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SHOULD ANY AD HOC DISASTER AID BE TARGETED TO THE "HOLE" IN THE FARM SAFETY NET?

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<u>Summary.</u> The worst outcome for insured growers is to suffer a 35% to 40% yield loss and higher prices. Growers will lose their counter cyclical payment because of higher prices, they have fewer bushels (production) to sell at the higher prices, even with this significant yield loss, they will receive no payments under ad hoc traditional disaster aid (TDA), and their net insurance payments will be small or none. However, these corn growers can expect to <u>lose more than \$59 per acre</u> below their expected revenue when the crop was planted and they still must cover most of the harvest expenses. TDA targeted payments to zero yields that could have been insured while providing nothing for insured growers with significant yield losses. Some growers are suggesting any disaster aid should be targeted to the "hole in the safety net" and not to the risk that is covered under crop insurance.

<u>Introduction</u>. There are some crops that do not have crop insurance contracts and there are only a few pilot insurance products available for livestock and grazing. However, past TDA was provided on crops that were insurable with subsidized crop insurance contracts and the TDA was targeted to the risk that could have been covered under those crop insurance contracts. Many analysts are expecting disaster aid will be provided again on insurable crops under any new disaster aid legislation. Should that disaster aid be targeted to uninsurable yield losses or to insurable yield losses?

<u>Is Disaster Aid "Necessary"?</u> USDA Economists have stated the subsidized crop insurance program is "working". If the subsidized crop insurance program is "working" then why do farmers "need" disaster aid? In order to answer that question one must consider the entire farm "safety net" that includes crop insurance and commodity programs.

The "Hole" in the "Safety Net". An example farm was created in table 1 to address this question. The example grower has an historical average yield of 133.3 bushels but produced only 86.6 bushels. This would represent a 35% yield loss, which is a significant yield loss but the grower receives no traditional disaster aid. The net insurance payment for most growers will be relatively small as is the case on line 29, table 1. The example grower receives no Counter Cyclical (CC) payment, no Loan Deficiency Payment (LDP) because of higher prices, reduced cash sales because of reduced yields, and a "small" crop insurance payment because of the deductible. This example insured grower's revenue ranges from \$83.91 to \$59.73 below the expected revenue and he\she must cover most of the harvest expenses (table 1, line 32). This is the "hole" in the farm "safety net" that is not covered by crop insurance or TDA programs.

The "Safety Net" Includes Direct Payments, Counter Cyclical Payments, and Crop Insurance. Under the new Farm Service Agency (FSA) farm program growers would also receive the counter cyclical payment based on the historical yield times 85% times the maximum of \$0.00, or \$3.32 less the maximum of the 12 month national average price or loan rate. The 12 month national average price is currently being calculated by National Agricultural Statistics Service (NASS). However, under today's market, prices are above \$2.32 and the expected counter cyclical payment on line 12 is zero. If the 12 month national average price were \$1.98, then the counter cyclical payment on line 12 is 133.3 bushels times the maximum payment of 34 cents times 85% for a total of \$38.52 per acre.

The direct payment on line 14 is not subject to either yield or price risk and for this grower would be 28 cents times 120 direct payment bushels times 85% for a total of \$28.56 and reported on line 14 of table 1. Total government payments on line 17 include the direct payment, loan deficiency payment, if any and the counter cyclical payment, if any.

Insured growers would also receive crop insurance indemnity payments if their yield is low enough to trigger those payments. The amount of the loss required to trigger crop insurance indemnity payments depends on the level of coverage purchased by growers. In table 1, it was assumed the grower purchased 75% crop insurance coverage and produced a below average yield of 86.6 bushels therefore, the example grower would receive a "small" indemnity payment.

The insured grower with 75% Crop Revenue Coverage or Revenue Assurance – Harvest Price Option (CRC or RA-HPO) would receive a \$33.65 indemnity payment less \$9.47 farmer paid premium for a net indemnity payment of \$24.18. The expected revenue was \$317.82 based on an average yield of 133.3 bushels times \$2.17 new crop futures prices in February 2002 less 15 cent basis, plus 85% of the 28 cent direct payment times 120 direct payment bushels. The combined government payments, net indemnity payment and crop sales equals \$258.09 for the CRC/RA-HPO insured grower on line 29, table 1. The grower has a \$59.73 loss to \$83.91 below his/her expected revenue depending on the level of crop insurance purchased (table 1, line 19). An insured grower with a total loss would generate a smaller cash loss of \$46.73 and he/she saves the harvest expenses (table 2, line 32)!

The worst outcome for insured growers is a significant 35% yield loss. This is a "large" loss but insured growers receive no TDA payment, they lose the counter cyclical payment and LDP payments because of higher prices, they only have 65% of a normal crop to sell at the higher price, and the insurance payment is relatively "small". Those growers who bought lesser coverage, such as RA without the harvest price option or no insurance would sustain substantially larger losses below the expected revenue with no appreciable reduction in expenses. The net RA payment was reduced because the price increase caused a reduction in the indemnity payment (table 1, line 27). In addition, the crop is large enough that growers will incur most of the harvest costs.

The public policy alternatives to address the hole in the safety net include:

- 1. Status quo with no additional ad hoc disaster aid payments.
- 2. A disaster program that would increase the direct payments to growers regardless of yield losses in disaster eligible counties has been passed in the Senate. Growers in non-eligible disaster counties would receive the additional payment only if they can demonstrate a 35% yield loss.
- 3. The House has introduced traditional disaster aid payments that would only pay individual growers who can demonstrate at least a 35% yield loss.
- 4. A disaster aid payment based on an indemnity bonus payment would target payments to individuals with yield loss and who purchase crop insurance.
- 5. An increased crop insurance coverage level that would fund the marginal increased crop insurance as an ad hoc disaster program.
- 6. The companion disaster aid program that was introduced by Congressman Graves (R-MO) would target payments towards the deductible in the insurance contract.
- 7. A technical correction on the farm bill that would place a second trigger on the counter cyclical payment so that growers could collect the counter cyclical payment due to either low yields or low prices.

¹ The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage.

- 8. A "free" market policy.
- 9. Other alternatives.

This paper will look at an example case problem to demonstrate how each of these policies might work at the farm level. The analysis will demonstrate under what conditions farmers would collect these various forms of ad hoc disaster aid. In addition, some of these policies have been introduced into legislation while others have not been considered by Congress. Alternatives that have not been introduced as legislation would need Office of Management and Budget (OMB) budget scoring.

Issue. Because the largest losses for insured growers occur with 35% yield loss, should disaster aid be targeted to the "hole in the safety net" or should the payments be targeted to the low yield that could have been covered with crop insurance? Past TDA program payments were targeted to the low yields. A bill has been introduced into the House that is modeled after the 1998 TDA program. Congress will have to pass a disaster aid law and the President will need to sign it before farmers will be paid disaster payments. Growers under a TDA program were paid if their yield fell below 65% of their historical average yield. For example, if a grower had 133.3 bushel historical yield with a 65% TDA program any yield below 86.7 bushels would trigger TDA payments.

The best outcome for an insured grower with a TDA program is no yield. The example grower with a zero yield would receive government payments of \$141.20 and net CRC/RA-HPO indemnity payment of \$242.53 for combined revenue of \$383.73 (table 3, line 30). The grower exceeded the expected revenue by \$65.91 (table 3, line 32). The revenue would actually exceed the revenue from a normal crop and forego the harvest expenses. The uninsured grower would suffer the largest loss with a zero yield because of no insurance payment (table 3, line 32).

Senate bill provides payments to growers with a 35% yield loss. Because of the current crop losses the Senate passed a disaster aid program as a part of an appropriation bill. The Senate Bill would pay 42% of the direct payment. The example grower would receive an additional government direct payment of \$12.28 (table 4, line 16). The additional direct payment, other government payments, crop sales and net CRC/RA-HPO indemnity payment of \$24.18 generates combined revenue of \$270.37 with a 35% percent yield loss (table 4, line 30). The CRC/RA-HPO insured grower has a \$47.45 loss below expected revenue (table 4, line 32).

The Senate plan would provide payments to growers with a 35% yield loss while TDA would make no payments. However, this approach has been criticized because it would also make payments to growers that had no crop losses if they are located in a disaster approved county. Growers located in a non-disaster approved county would need to demonstrate a 35% yield loss.

An indemnity payment bonus. It has been suggested that a bonus indemnity payment be paid to the growers suffering natural disasters, in lieu of traditional disaster aid payments. Under this approach growers would be paid a percentage of their indemnity payment as an ad hoc disaster aid payment. In the analysis a bonus payment of 20% was assumed but clearly this number is an arbitrary number and would be subject to political and budget considerations.

Under this approach, uninsured growers would receive no disaster aid payments. CAT contracts or insurance contracts with insurance deductibles larger than 35% would receive no disaster aid payments assuming a 35% yield loss as presented in table 5. Growers, in the example farm, with a 35% yield loss a 20% indemnity bonus payment would generate a \$6.73 bonus indemnity payment for CRC/RA-HPO (table 5, line 16).

This approach would target payments to those that suffered crop losses and who purchase crop insurance. However, it provides little protection for yield losses that occur in the first 35% of loss for most growers simply because coverage levels purchased have been primarily at 70 and 75 percent.

An increased crop insurance coverage level. Another proposal has been to increase all insured's current crop insurance coverage by simply increasing the coverage level. For example, one could add 10 points of coverage to the crop insurance coverage purchased by growers. This would effectively increase a CRC contract from 75% coverage, in the example, on table 6, to 85% coverage. However, because the payment is an ad hoc disaster aid payment the grower will pay no premium for the increased coverage from 75 to 85 percent.

In the example, with a 35% yield loss, this policy would provide ad hoc disaster aid to the growers who purchased crop insurance coverage and would target the payment towards the deductible part of the insurance contract purchased. In the case example, in table 6, line 16, this policy would pay an ad hoc disaster payment based on a 10% increase in crop insurance coverage from zero with CAT to a high of \$11.49 with CRC/RA-HPO coverage. The uninsured grower would receive no payments under this program. In addition, there maybe insured growers that would still not trigger indemnity payments even with the higher 10% coverage level.

<u>Companion Disaster Assistance Program (CDAP).</u> An alternative is to follow the design of a private companion hail policy that targets payments to cover the deductible in the federally reinsured crop insurance contract that is not insurable for non-hail risk. A CDAP policy was introduced by Graves (R-MO) would target aid to the first 53% of yield loss and not to the total loss that could have been insured.

This alternative disaster policy would trigger payments once yield losses exceed 20%.²

The grower would suffer a larger loss before CDAP would start to pay if the deductible were increased from 20%. With larger yield losses the higher deductible CDAP would pay the same as the 20% deductible because of the level 3 payment factor. The grower is trading a smaller CDAP payment for a larger TDA payment to collect payments on smaller yield losses, i.e. a lower deductible; 20% versus 35%. CDAP targets the payments to the insurance deductible that is less insurable.

Growers with a 133.3 bushels historical yield would trigger payments once yields fall below 106.6 bushels under a 20% CDAP program (table 7, line 6). For example, on line 8 of table 7, the grower has lost 35% of the crop and would trigger a payment.

The CDAP maximum payment was set at 40% (\$45.06, table 7, line 7,) of the TDA maximum payment (\$112.64, table 3, line 7,). The CDAP program with a 100% yield loss will pay 60% less than the TDA but will pay higher payments for smaller losses than TDA.

The companion 3 level generates a payment rate (% yield loss less 20% X companion level 3) times the maximum payment to generate a CDAP payment of \$20.27 (table 7, line 11).³ Defining the maximum CDAP payment as a function of the TDA maximum payment will allow the CDAP program to apply to

² The 20% deductible is an arbitrary number. One could lower the deductible but that would require additional USDA funding.

³ The companion level 3 is an arbitrary number but must be between 2 and 4. If the companion level were reduced to a lower number it would require a larger yield loss to collect the maximum payment and lower USDA costs.

non-program crops in addition to corn and other program crops. In addition the grower would also collect \$28.56 in direct payments for a total of \$48.83 in government payments.

If the grower had CRC/RA-HPO with a 35% yield loss, the net loss in revenue is approximately \$39.45 (table 7, line 32). Most growers will still generate revenue below expected revenue for combined CDAP and net crop insurance payments. This may, or may not be a profitable revenue for the grower, it will depend on individual farm costs.

If this same grower had bought CRC/RA-HPO combined with TDA payments the grower would have had a larger net loss of \$59.73 under the expected revenue. While the grower does not reach his/her expected revenue, his/her revenue loss is less with a CDAP payment than a TDA payment. Because it requires a smaller yield loss to trigger payment under a CDAP program there would be more growers with claims then would be the case under a TDA program.

The companion 3 level could also be set at companion 2.0 or 4.0 level. The companion level must be set at level 2 or greater but less than 4. If the companion level were set at a lower value then it would require more than a 53% yield loss to collect the full coverage (table 8, line 11). Yield losses of 53% of historical yield or less will generate higher CDAP payments than TDA. The net revenue was -\$11.01 for the CRC/RA-HPO insured growers (table 8, line 32).

Both the insured and uninsured grower with a zero yield would clearly prefer TDA. Yield losses would need to exceed 53% of historical yield before TDA pays more than CDAP. The CRC/RA-HPO insured grower would exceed expected revenue with a zero yield (table 3, line 32).

Some of the past disaster programs have capped the combined crop insurance indemnity and disaster payments to the "expected value" of the crop. If policy makers were to reduce TDA payments for insured growers that exceeded the "expected value" of the crop, the result would be fewer growers buying crop insurance in the future.

Zero/92 program. A Zero/92 program is similar to CDAP that is modeled after the private companion hail policy and targets disaster aid to the insurance deductible. A Zero/92 policy would target aid to the first 41.3% of yield loss and not to the loss that could have been insured. It is a second payment trigger on the counter cyclical payment. Growers with yield losses that are greater than 41.3% would have collected all of the counter cyclical payment. This alternative disaster policy would trigger payments once yield losses exceed 8%.

The grower would suffer a larger loss before Zero/92 would start to pay if the deductible were increased from 8%. The grower is trading a smaller Zero/92 payment for a larger TDA payment to collect payments on the first bushels lost, i.e. a lower deductible; 8% versus 35%. Zero/92 targets the payments to the insurance deductible that is not insured.

Zero/92 pays when the example farm's yields are below 92% of the 133.3 bushels or 122.6 bushels (table 9, line 6). Yields below 122.6 would trigger a payment based on the percent crop loss.

The Zero/92 maximum payment was set equal to the maximum counter cyclical payment (\$38.52, table 9, line 7). The CDAP program with a 100% yield loss will pay 66% less than the traditional disaster aid program (TDA). The companion 3 level generates a payment rate (% yield loss less 8% X companion

⁴ The 8% deductible is an arbitrary number. One could lower the deductible but that would require additional USDA funding.

level 3) times the maximum payment to generate a Zero/92 payment of \$31.20 (table 9, line 11).⁵ Defining the maximum Zero/92 payment as the maximum counter cyclical payment will apply to program crops only. However, in many years Zero/92 would require no additional budget to fund payments because all growers would have received the counter cyclical payment caused by lower prices. Only in years with higher prices would a second Zero/92 yield trigger counter cyclical payments and increase budget costs.

The payment 3 level could also be set at 2.0 or level 4.0. The payment level must be set at level 2 or greater. If the payment level were set at lower values then it would require more than a 41% yield loss to collect the full coverage.

<u>Conclusions</u>. Growers with yield losses greater than 50% will prefer traditional disaster aid. Growers in disaster eligible counties and no yield loss will prefer an additional direct payment as proposed by the Senate. Growers who purchased high levels of crop insurance will prefer the bonus indemnity payment and/or an increased crop insurance coverage level. Growers with yield losses of less than 50% will prefer the CDAP or Zero/92 policy approach.

Other alternatives include the status quo where growers would receive no additional disaster aid beyond subsidized crop insurance and livestock disaster aid.

The "free market" approach is another alternative. Economists often argue government payments (disaster aid, subsidized crop insurance, FSA commodity payments, etc.) are bid into land values and cash rents. Without government payments rents and land values would likely be lower and growers would continue to plant crops. This approach was an argument for the 1995 Farm Bill, but many analyst have concluded it is a politically unacceptable alternative.

There maybe other alternative disaster designs that were not included in this paper. However, policy makers will have to decide if they should provide any disaster aid on insurable crops. Then if disaster aid is the choice, how will those payments be targeted? How will disaster payments affect the future of crop insurance?

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⁵ The companion level 3 is an arbitrary number. If the level were reduced to 3 or a lower number it would require a larger yield loss to collect the maximum payment and lower the USDA costs.

Table 1. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	Ins.				НРО	
1	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3
2	·	86.6	86.6	86.6	86.6	86.6	86.6
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35%	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75%	75%
20	Production Guaranteed		66.7	100.0			
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32
22	Harvest Average Price				2.52	2.52	2.52
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00
24	Final Revenue Guarantee				252.00	252.00	232.00
25	Lost Production		0.0	13.4			
26	Revenue to Count				218.35	218.35	205.35
27	Indemnity Payment ¹		0.00	26.71	33.65	33.65	26.65
28	Less Farmer Paid Premium ²		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	233.91	233.91	254.16	258.09	258.09	251.56
31	Expected Revenue ³	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(83.91)	(83.91)	(63.66)	(59.73)	(59.73)	(66.26)
			-	-	-		-

¹Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

²The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on

The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

3 Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by

³Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 2. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 100% Yield loss

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#		No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	lns.				HPO	
1	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3
2	Current Year's Crop (bu)	0.0	0.0	0.0	0.0	0.0	0.0
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	0.00	0.00	0.00	0.00	0.00	0.00
	Government Payments						
8	% Yield Lost of Planted Crop	100%	100%	100%	100%	100%	100%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75%	75%
20	Production Guaranteed		66.7	100.0			
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32
22	Harvest Average Price				2.52	2.52	2.52
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00
24	Final Revenue Guarantee				252.00	252.00	232.00
25	Lost Production		66.7	100.0			
26	Revenue to Count				0.00	0.00	0.00
27	Indemnity Payment ¹		80.04	200.00	252.00	252.00	232.00
28	Less Farmer Paid Premium ²		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		80.04	193.54	242.53	242.53	223.00
30	Net Revenue Lost\Gain	28.56	108.60	222.10	271.09	271.09	251.56
31	Expected Revenue ³	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost∖Gain	(289.26)	(209.22)	(95.72)	(46.73)	(46.73)	(66.26)
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¹Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

²The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on

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3 Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by

³Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 3. Net Revenue from Traditional Disaster Aid, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 100% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	lns.				НРО	
1		133.3	133.3	133.3	133.3	133.3	133.3
2	Current Year's Crop (bu)	0.0	0.0	0.0	0.0	0.0	0.0
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	0.00	0.00	0.00	0.00	0.00	0.00
	Government Payments						
5	Disaster Coverage Level	65%	65%	65%	65%	65%	65%
6	Bu. Pymt Trigger Yield	86.6	86.6	86.6	86.6	86.6	86.6
7	Max TDA Pymt ¹	103.97	112.64	112.64	112.64	112.64	112.64
8	% Yield Lost of Planted Crop	100%	100%	100%	100%	100%	100%
11	TDA Payment	103.97	112.64	112.64	112.64	112.64	112.64
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	132.53	141.20	141.20	141.20	141.20	141.20
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75%	75%
20	Production Guaranteed		66.7	100.0			
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32
22	Harvest Average Price				2.52	2.52	2.52
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00
24	Final Revenue Guarantee				252.00	252.00	232.00
25	Lost Production		66.7	100.0			
26	Revenue to Count				0.00	0.00	0.00
27	Indemnity Payment ²		80.04	200.00	252.00	252.00	232.00
28	Less Farmer Paid Premium ³		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		80.04	193.54	242.53	242.53	223.00
30	Net Revenue Lost\Gain	132.53	221.24	334.74	383.73	383.73	364.20
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(185.29)	(96.58)	16.92	65.91	65.91	46.38
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¹The maximum disaster aid payment as defined in past Traditional Disaster Aid (TDA) programs will equal the higher of the Farm Service Agency (FSA) program yield, or the Risk Management Agency's (RMA) Actual Production History, or the National Agricultural Statistical Service (NASS) county average yield times 65 percent (60% for uninsured growers) times the MPCI-APH market price election times 65 percent.

²Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

³The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

The average rate for corn will vary by location.

Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 4. Net Revenue from Senate Disaster Aid, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	Ins.				HPO	
1	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3
2	Current Year's Crop (bu)	86.6	86.6	86.6	86.6	86.6	86.6
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35%	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
16	Senate Disaster Payment	12.28	12.28	12.28	12.28	12.28	12.28
17	Total Government Payments	40.84	40.84	40.84	40.84	40.84	40.84
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75%	75%
20	Production Guaranteed		66.7	100.0			
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32
22	Harvest Average Price				2.52	2.52	2.52
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00
24	Final Revenue Guarantee				252.00	252.00	232.00
25	Lost Production		0.0	13.4			
26	Revenue to Count				218.35	218.35	205.35
27	Indemnity Payment ²		0.00	26.71	33.65	33.65	26.65
28	Less Farmer Paid Premium ³		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	246.19	246.19	266.44	270.37	270.37	263.84
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(71.63)	(71.63)	(51.38)	(47.45)	(47.45)	(53.98)
		. ,	•	•	•	•	

¹The Senate Disaster Aid was calculated at 43% of the Direct Payment. Grower must be in a disaster eligible county or meet the test of a 35% yield loss.

²Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.
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³The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

⁴Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 5. Net Revenue from Disaster Aid based on a Bonus Indemnity Payment, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#	,	No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	Ins.				HPO	
1	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3
2	Current Year's Crop (bu)	86.6	86.6	86.6	86.6	86.6	86.6
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35%	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
16	Disaster Pymt = 20% of Indemnity ¹	0.00	0.00	5.34	6.73	6.73	5.33
17	Total Government Payments	28.56	28.56	33.90	35.29	35.29	33.89
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75 %	75%
20	Production Guaranteed		66.7	100.0			
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32
22	Harvest Average Price				2.52	2.52	2.52
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00
24	Final Revenue Guarantee				252.00	252.00	232.00
25	Lost Production		0.0	13.4			
26	Revenue to Count				218.35	218.35	205.35
27	Indemnity Payment ²		0.00	26.71	33.65	33.65	26.65
28	Less Farmer Paid Premium ³		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	233.91	233.91	259.50	264.82	264.82	256.89
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(83.91)	(83.91)	(58.32)	(53.00)	(53.00)	(60.93)
		•		•	•		-

¹Disaster Aid based on crop insurance coverage would pay a bonus indemnity payment and was assumed to be 20% in the example.

²Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

³The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

⁴Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 6. Net Revenue from Disaster Aid based on 10% Increase in CI Coverage, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	Ins.				HPO	
1	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3
2	Current Year's Crop (bu)	86.6	86.6	86.6	86.6	86.6	86.6
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35%	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
16	10% Increased CI Coverage ¹	0.00	0.00	9.72	11.49	11.49	10.15
17	Total Government Payments	28.56	28.56	38.28	40.05	40.05	38.71
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75%	75%
27	Indemnity Payment ²		0.00	43.59	54.93	54.93	46.66
28	Less Farmer Paid Premium ³		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		0.00	46.85	56.94	56.94	47.81
30	Net Revenue Lost\Gain	233.91	233.91	290.47	302.34	302.34	291.87
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(83.91)	(83.91)	(27.35)	(15.48)	(15.48)	(25.95)

¹Disaster Aid based on a 10 point increase in crop insurance coverage. No premium paid by growers for the extra coverage.

²Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

³The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

⁴Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 7. Net Revenue from Companion Disaster Aid Program (CDAP), Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

# #	eriment rayments, crop ins	No	CAT	MPCI	CRC	RA-	RA	,,
"	Production & Sales	Ins.	3 /11	01	Onto	HPO	107	
4	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3	
	Current Year's Crop (bu)	86.6	86.6	86.6	86.6	86.6	86.6	
	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37	
	Sales	205.35	205.35	205.35	205.35	205.35	205.35	
7	Government Payments	200.00	200.00	200.00	200.00	200.00	200.00	
5	Disaster Coverage Level	80%	80%	80%	80%	80%	80%	
6	Bu. Pymt Trigger Yield	106.6	106.6	106.6	106.6	106.6	106.6	
7	1	45.06	45.06	45.06	45.06	45.06	45.06	
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35%	35%	
9	Companion Pymt Level	3	3	3	3	3	3	
10	% Coverage Paid	45.0%	45.0%	45.0%	45.0%	45.0%	45.0%	
11	Companion Zero/92 Payment	20.27	20.27	20.27	20.27	20.27	20.27	
12		0.00	0.00	0.00	0.00	0.00	0.00	
14		28.56	28.56	28.56	28.56	28.56	28.56	
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00	
17	Total Government Payments	48.83	48.83	48.83	48.83	48.83	48.83	
	Crop Insurance							
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3	
19	Coverage Level		50%	75%	75%	75%	75%	
20	Production Guaranteed		66.7	100.0				
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32	
22	Harvest Average Price				2.52	2.52	2.52	
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00	
24	Final Revenue Guarantee				252.00	252.00	232.00	
25	Lost Production		0.0	13.4				
26	Revenue to Count				218.35	218.35	205.35	
27	Indemnity Payment ²		0.00	26.71	33.65	33.65	26.65	
28	Less Farmer Paid Premium ³		0.00	6.46	9.47	9.47	9.00	
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65	
30	Net Revenue Lost\Gain	254.18	254.18	274.43	278.37	278.37	271.83	
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82	
32	Net Revenue Lost\Gain	(63.64)	(63.64)	(43.39)	(39.45)	(39.45)	(45.99)	
		· · · · · ·	-	-			-	

¹The maximum disaster aid payment defined by Graves' Bill is equal to 40% of the past Traditional Disaster Aid (TDA) program that equaled the higher of the Farm Service Agency (FSA) program yield, or the Risk Management Agency's (RMA) Actual Production History, or the National Agricultural Statistical Service (NASS) county average yield times 65 percent times the MPCI-APH market price election times 65 percent.

²Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

³The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

The average rate for corn will vary by location.

Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 8. Net Revenue from Companion Disaster Aid Program (CDAP), Sales, Government Payments, Crop Insurance, a Market Price Increase and a 53% Yield loss

#	:	No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	Ins.				HPO	
1	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3
2	Current Year's Crop (bu)	62.2	62.2	62.2	62.2	62.2	62.2
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	147.43	147.43	147.43	147.43	147.43	147.43
	Government Payments						
5	Disaster Coverage Level	80%	80%	80%	80%	80%	80%
6	Bu. Pymt Trigger Yield	106.6	106.6	106.6	106.6	106.6	106.6
7	Max Pymt ¹	45.06	45.06	45.06	45.06	45.06	45.06
8	% Yield Lost of Planted Crop	53%	53%	53%	53%	53%	53%
9	Companion Pymt Level	3	3	3	3	3	3
10	% Coverage Paid	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
11	Companion Zero/92 Payment	45.06	45.06	45.06	45.06	45.06	45.06
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	73.62	73.62	73.62	73.62	73.62	73.62
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75%	75%
20	Production Guaranteed		66.7	100.0			
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32
22	Harvest Average Price				2.52	2.52	2.52
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00
24	Final Revenue Guarantee				252.00	252.00	232.00
	Lost Production		4.5	37.8			
26	Revenue to Count				156.76	156.76	147.43
27	Indemnity Payment ²		5.39	75.59	95.24	95.24	84.57
28	Less Farmer Paid Premium ³		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		5.39	69.13	85.77	85.77	75.57
30	Net Revenue Lost\Gain	221.05	226.44	290.17	306.81	306.81	296.62
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(96.78)	(91.38)	(27.65)	(11.01)	(11.01)	(21.21)
		. ,	•	•	•		

¹The maximum disaster aid payment defined by Graves' Bill is equal to 40% of the past Traditional Disaster Aid (TDA) program that equaled the higher of the Farm Service Agency (FSA) program yield, or the Risk Management Agency's (RMA) Actual Production History, or the National Agricultural Statistical Service (NASS) county average yield times 65 percent times the MPCI-APH market price election times 65 percent.

²Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

³The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

The average rate for corn will vary by location.

Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

Table 9. Net Revenue from Zero/92, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#	1	No	CAT	MPCI	CRC	RA-	RA
	Production & Sales	Ins.				HPO	
1	Expected Yield	133.3	133.3	133.3	133.3	133.3	133.3
2	Current Year's Crop (bu)	86.6	86.6	86.6	86.6	86.6	86.6
3	Harvest Average Price	2.37	2.37	2.37	2.37	2.37	2.37
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
5	Disaster Coverage Level	92%	92%	92%	92%	92%	92%
6	Bu. Pymt Trigger Yield	122.6	122.6	122.6	122.6	122.6	122.6
7	Max Pymt ¹	38.52	38.52	38.52	38.52	38.52	38.52
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35%	35%
9	Companion Pymt Level	3	3	3	3	3	3
10	% Coverage Paid	81.0%	81.0%	81.0%	81.0%	81.0%	81.0%
11	Companion Zero/92 Payment	31.20	31.20	31.20	31.20	31.20	31.20
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	59.76	59.76	59.76	59.76	59.76	59.76
	Crop Insurance						
18	Crop Insurance APH	133.3	133.3	133.3	133.3	133.3	133.3
19	Coverage Level		50%	75%	75%	75%	75%
20	Production Guaranteed		66.7	100.0			
21	Price Election\Base Price		2.00	2.00	2.32	2.32	2.32
22	Harvest Average Price				2.52	2.52	2.52
23	\$ of Coverage \ Acre		80.04	200.00	232.00	232.00	232.00
24	Final Revenue Guarantee				252.00	252.00	232.00
25	Lost Production		0.0	13.4			
26	Revenue to Count				218.35	218.35	205.35
27	Indemnity Payment ²		0.00	26.71	33.65	33.65	26.65
28	Less Farmer Paid Premium ³		0.00	6.46	9.47	9.47	9.00
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	265.11	265.11	285.36	289.30	289.30	282.76
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(52.71)	(52.71)	(32.46)	(28.52)	(28.52)	(35.06)

¹The maximum zero/92 payment equals the maximum counter cyclical payment. Under zero/92 growers may collect counter cyclical payments for yield loss or price declines. The total payments for yield loss and price loss cannot exceed the maximum counter cyclical payment.

²Crop Revenue Coverage (CRC) Insurance payments were calculated for 2002. The CRC payments in 2002 were higher than MPCI-APH payments. CRC payments were also higher than Revenue Assurance (RA) payments but over the long run RA with the harvest price option (RA-HPO) payments should equal CRC payments. The most common insurance on corn is revenue insurance at 70% or 75% coverage.

³The farmer paid premium was calculated based on the national average farmer paid premium rate for 75% coverage on MCPI-APH, CRC and RA times the example farms' insurance liability. The average farmer paid 2002 premium rate for 75% corn coverage MPCI-APH was \$3.23, \$4.08 CRC, and \$3.88 RA per \$100 of coverage. Because RMA does not separate the RA and RA-HPO statistics, the premium rate is probably over stated for RA without the harvest price option. The average rate for corn will vary by location.

⁴Expected revenue was based on the average yield and the price available for new crop corn. The basis will differ by location and alter the expected revenue. The planting time price was high enough that LDP and counter cyclical payments were not expected. If prices had fallen the expected revenue would have changed little because the government payments would have been added. The grower must cover production expenses, harvest expenses, family living, and loan payments from the expected revenue.

If Crop Insurance is Working, then is Disaster Aid Necessary?

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Check out our WEB at: www.agecon.ksu.edu/risk

If the Insurance Program is

working, and USDA says that

it is working, then why do

farmers "need" disaster aid?

New Safety Net

Direct (Fixed) Payments

 Marketing Loans and Loan Deficiency Payments

Counter-Cyclical Payments

Crop Insurance

Table 1. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#	!	No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35 %	35%	35%	35 %	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00

Table 1. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35 %	35 %	35%	35 %	35 %	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56

Table 1. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35 %	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56

Table 1. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35 %	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56
	Crop Insurance						
19	Coverage Level		50%	75%	75%	75 %	75%
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65

Table 1. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35 %	35%	35%	35%	35 %	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56
	Crop Insurance						
19	Coverage Level		50%	75%	75 %	75 %	75%
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	233.91	233.91	254.16	258.09	258.09	251.56

Table 1. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35 %	35%	35 %	35 %	35%	35 %
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56
	Crop Insurance						
19	Coverage Level		50%	75 %	75 %	75%	75 %
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	233.91	233.91	254.16	258.09	258.09	251.56
31	Expected Revenue ³	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(83.91)	(83.91)	(63.66)	(59.73)	(59.73)	(66.26)

Total Loss

 Insured farmers are better off with Zero Yield than a 35% Loss

Table 2. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 100% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	0.00	0.00	0.00	0.00	0.00	0.00
	Government Payments						
8	% Yield Lost of Planted Crop	100%	100%	100%	100%	100%	100%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56
	Crop Insurance						
19	Coverage Level		50%	75%	75%	75 %	75%
29	Net Indemnity Payment		80.04	193.54	242.53	242.53	223.00

Table 2. Net Revenue under Current Agricultural Policy from Sales, Government Payments, Crop Insurance, a Market Price Increase and a 100% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	0.00	0.00	0.00	0.00	0.00	0.00
	Government Payments						
8	% Yield Lost of Planted Crop	100%	100%	100%	100%	100%	100%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	28.56	28.56	28.56	28.56	28.56	28.56
	Crop Insurance						
19	Coverage Level		50 %	75 %	75 %	75 %	75 %
29	Net Indemnity Payment		80.04	193.54	242.53	242.53	223.00
30	Net Revenue Lost\Gain	28.56	108.60	222.10	271.09	271.09	251.56
31	Expected Revenue ³	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(289.26)	(209.22)	(95.72)	(46.73)	(46.73)	(66.26)

Old Disaster Program

 Insured farmers combined with the 98 Disaster Program and a Zero Yield would Exceed Expected Revenue

Table 3. Net Revenue from Traditional Disaster Aid, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 100% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	0.00	0.00	0.00	0.00	0.00	0.00
	Government Payments						
8	% Yield Lost of Planted Crop	100%	100%	100%	100%	100%	100%
11	TDA Payment	103.97	112.64	112.64	112.64	112.64	112.64
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	132.53	141.20	141.20	141.20	141.20	141.20
	Crop Insurance						
19	Coverage Level		50%	75 %	75 %	75 %	75 %
29	Net Indemnity Payment		80.04	193.54	242.53	242.53	223.00
30	Net Revenue Lost\Gain	132.53	221.24	334.74	383.73	383.73	364.20
31	Expected Revenue⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(185.29)	(96.58)	16.92	65.91	65.91	46.38

The public policy alternatives to address the hole in the safety net include:

- 1. Status quo, no ad hoc disaster aid
- 2. % direct payments to growers regardless of yield losses
- 3. An indemnity bonus payment
- 4. An increased crop insurance coverage level with no added premiums
- 5. Companion disaster aid targeted to the insurance deductible

The public policy alternatives to address the hole in the safety net include:

- 6. Zero/92 would place a second trigger on the counter cyclical payment
- 7. A "free" market policy
- 8. Other alternatives.
- 9. Traditional disaster aid payments that require a 35% yield loss

65/50 Disaster Aid

Coverage set at 65% of "Historical Yield

 Pays 50% of the MPCI Price on lost Production, 45% for uninsured

CAP on Payments

Disaster Aid CAP

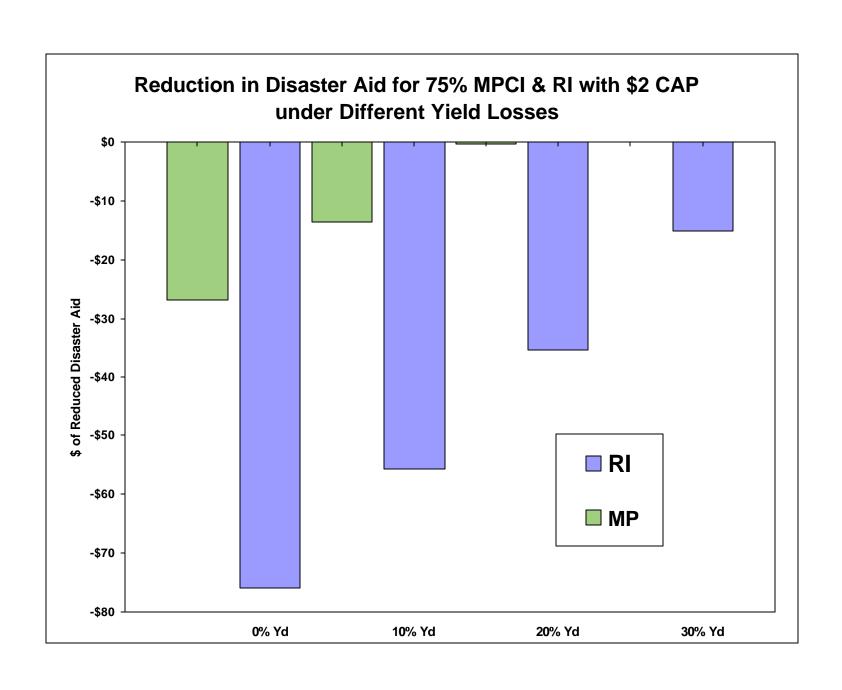
 Disaster Aid + Crop Insurance + Production "Value" cannot Exceed "Expected Crop Value"

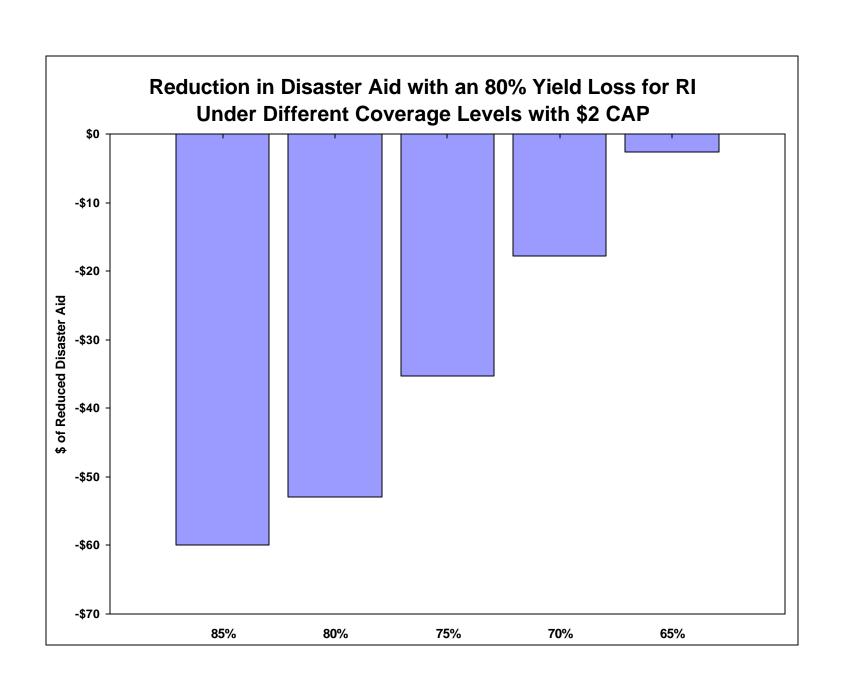
Past CAP based on MPCI Price Election

APH X MPCI Price Election X 95%

Table 1. Net Revenue from 65/50 Disaster Aid, Sales, Government Pymts, Crop Insurance, a Market Price Increase and a 80% Yield loss & a \$2.00 CAP

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	63.18	63.18	63.18	63.18	63.18	63.18
	Government Payments						
5	Disaster Coverage Level	65%	65%	65%	65%	65%	65%
7	Max TDA Pymt ¹	77.98	86.65	86.65	86.65	86.65	86.65
8	% Yield Lost of Planted Crop	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
11	TDA Payment	53.99	59.99	59.99	59.99	59.99	59.99
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
17	Total Government Payments	82.55	88.55	88.55	88.55	88.55	88.55
	Crop Insurance						
19	Coverage Level		50%	75%	75%	75%	75%
29	Net Indemnity Payment		48.05	140.22	175.35	175.35	155.82
30	CI + Yield + Disaster	107.31	161.35	253.53	288.65	288.65	269.12
31	CAP on Disaster & CI & Yield	253.27	253.27	253.27	253.27	253.27	253.27
32	CAP REDUCTION ⁴	0.00	0.00	(0.26)	(35.38)	(35.38)	(15.85)
33	Net Payments	53.99	108.03	199.95	199.95	199.95	199.95
34	Net Revenue Lost\Gain	145.73	199.78	291.69	291.69	291.69	291.69
35	Expected Revenue ⁵	317.82	317.82	317.82	317.82	317.82	317.82
36	Net Revenue Lost\Gain	(172.09)	(118.04)	(26.13)	(26.13)	(26.13)	(26.13)





65/50 Disaster Aid

 Does not cover the "Hole" in the Farm Safety Net, No payment to Growers with a 35% yield loss

- Targets payments to total loss that could have been insured.
- CAP reduces payments to highly insured farmers, giving an incentive to buy less coverage.

Table 2. Net Revenue from 65/50 Disaster Aid, Sales, Government Pymts, Crop Insurance, a Market Price Increase and a 80% Yield loss & a \$2.52 CAP

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	63.18	63.18	63.18	63.18	63.18	63.18
	Government Payments						
5	Disaster Coverage Level	65%	65%	65%	65%	65%	65%
7	Max TDA Pymt ¹	77.98	86.65	86.65	86.65	86.65	86.65
8	% Yield Lost of Planted Crop	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
11	TDA Payment	53.99	59.99	59.99	59.99	59.99	59.99
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
17	Total Government Payments	82.55	88.55	88.55	88.55	88.55	88.55
	Crop Insurance						
19	Coverage Level		50%	75%	75 %	75%	75%
29	Net Indemnity Payment		48.05	140.22	175.35	175.35	155.82
30	CI + Yield + Disaster	121.17	175.22	267.39	302.52	302.52	282.99
31	CAP on Disaster & CI & Yield	319.12	319.12	319.12	319.12	319.12	319.12
32	CAP REDUCTION ⁴	0.00	0.00	0.00	0.00	0.00	0.00
33	Net Payments	53.99	108.03	200.21	235.33	235.33	215.80
34	Net Revenue Lost\Gain	145.73	199.78	291.95	327.08	327.08	307.55
35	Expected Revenue ⁵	317.82	317.82	317.82	317.82	317.82	317.82
36	Net Revenue Lost\Gain	(172.09)	(118.04)	(25.87)	9.25	9.25	(10.28)

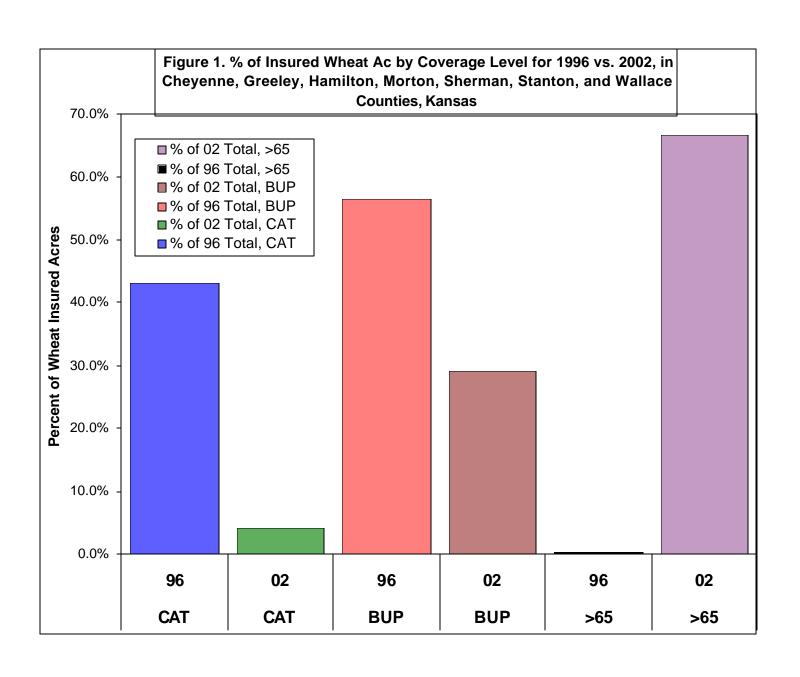


Table 4. Net Revenue from Senate Disaster Aid, Sales, Government Payments, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35 %	35%	35%	35%	35 %
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
16	Senate Disaster Payment	12.28	12.28	12.28	12.28	12.28	12.28
17	Total Government Payments	40.84	40.84	40.84	40.84	40.84	40.84
	Crop Insurance						
19	Coverage Level		50 %	75 %	75 %	75 %	75 %
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	246.19	246.19	266.44	270.37	270.37	263.84
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(71.63)	(71.63)	(51.38)	(47.45)	(47.45)	(53.98)

Table 5. Net Revenue from Disaster Aid based on a Bonus Indemnity Payment, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35 %	35%	35%	35 %	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
16	Disaster Pymt = 20% of Indemnity	0.00	0.00	5.34	6.73	6.73	5.33
17	Total Government Payments	28.56	28.56	33.90	35.29	35.29	33.89
	Crop Insurance						
19	Coverage Level		50 %	75 %	75 %	75 %	75 %
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	233.91	233.91	259.50	264.82	264.82	256.89
31	Expected Revenue⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(83.91)	(83.91)	(58.32)	(53.00)	(53.00)	(60.93)

Table 6. Net Revenue from Disaster Aid based on 10% Increase in CI Coverage, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
8	% Yield Lost of Planted Crop	35%	35%	35%	35 %	35%	35%
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
16	10% Increased CI Coverage	0.00	0.00	26.60	32.76	32.76	30.16
17	Total Government Payments	28.56	28.56	55.16	61.32	61.32	58.72
	Crop Insurance						
19	Coverage Level		50%	75%	75 %	75 %	75 %
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	233.91	233.91	280.76	290.85	290.85	281.72
31	Expected Revenue ³	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(83.91)	(83.91)	(37.06)	(26.97)	(26.97)	(36.10)

Table 7. Net Revenue from Companion Disaster Aid Program (CDAP), Sales, Crop Insurance, a Market Price Increase and a 35% Yield loss

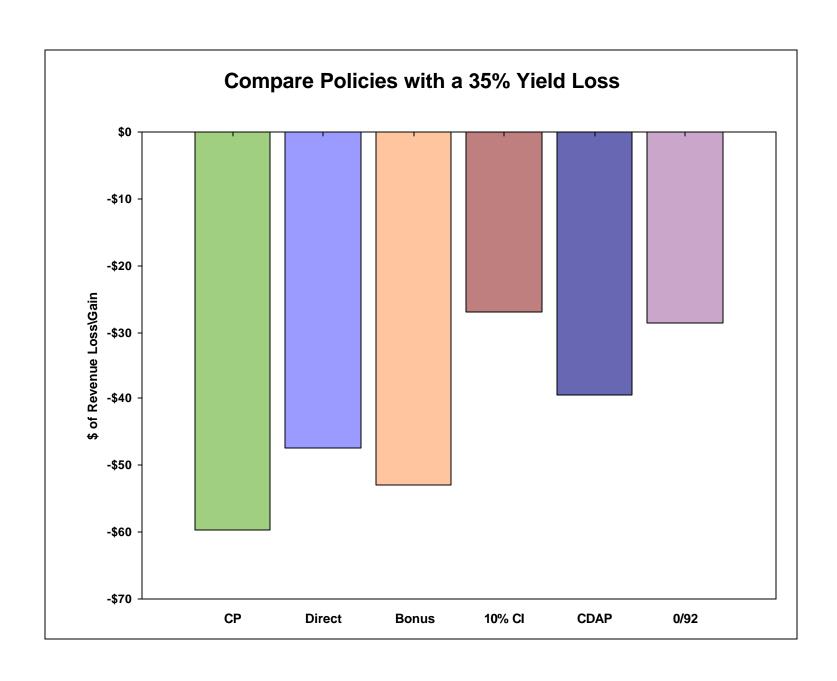
#	!	No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
5	Disaster Coverage Level	80%	80%	80%	80%	80%	80%
8	% Yield Lost of Planted Crop	35%	35%	35%	35 %	35%	35%
9	Companion Pymt Level	3	3	3	3	3	3
10	% Coverage Paid	45.0%	45.0%	45.0%	45.0%	45.0%	45.0%
11	Companion Zero/92 Payment	20.27	20.27	20.27	20.27	20.27	20.27
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	48.83	48.83	48.83	48.83	48.83	48.83
	Crop Insurance						
19	Coverage Level		50%	75 %	75 %	75 %	75 %
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	254.18	254.18	274.43	278.37	278.37	271.83
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(63.64)	(63.64)	(43.39)	(39.45)	(39.45)	(45.99)

Table 8. Net Revenue from Companion Disaster Aid Program (CDAP), Sales, Crop Insurance, a Market Price Increase and a 53% Yield loss

#	<u> </u>	No	CAT	MPCI	CRC	RA-	RA
4	Sales	147.43	147.43	147.43	147.43	147.43	147.43
	Government Payments						
5	Disaster Coverage Level	80%	80%	80%	80%	80%	80%
8	% Yield Lost of Planted Crop	53%	53%	53 %	53%	53%	53 %
9	Companion Pymt Level	3	3	3	3	3	3
10	% Coverage Paid	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
11	Companion Zero/92 Payment	45.06	45.06	45.06	45.06	45.06	45.06
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	73.62	73.62	73.62	73.62	73.62	73.62
	Crop Insurance						
19	Coverage Level		50%	75 %	75 %	75 %	75 %
29	Net Indemnity Payment		5.39	69.13	85.77	85.77	75.57
30	Net Revenue Lost\Gain	221.05	226.44	290.17	306.81	306.81	296.62
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(96.78)	(91.38)	(27.65)	(11.01)	(11.01)	(21.21)

Table 9. Net Revenue from Zero/92, Sales, Government Payments, Crop Insurance, a Market Price Increase and a 35% Yield loss

#		No	CAT	MPCI	CRC	RA-	RA
4	Sales	205.35	205.35	205.35	205.35	205.35	205.35
	Government Payments						
5	Disaster Coverage Level	92%	92%	92%	92%	92%	92%
8	% Yield Lost of Planted Crop	35%	35%	35%	35%	35%	35 %
9	Companion Pymt Level	3	3	3	3	3	3
10	% Coverage Paid	81.0%	81.0%	81.0%	81.0%	81.0%	81.0%
11	Companion Zero/92 Payment	31.20	31.20	31.20	31.20	31.20	31.20
12	Counter Cyclical Pymt * 85%	0.00	0.00	0.00	0.00	0.00	0.00
14	Direct Pymt * 85% * DPY	28.56	28.56	28.56	28.56	28.56	28.56
15	LDP Pymt	0.00	0.00	0.00	0.00	0.00	0.00
17	Total Government Payments	59.76	59.76	59.76	59.76	59.76	59.76
	Crop Insurance						
19	Coverage Level		50%	75%	75%	75 %	75 %
29	Net Indemnity Payment		0.00	20.25	24.18	24.18	17.65
30	Net Revenue Lost\Gain	265.11	265.11	285.36	289.30	289.30	282.76
31	Expected Revenue ⁴	317.82	317.82	317.82	317.82	317.82	317.82
32	Net Revenue Lost\Gain	(52.71)	(52.71)	(32.46)	(28.52)	(28.52)	(35.06)



Private Sector Products?

- 1. Insure crop loss from 75% to 90%
 CRC Plus
 Cargill A+
 85% Coverage Reduced Demand
- 2. Buy Calls to lock in CC payment
- 3. 100% Hedge
- 4. Weather Derivatives
- 5. Subsidies Favor Option Units in CI

Thank You



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