to determine the appropriate type of crop insurance for risk protection. This decision will be heavily dependent on how well their individual yields track with the county yield. The more closely they track, the more likely that GRP provides better yield risk coverage.

Conclusions

With the expansion of GRP, producers in many regions will now have a number of choices (GRP, the old APH program, and private insurance alternatives). The example presented above illustrates the important characteristics of GRP and how it may provide better risk protection than the traditional APH program for some producers. It still remains an individual decision for producers to determine the best risk management alternative for their situation.

Private insurance companies may enhance the GRP by offering supplemental products that will cover losses

when GRP does not (local hail, for example). Such a combination could prove superior for both individual protection and as a public policy alternative. GRP offers at least some opportunity to reduce the risks of crop farming, now often provided through disaster and other government programs. Growers, lenders, and others in the farming sector will need to consider the choices.

■ For more information

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