



FEFO 10-04  
March 11, 2010

## GRIP PREMIUMS IN 2010

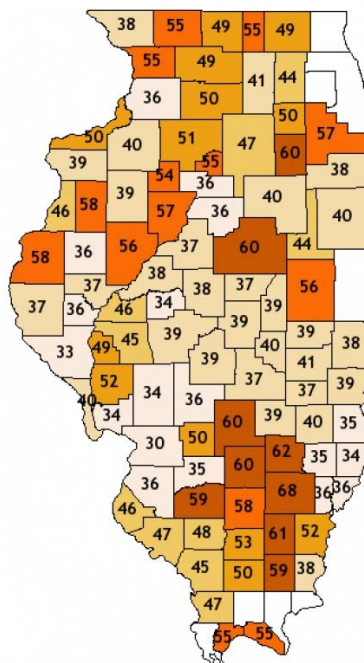
Group Risk Income Plan (GRIP) is a county revenue product that bases guarantees and payments on county yields rather than on farm yields. Premiums on GRIP products have changed between 2009 and 2010, with most counties experiencing premium declines. Premiums on GRIP with the harvest revenue option (GRIP-HR) for corn at the 90% coverage level and 100% protection level have an average premium reduction of \$15 per acre across all Illinois Counties.

Part of the reduction is due to lower estimates of price volatilities for the 2010 year. The price volatility used on GRIP products is .26 in 2010 compared to a .34 volatility in 2009. The lower price volatilities indicates that the “market” believe the possibilities of low prices is lower in 2010 as compared to 2009, suggesting lower chances of insurance premiums due to low prices, then resulting in lower premiums to cover price-induced risks. The other reason for premium changes is rating assessments made by the Risk Management Agency (RMA).

### Difference in GRIP-HR Premiums for Corn

While the average premium reduction for GRIP-HR having a 90% coverage level and 100% protection level for corn is \$15 per acre, there is large variability in premium reductions. The largest reduction is for Tazewell County, having a reduction of \$31.13 per acre. On the other hand, there are counties experiencing premium increases including Clay (\$.06 per acre), Fayette (\$.09 per acre), Franklin (\$.74 per acre), Jefferson (\$.10 per acre), Perry (\$1.47 per acre), Saline (\$4.25 per acre), Washington (\$2.12 per acre), Wayne (\$.69 per acre), and Williamson (\$3.09 per acre) Counties. Counties with premium increases are in southern Illinois.

Figure 1. GRIP-HR Premium, 90% Coverage Level, 100% Protection Level, Corn, 2010.



Premium reduction differences lead to dramatically different GRIP-HR premiums across counties. Wayne County's GRIP-HR (90% coverage level, 100% protection level) premium of \$67.83 is the highest in Illinois. Madison County's GRIP-HR premium of \$29.58 per acre is the lowest. There is a general, geographical pattern to high and low premium (see Figure 1). With notable exceptions, GRIP-HR premiums are in the \$30 and \$40 range in the center part of Illinois (see Figure 1). There is a pocket of counties in southern Illinois with \$50 and \$60 per acre premiums. Premiums in northern Illinois are mixed: DeKalb, JoDaviess, and Whiteside Counties have low premiums while Boone, Grundy, and Will Counties have high premiums.

### What Explains Difference in GRIP-HR Premiums?

Theoretically, two items should explain premium differences for county-level products:

1. Correlation of county yield with base and harvest price changes. Generally, correlations between yield and price changes are high in Illinois, with slightly lower correlations expected in southern Illinois as compared to northern and central Illinois. Generally, high correlations reduce insurance payments, as revenue declines associated with yield shortfalls are offset by price increases and vice versa. This would lead to higher premiums in southern Illinois as compared to northern and central Illinois.
2. Higher yield variability. Counties with higher yield variability should have higher GRIP-HR premium. A .21 correlation exists between 2010 GRIP-HR premiums and the standard deviation of detrended county yields.

There are a number of premiums that are difficult to explain based on either correlation or yield variability. McLean county has a \$60 per acre GRIP-HR premium that is noticeably higher than its adjacent counties: Dewitt (\$37 per acre), Livingston (\$40 per acre), Tazwell (\$37 per acre), Piatt (\$39 per acre), and Woodford (\$37 per acre) Counties. It is unlikely that McLean County has a different yield-price correlation or has much higher yield variability than adjacent counties. Two other notable anomalies are:

1. Champaign County (\$56 per acre) compared to adjacent counties with lower premium of Douglas (\$39 per acre), Edgar (\$38 per acre), Ford (\$44 per acre), Piatt (\$39 per acre), and Vermillion (\$37 per acre) Counties.
2. Warren County (\$58 per acre) compared to adjacent counties of Henderson (\$46 per acre), Knox (\$39 per acre), Mercer (\$39 per acre) and McDonough (\$36 per acre) Counties.

### Selection of GRIP

Farmers in counties with low GRIP premiums will find the county-level products more advantageous than farmers in counties with high GRIP premiums. Even for counties with higher premium, the expected payments from GRIP-HR are expected to exceed GRIP-HR farmer paid premiums in northern and central Illinois. Estimates of net costs can be found in the payment simulator in the crop insurance section of *farmdoc*.

Submitted by: Gary Schnitkey, Department of Agricultural and Consumer Economics, University of Illinois