The Agriculture and Food Act of 1981
and Farm Program Provisions for 1982 and 1983

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Due to large supplies of grain and soybeans and surplus of dairy products, government farm programs will play a major role in the markets for these products over the next couple of years, at least. For this reason, a brief review of these programs is warranted.

The Agriculture and Food Act of 1981 (PL97-98) passed late in 1981 is a 4-year authorization bill for many farm programs.[1] The essence of the support levels under this Act for major crops and milk is indicated in Table 1. Minimum regular loan rates and target prices are established through the 1985-86 crop years on feed grains and wheat.

If the average market price for corn or wheat is not more than 105 percent of the loan level in any marketing year, the Secretary may reduce the loan level for the next marketing year, but by no more than 10 percent in any year and no lower than $3.00 for wheat and $2.00 for corn. If the Secretary takes the allowable reduction action, emergency compensation must be made by increasing the target price payments by an amount that the Secretary determines will provide the same total return to producers as if the action on the loan had not taken place. If there are no target price payments in effect, then separate payments must be made.

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[1] Johnson, James, et al., "Provisions of the Agriculture and Food Act of 1981," Staff Report No. AGES811228, NED, ERS, USDA, January 1982.

Table 1.

Support Prices Provided in the Agriculture and
Food Act of 1981 with Comparisons to 1981

| | Unit | Supports Provided in 1981 Act | | | | |
		1981-82	1982-83	1983-84	1984-85	1985-86
Corn						
Loan	$/bu.	2.40	2.55	—————	—Minimum—————→	
Target[a/]	$/bu.	2.40	2.70	2.86	3.03	3.18
Wheat						
Loan	$/bu.	3.20	3.55	—————	— Minimum —————→	
Target[a/]	$/bu.	3.81	4.05	4.30	4.45	4.65
Soybeans	$/bu.	5.02	(75% of 5-year average price)			
Sugar[b/]	¢/bu.		17.00	17.50	17.75	18.00
Milk[c/]	$/cwt.	13.10	13.25	14.00	14.60	
70% of parity[d/]	$/cwt.		14.40	15.30	17.00	
75% of parity[e/]	$/cwt.		15.43	16.39	18.21	

[a/] Minimum.

[b/] Raw cane sugar price. The support for sugar beets will be at such a level as the Secretary determines to be fair and reasonable in relation to sugarcane.

[c/] Minimum support levels in fiscal years ending September 30.

[d/] Minimum support level if Secretary determines purchases will cost less than $1 billion (level estimated).

[e/] Minimum support level if Secretay determines purchases will be less than 4.0 billion pounds (1983 fiscal year) 3.5 billion (1984 fiscal year) and 2.69 billion pounds (1985 fiscal year). The prices are estimated.

A loan on soybeans is established at 75 percent of the simple average of the price received by farmers over the preceding 5 marketing years, excluding the high and low years. In any case, the loan rate may not be less than $5.02.

The 1981 Act requires the Secretary of Agriculture to support the price of the 1982-85 crops of sugar beets and sugarcane. The Secretary is mandated to support the price of domestically grown cane sugar through nonrecourse loans at the levels indicated in Table 1.

Support provisions are also included for cotton, wool, rice, grain, sorghum, oats, barley, and peanuts. The Secretary is authorized to use either an acreage limitation or a set-aside program to reduce the acreage planted to wheat or feed grains, if needed. The acreage limitation program, but not the set-aside, is available to reduce the acreage planted to upland cotton or rice. Paid land diversion authority is also continued for wheat, feed grains, upland cotton, and rice.

The acreage base for each crop for any farm will be the acreage planted for harvest in the previous crop year or the average for the two previous crop years. When an acreage limitation program is in effect on a crop, the acreage of that crop must be reduced and a percentage of the acres on each farm will be devoted to conservation uses. When a set-aside program is in effect, producers would have to set-aside and devote to conserving uses acreage equal to a specified percentage of the acreage planted for harvest. Under a set-aside program, it is actually possible to increase acreage of the controlled crop (at the expense of other crops) as long as the set-aside requirements are met.

The dairy price supports are set both at specific levels as indicated in Table 1 and under certain conditions are based on the parity index. This is a departure from previous legislation in which milk supports were entirely calculated as a percentage of parity. The minimum support levels increase from $13.10

per hundredweight in fiscal 1982 to $14.60 in fiscal 1985. However, the Secretary may increase the supports to 70 or 75 percent of parity under the conditions indicated in the footnotes d and e in Table 1. These higher levels of support as presented in dollar terms are only estimates based on projections of parity and are not official support prices. (Note recent changes in this program discussed later in this report.)

The 1981 Act requires the Secretary to formulate and administer a producer-held storage program for wheat and feed grains. The reserve program is to be accomplished through an original or extended price support loan program of 3 to 5 years' duration. Loans made under such a program must be at the same level as the regular loan, but can be made at a higher level if the Secretary deems appropriate. The Secretary may provide producers storage payments to encourage participation and may waive or adjust interest charges on loans made under this program.

The Secretary may place an upper limit on the amount of wheat and feed grains placed in the reserve, but not less than 700 million bushels on wheat and 1 billion bushels on feed grains. The Secretary has full discretion to determine the release price and may increase the rate of interest on the loans and design other methods to encourage orderly marketing when the release is reached.

Whenever the reserve loan program is in effect, the CCC cannot sell any of the stocks of wheat or feed grains at less than 110 percent of the release price. This restriction does not apply to sales of corn used for gasohol production, commodities which have substantially deteriorated, or to sales or disposals from the emergency feed program or disaster reserve. If the loan reserve program is not in effect, the minimum resale price for CCC stocks will be 115 percent of the current national average loan rate adjusted for market differentials plus reasonable carrying charges.

The 1982 Farm Program

Early in 1982, the Secretary of Agriculture announced details of the reserve program on 1982 crops. On corn, the reserve loan rate was set at $2.90 per bushel with a release price of $3.25. On wheat, the reserve loan was $4.00 with a release price of $4.65. To be eligible for the regular loan, the target prices and the reserve program, producers had to comply with a "Reduced Acreage Program" (RAP). This involved cutting back corn acreage by 10 percent and wheat acreage by 15 percent from the base.

The sign-up for the programs amounted to about 85 percent of the base acreage on wheat and 75 percent on corn. Of the wheat producers who signed up, about 57 percent actually complied, bringing the acreage on participating farms up to nearly 50 percent of the national base acreage. Only about 40 percent of the corn producers who signed up complied, resulting in total compliance at only about 30 percent of the base. While producers cut acreage on both corn and wheat in 1982, weather was favorable and record crops were harvested on wheat, soybeans and corn.

The 1983 Acreage Reduction and Required Land Diversion Program

Because U.S. stock levels were high and likely to accumulate in the 1982-83 crop year, the Secretary of Agriculture announced in August a 15 percent Reduced Acreage Program and a 5 percent paid land diversion for the 1983 crop wheat. The program is similar to the one on the 1982 crop with some important exceptions in addition to the paid land diversion. The regular loan rate was raised to $3.65, 10 cents higher than on the 1982 crop. The target price increased from $4.05 on the 1982 crop to $4.30 on the 1983 crop--the minimum established in the Act. This means a maximum federal budget exposure of 65 cents per bushel should market prices equal the regular loan rate ($3.65) or below in June-October 1983.

Participants are eligible for direct payments equal to the target price minus the market price in the first 5 months of the crop year, up to the difference between the target and loan. The 5 percent land diversion payment will be calculated by multiplying $2.70 per bushel times the farm yield times the acres diverted.

The Omnibus Budget Reconciliation Act of 1982, passed in August 1982, requires that the bases for wheat, feed grains and rice for 1983 be the same as those established for the farm for 1982, adjusted to reflect crop rotations and other factors the Secretary determines should be considered in determining a fair and equitable base. This means that farmers will have the same base in 1983 as in 1982 whether or not they participated in the program in 1982.

A feature of the 1983 program is that participants receive an advance payment equal to 50 percent of their estimated 1983 crop deficiency payment and diversion payment at the time they sign up. The Secretary announced in late September that the estimated deficiency payment is the maximum 65 cents on wheat, making the advance payment 32.5 cents per bushel times the farm yield times the acres intended to be planted. The advance payment on the diversion payment would be $1.35 times the farm yield times 5 percent of the farm base.

The feed grain program involves a 20 percent acreage reduction of which half (10 percent of the base) will be a paid diversion. The seriousness of the feed grain over-supply apparently convinced the administration to offer the 10 percent land diversion rather than 5 percent that was in the original plan.

The regular loan was increased to $2.65 on corn, 10 cents higher than on the 1982 crop and above the minimum authorized. The regular loan will be $2.52 on sorghum, $2.16 on barley, $1.36 for oats, and $2.25 for rye. The 1983 target prices were set at $2.86 for corn, $2.72 for sorghum, $2.60 for barley, and $1.60 for oats.

Estimated deficiency payments were established as follows: 21 cents for corn, 20 cents for sorghum, and 15 cents for barley. Advance deficiency payments are available at sign-up at half those rates. (Deficiency payments = the indicated rate per bushel times the farm yield times intended plantings.)

The diversion payment on corn will be $1.50 per bushel times the farm yield times 10 percent of the base acreage for the farm. One-half of these payments are also available at sign-up. Diversion payments on sorghum will be $1.50; on barley, $1.00; and on oats, $.75 per bushel.

As with wheat, farmers will have the same base as in 1982 whether or not they complied with the 1982 Feed Grain Program. This is an important change from the Agriculture and Food Act of 1981 for some producers who had a low base and expected to increase it with expanded acres in 1982.

The Payment in Kind Program

Recognizing that the acreage reduction and required land diversion program might not achieve the objectives for bringing supplies in adjustment to demands, Secretary Block revealed in early November that the USDA was seriously considering a Payment in Kind (PIK) program. The advantage to such a program is that it would both reduce stocks and cut back on Federal cash outlays. Efforts to obtain Congressional sanctions for the program failed but the Administration felt that they had sufficient authority to implement the program. The main concerns were whether payments in kind would count against a $50,000 upper limit that a producer can receive in government payments and whether CCC stocks could be released as PIK when the minimum sale price is 110 percent of the release price of the reserves (115 percent of the regular loan rate when the reserve program is not in effect).

President Reagan announced the PIK program on January 11. Sign-up began on January 24 with March 11 established as a deadline for both PIK and the previously announced acreage reduction and diversion program (ARP-DV).

The PIK program is an option for those complying with ARP-DV and not an alternative exclusive of ARP-DV. The option is to place 10 to 30 percent of the base acreage into the program in addition to the 20 percent in ARP-DV. For this, corn producers will receive 80 percent of their base yield on the PIK acres and wheat producers 95 percent of their base yield. The higher rate for wheat producers reflects the fact that winter wheat had already been planted and extra expense is involved. (Spring wheat producers will also receive 95 percent.)

Another option some farmers may be able to exercise is to reduce planted acreage of the crop to zero and devote an acreage equal to the base to approved conservation uses. The operator bids by specifying the percent of the farm program yield per acre that is acceptable as compensation for participation. If accepted, the bid applies on the total PIK acreage diverted. The county ASC committee will not accept bids that exceed the per acre offer rate for PIK diversion, i.e., 80 percent on corn and 95 percent on wheat.

Bids will be submitted as sealed bids through March 11, 1983. In an open public meeting on March 18, the county ASC committee will open all bids and arrange them from the lowest percentage to the highest. If the county is authorized to accept bids, the bid with the lowest percentage will be accepted first.

The number of whole base bids accepted will depend on the level of sign-up in the 10-30 percent PIK, the supply-demand situation for each commodity, conditions in the local community, and other relevant factors. However, in no case would the amount diverted exceed 50 percent of the total base in the county. CCC reserves the right to reject any or all bids.

Producers, then, have the following options on 1983 crops:

1. Do not participate.

2. Participate under the 20 percent ARP-DV.

3. Participate in ARP-DV and the 10-30 percent PIK.

4. Participate in ARP-DV and the whole base PIK.

The grain involved as payment in kind will be made available from CCC stocks or inventories under the regular or farmer owned reserve loans. Complying producers with outstanding CCC loans (regular or farmer owned reserve) must allow CCC to use loan collateral for the PIK. Those with no outstanding CCC loans may receive PIK by acquiring the commodity from an approved warehouse.

PIK grain will be available at the time that roughly corresponds to harvest. In Michigan, this will be November 1 on corn and August 15 on wheat. The producer has 5 months from that date to take title to the commodity. CCC will pay storage for that period at the rate of 26.5 cents per bushel per year (.0726 cents per bushel daily).

A producer with a farm stored Farmer Owned Reserve (FOR) loan will receive an additional 7 months storage payment (less any unearned storage) beginning with the PIK availability date. In essence, these producers will receive additional compensation of 15.5 cents per bushel. The reason for special consideration for these producers is that some of them built farm storage structures to store the FOR grain. To require early liquidation of the FOR grain may cause financial hardships unless some additional assistance is granted.

Complying producers with regular loans outstanding as of March 11 may not redeem or forfeit loan quantities that would result in an outstanding amount less than the PIK. To compensate producers whose loans mature before the availability date, the CCC will pay for the storage (at 26.5 cents per bushel per year) from loan maturity to the availability date and up to 5 months beyond the availability date.

Example Budgets for Corn and Wheat

To illustrate the computation of expected returns from participating in the feed grain and wheat programs, examples under different farm price levels follow.

Acreage Reduction and Required Diversion Program (20 Percent)

In Table 2, a budget on corn is presented for an example farm under three alternative price assumptions for October 1983-February 1984; $2.25, 2.75 and 3.00. Under the $2.25 assumption, note that the net loan rate is above the price assumption. Therefore, in that case, the return from the loan would enter the calculations. The producer would receive the full 21 cent deficiency payment plus a diversion payment, and the use of a 50 percent advance on these payments (calculated at 15% times three fourths of a year). Subtracting the variable costs on the 400 acres planted and the cost for a cover crop on acres put into conserving uses, the net return to the participant over variable costs was $57,058.

The nonparticipant would net only $43,750 over variable costs (Table 2). Since the $57,058 net to the participant represents the minimum return guaranteed by the program, what price would the nonparticipant have to receive to equal that net return?

The computation is solving the equation:

55,000 bu x FPCN - $80,000 = $57,058

55,000 bu x FPCN = $137,058

FPCN = $137,058 ÷ 55,000 bu

FPCN = $2.49

where FPCN = farm price of corn in October 1983-February 1984.

TABLE 2

BUDGET FOR PARTICIPATION IN THE ACREAGE REDUCTION AND REQUIRED DIVERSION PROGRAM ON CORN IN 1983: AN EXAMPLE

Situation: Producer has a 500-acre corn base, expected yield of 110 bushels per acre on the entire base, 114 bushels on the reduced acreage, and a program yield of 105 bushels. Variable costs of production are $160 per acre and $10 per acre will be required for a cover crop on land diverted to conserving uses. Commercial storage costs are 4 cents per bushel per month and interest rates are 15 percent. Producer plants 400 acres, puts 100 acres to conserving uses, and takes out regular loan.

		Price Assumption for Oct.-1983-Feb. 1984		
			Participant	
(1)	Average farm price in Oct. 1983-Feb. 1984	2.25	2.75	3.00
		$	$	$
(2)	Regular loan rate	2.65	2.65	2.65
(3)	Less storage costs for 9 months[1]/ (9 x 4¢) =	.36	.36	.36
(4)	Net loan rate	2.29	2.29	2.29
(5)	Gross from loan (minimum) = (4) x expected production = 2.29 x 114 bu. x 400A =	104,424	104,424	104,424
	or from sale at harvest = (1) x 114 bu. x 400A =	102,600	125,400	136,800
(6)	Deficiency payment	.21	.11	0
(7)	Value of 50% advance on deficiency payment = .15 x .75 year x 50% x .21 =	.01181	.01181	.01181
(8)	Total value of deficiency payment = (6) + (7) x 105 bu. x 400A =	9,316	5,116	496
(9)	Diversion payment	1.50	1.50	1.50
(10)	Value of 50% advance on diversion payment = .15 x .75 year x 50% x 1.50 =	.0844	.0844	.0844
(11)	Total value of diversion payment = (9) + (10) x 105 bu. x 50A =	8,318	8,318	8,318
(12)	Gross return from the crop = higher return under (5) + (8) + (11) =	122,058	138,834	145,614
(13)	Variable cost per acre planted =	160	160	160
(14)	Variable costs on planted acres = $160 x 400A =	64,000	64,000	64,000
(15)	Cost for cover crop on diverted acres per acre	10	10	10
(16)	Cost for cover crop = $10 x 100A =	1,000	1,000	1,000
(17)	Net return to participant over variable costs = (12) - (14) - (16) =	57,058	73,834	80,614
			Nonparticipant	
(18)	Gross to non-participant = (1) x 110 bu. x 500A =	123,750	151,250	165,000
(19)	Variable costs to non-participant on planted acres over variable costs = $160 x 500A =	80,000	80,000	80,000
(20)	Net return to non-participants over variable costs = (18) - (19) =	43,750	71,250	85,000

Break-even farm price in Oct. 1983-Feb. 1984 between participating and not participating = $2.80

[1]/ Interest on the loan is not deducted since it is waived if the farmer delivers to the CCC.

The 55,000 bushels grown by the nonparticipant has to be sold at $2.49 per bushel in order to net the minimum guarantee from the program. Unless a producer can forward price corn for more than $2.49 per bushel, the profit potential is greater by participating and the risks from both yeilds and prices are less.

The decision of whether or not to comply may also depend on the breakeven price between participating and not participating. Note in Table 2 that if farm prices on corn average $2.75 that the deficiency payment is reduced to 11 cents. Also the nonparticipant is receiving higher prices on more bushels than is the participant. At $3.00, however, the deficiency payment is zero and the net return to participation is less than to nonparticipation. The breakeven price is somewhere between $2.75 and $3.00.

The computation is discussed in connection with Table 6. The answer is $2.80. This means that if producers expect the farm price of corn in October 1983 to February 1984 to average less than $2.80, they would profit by participating in the program.

An example on wheat is presented in Table 3. Following the same type of computations as on corn, the minimum price guarantee from the program would be $3.74 per bushel. The breakeven price between participating and not participating would be $4.08.

TABLE 3

BUDGET FOR PARTICIPATION IN THE ACREAGE REDUCTION AND
REQUIRED DIVERSION PROGRAM ON WHEAT IN 1983: AN EXAMPLE

Situation: Producer has a 100-acre wheat base, expected yield of 45 bushels per acre on the entire base, 47 bushels on the reduced acreage, and a program yield of 42 bushels. Variable costs of production are $90 per acre and $10 per acre will be required for a cover crop on the land diverted to conserving uses. Commercial storage costs are 4 cents per bushel per month and interest rates are 15 percent. Producer plants 80 acres, puts 20 acres to conserving uses, and takes out regular loan.

		Price Assumption for June-October, 1983		
		Participant		
(1)	Average farm price in June-Oct.	3.25 $	4.00 $	4.50 $
(2)	Regular loan rate	3.65	3.65	3.65
(3)	Less storage costs for 9 months[1]/ (9 x 4¢) =	.36	.36	.36
(4)	Net loan rate	3.29	3.29	3.29
(5)	Gross from loan (minimum) = (4) x expected production = 3.29 x 47 bu. x 80A = or from sale at harvest = (1) x 47 bu. x 80A =	12,370 12,220	12,370 15,040	12,370 16,920
(6)	Deficiency payment	.65	.30	0
(7)	Value of 50% advance on deficiency payment = .15 x .50 year x 50% x .65 =	.0244	.0244	.0244
(8)	Total value of deficiency payment = (6) + (7) x 42 bu. x 80A =	2,266	1,090	82
(9)	Diversion payment	2.70	2.70	2.70
(10)	Value of 50% advance on diversion payment = .15 x .50 year x 50% x 2.70 =	.1012	.1012	.1012
(11)	Total value of diversion payment = (9) + (10) x 42 bu. x 5A =	599	599	599
(12)	Gross return from the crop = higher return under (5) + (8) + (11) =	15,224	16,718	17,590
(13)	Variable cost per acre planted =	90	90	90
(14)	Variable costs on planted acres = $90 x 80A =	7,200	7,200	7,200
(15)	Cost for cover crop on diverted acres per acre	10	10	10
(16)	Cost for cover crop = $10 x 20A =	200	200	200
(17)	Net return to participant over variable costs = (12) - (14) - (16) =	7,824	9,318	10,190
		Nonparticipant		
(18)	Gross to non-participant = (1) x 45 bu. x 100A =	14,625	18,000	20,250
(19)	Variable costs to non-participant on planted acres over variable costs = $90 x 100A =	9,000	9,000	9,000
(20)	Net return to non-participants over variable costs = (18) - (19) =	5,625	9,000	11,250

Break-even farm price in June-October 1983
between participating and not participating = $4.09

[1]/ Interest on the loan is not deducted since it is waived if the farmer delivers to the CCC.

Payment in Kind (30 Percent)

Tables 4 and 5 extend the examples in Tables 2 and 3 to the option of participating in the PIK program at the 30 percent level (with four levels of price rather than three). In this case, only half of the base is planted. The value of the payments in kind is assumed to be equal to the farm price in the first 5 months of the crop year. Receipts from the payment in kind are calculated as indicated in line (12). On corn, the computation is 80 percent of the product of the assumed price in line (1) times the base yield times 30 percent of the base acres.

In this example, net returns to participating in PIK at the 30 percent level are greater than for the minimum 20 percent Acreage Reduction and Diversion program. Net returns to participation in the corn PIK program was higher than nonparticipation at all levels of prices examined--even at the $3.25 level added to Table 4. In the wheat PIK program, returns were very close between "in" and "out" at the highest level budgeted--$5.00 per bushel.

As was calculated for ARP-DV, the minimum price guarantees in this example on 30 percent PIK were $2.64 on corn and $3.91 on wheat. The breakeven prices between participating and not participating were $3.32 on corn and $4.87 on wheat.

While the comparisons were not made between participating in PIK at the 10 or 30 percent levels, the computations for this example would indicate an advantage to the 30 percent PIK. In other words, this producer would show greater net returns from putting 30 percent of the base in PIK than 10 percent.

TABLE 4

BUDGET FOR PARTICIPATION IN THE PIK
PROGRAM (30% LEVEL) ON CORN IN 1983: AN EXAMPLE

Situation: Same as in example where producer participates in the previously announced program. Assumes that, in addition, the producer enters 30 percent of the farm base in the Payment in Kind (PIK) program and that the value of the corn received in this program is equal to the indicated market price.

		Price Assumptions for October 1983-Feb. 1984			
		2.25	2.75	3.00	3.25
		Participant			
		$	$	$	$
(2)	Regular loan rate	2.65	2.65	2.65	2.65
(3)	Less storage costs for 9 months[1]/ (9 x 4¢) =	.36	.36	.36	.36
(4)	Net loan rate	2.29	2.29	2.29	2.29
(5)	Gross from loan (minimum) = (4) x expected production = 2.29 x 114 x 250A =	65,250	65,250	65,250	65,250
	or from sale at harvest = (1) x 114 x 250A =	64,250	78,500	85,500	92,625
(6)	Deficiency payment	.21	.11	0	0
(7)	Value of 50% advance on deficiency payment = .15 x .75 year x 50% x .21 =	.01181	.01181	.01181	.01181
(8)	Total value of deficiency payment = [(6) + (7)] x 105 x 250A =	5,823	3,198	310	310
(9)	Diversion payment	1.50	1.50	1.50	1.50
(10)	Value of 50% advance on diversion payment = .15 x .75 year x 50% x 1.50 =	.0844	.0844	.0844	.0844
(11)	Total value of diversion payment = [(9) + (10)] x 105 x 50A =	8,318	8,318	8,318	8,318
(12)	Value of PIK = 80% x (1) x 105 x 150 =	28,350	34,650	37,800	40,950
(13)	Gross return from the crop = higher return under (5) + (8) + (11) =	107,741	124,666	131,928	142,203
(14)	Variable costs per acre planted	160	160	160	160
(15)	Variable costs on planted acres = $160 x 250	40,000	40,000	40,000	40,000
(16)	Cost for cover crop on diverted acres per acre	10	10	10	10
(17)	Cost for cover crop = $10 x 250A =	2,500	2,500	2,500	2,500
(18)	Net return to participant over variable costs = (13) - (15) - (17) =	65,241	82,166	39,428	99,703
		Non-Participant			
(19)	Gross to non-participant = (1) x 110 bu x 500A =	123,750	151,250	165,000	179,000
(20)	Variable costs to non-participants on planted acres = $160 x 500A	80,000	80,000	80,000	80,000
(21)	Net return to non-participants over variable costs = (19) - (20)	43,750	71,250	85,000	99,000

(1) Average farm price in October 1983-Feb. 1984

Break-even farm price
in Oct. 1983-Feb. 1984
between participating
and not participating = $3.32

[1]/Interest on the loan is not deducted since it is waived if the farmer delivers to the CCC.

TABLE 5

BUDGET FOR PARTICIPATION IN THE PIK
PROGRAM (30% LEVEL) ON WHEAT IN 1983: AN EXAMPLE

Situation: Same as in example where producer participates in the previously announced program. Assume that, in addition, the producer enters 30 percent of the farm base in the Payment in Kind (PIK) program and that the value of the wheat received in this program is equal to indicated market price.

		Price Assumption for June-October, 1983			
(1)	Average farm price in June-Oct.	3.25	4.00	4.50	5.00
		Participant			
		$	$	$	$
(2)	Regular loan rate	3.65	3.65	3.65	3.65
(3)	Less storage costs for 9 months[1]/ (9 x 4¢) =	.36	.36	.36	.36
(4)	Net loan rate	3.29	3.29	3.29	3.29
(5)	Gross from loan (minimum) = (4) x expected production = 3.29 x 47 x 50A =	7,732	7,732	7,732	7,732
	or from sale at harvest = (1) x 47 x 50A =	7,638	9,400	10,575	11,750
(6)	Deficiency payment	.65	.30	0	0
(7)	Value of 50% advance on deficiency payment = .15 x .50 year x 50% x .65	.0244	.0244	.0244	.0244
(8)	Total value of deficiency payment = [(6) + (7)] x 42 bu x 50A =	1,416	681	51	51
(9)	Diversion payment	2.70	2.70	2.70	2.70
(10)	Value of 50% advance on diversion payment = .15 x .50 year x 50% x 2.70	.1012	.1012	.1012	.1012
(11)	Total value of diversion payment = [(9) + (10)] x 42 x 5A =	588	588	588	588
(12)	Value of PIK = 95% x (1) x 42 x 30	3,891	4,788	5,386	5,985
(13)	Gross return from the crop = higher return under (5) + (8) + (11) =	13,627	15,457	16,600	18,374
(14)	Variable costs per acre planted	90	90	90	90
(15)	Variable costs on planted acres = $90 x 50A =	4,500	4,500	4,500	4,500
(16)	Cost for cover crop on diverted acres per acre	10	10	10	10
(17)	Cost for cover crop = $10 x 50A	500	500	500	500
(18)	Net return to participant over variable costs = (13) - (15) - (17)	8,627	10,457	11,600	13,374
		Non-Participant			
(19)	Gross return to non-participant = (1) x 45 bu x 100A	14,625	18,000	20,250	22,500
(20)	Variable costs to non-participant on planted acres = $90 x 100A =	9,000	9,000	9,000	9,000
(21)	Net return to non-participant over variable costs = (19) - (20) =	5,625	9,000	11,250	13,500

Break-even farm price
in June-Oct. 1983
between participating
and not participating = $4.87

[1]/Interest on the loan is not deducted since it is waived if the farmer delivers to CCC.

Whole Base PIK

At any given price level, the producer could calculate the breakeven bid for the Whole Base PIK against the best alternative option. For example, at $2.75 on corn, the 30 percent PIK gave the highest net returns at $82,166. What percent of the base yield could the producer bid to equal that amount under Whole Base PIK? The equation is:

Bid x (Program yield x 90% of Base Acres x Farm Price of Corn) + Diversion Payment + Interest on Advance on Diversion Payment - Cost of cover crop = $82,166

Filling in the numbers and solving:

Bid x (105 x 90% x 500 x 2.75) + 8318 - 5000 = $82,166

Bid x (129,938) + 3318 = $82,166

Bid x (129,938) = 78,848

Bid = 61 percent

Using a similar formula on wheat and an assumed price of $4.00 per bushel, the breakeven bid was 68 percent. Most examples in which the base acres and yields are reasonably close to the current levels, the breakeven bids are near two-thirds of the base yields. Forms for calculating these figures are provided in Tables 6 and 7.

General Worksheets on Corn and Wheat

As a guide for calculating alternative budgets for individual farmers, Tables 6 and 7 were developed for corn and wheat respectively. As a suggestion, several copies of these worksheets could be reproduced and used to examine alternative price assumptions given the particular situation on an individual farm.

The procedure would be similar to that discussed for the example farm. One difference is that some farmers may have a base acreage different from the area they would normally plant. Most commonly, the base acreage would be less than the acres they intend to harvest in 1983. In this case, the net return over variable costs from other crops on those acres (adjusted to the corn or wheat base as standard) must be added to the participants' returns.

The easiest way to use Tables 6 and 7 is to assume a farm price and calculate the resultant net return for columns A through D. Then using the most attractive alternative as a base, the breakeven percentage farmers could bid on the Whole Base PIK alternative could be calculated as described in the last footnote in the tables.

For the more venturesome, the breakeven prices between not participating and participating under B, C and D could be computed by a procedure indicated in footnotes 1 and 3. The breakeven levels are only guidelines. There are other considerations. Yields may be higher as acreage is reduced. Both price and yield risks will likely be reduced. For the whole base PIK, the yield risk is eliminated although the price risk remains. Since PIK grain is not eligible for loans, the price risk on the downside is greater than under the other programs.

Line	Non-Partici-pant A	20% ARP and Diversion B	10% PIK C	30% PIK D	Entire Base E
Gross from Crop Grown					
(1) Farm price of corn in Oct. '83-Feb. '84 (FPCN)[1]					
(2) Expected yield on harvested acres					✕
(3) Percent of base harvested[2]		80%	70%	50%	0
(4) Gross = (1) x (2) x (3)					✕
Deficiency Payment					
(5) Program yield	✕				
(6) (3) x (5)	✕				✕
(7)[3] a. ($2.86-FPCN) if $2.65 < FPCN < $2.86	✕				✕
b. $.21 if FPCN ≤ $2.65	✕	.21	.21	.21	✕
c. 0 if FPCN ≥ $2.86	✕	0	0	0	✕
(8) Payment = (6) x (7)	✕				✕
(9) Interest on advance = .01181 x (6)	✕				✕
Diversion Payment					
(10) (5) x .15	✕				
(11) Interest on advance = .00844 x (5)	✕				
Value of PIK					
(12) Percent of base	✕	✕	10%	30%	90%
(13) .8 x (1) x (5) x (12)	✕	✕			✕
(14) (bid ___%) x (1) x (5) x 90%	✕	✕	✕	✕	✕
Gross From Crop Grown and Program					
(15) (4) + (8) + (9) + (10) + (11) + (13) + (14)					
Variable (Direct) Costs					
(16) Per acre					✕
(17) (3) x (16)					✕
Cost for Cover Crop					
(18) Per acre	✕				
(19) [100% - (3)]	✕	20%	30%	50%	100%
(20) (18) x (19)	✕				
Net Return over Variable Costs					
(21) (15) - (17) - (20)					
(22) Net return over variable costs per base acre on alternative crops if (3) A is not 100%[4]					
(23) Adjusted net return (21) + (22)					

Return Per Base Acre

FOOTNOTES TO TABLE 6

[1]/ Set at expected level or solve FPCN for breakeven price. This is accomplished by setting the equation for net return over variable costs in columns B, C and D equal to the equation for net returns over variable costs in column A, then solving for FPCN.

[2]/ The value in column A may be less than or greater than 100 percent. In that case, estimate net returns over variable costs from the use of those acres in alternate crops and enter in line (22). (see footnote [4]/).

[3]/ In calculating the breakeven farm price of corn (FPCN), first use (7c), i.e., zero, in the formula. If the answer for FPCN is less than $2.86, then use (7a) in the formula. If this answer is less than $2.65, use (7b), i.e., .21, in the formula.

[4]/ This line is to be calculated if the value in line 3, column A is different from 100 percent. If below 100 percent, calculate the net return over variable costs for the alternative crop per acre and multiply that number by (100 percent minus the value in line 3, Column A). Enter this product in line 22, column A only. If line 3, column A is greater than 100 percent (i.e., base acreage is less than normal plantings of corn) calculate the net returns over variable costs per acre for the alternative crop that would be grown in place of corn, multiply this number by (the value in line 3, column A less 100 percent). Enter this product in line 22, columns B, C, D and E.

[5]/ Set the value in line (1) for all the alternatives at the expected price of wheat. Calculate the net return over variable costs in column A, B, C and D. Enter the highest value obtained in line (21) or (23), if applicable, in line (21) or (23) of column E. Add the value in (18E) to (21E) and enter this figure in (15E). Deduct from (15E) the sum of (10E) and (11E) and enter this difference in (14E). Solve for the breakeven bid with the following equation. Breakeven bid = (14E) ÷ (1E) x (5E) x .90.

Table 7. Worksheet for Evaluating Options Under the 1983 Wheat Program

Line		Return Per Base Acre				
		Non-Partici-pant	20% ARP and Diversion	10% PIK	30% PIK	Entire 5/ Base
		A	B	C	D	E
Gross from Crop Grown						
(1)	Farm price of wheat in June-Oct. 1983 (FPWH)1/					
(2)	Expected yield on harvested acres					✕
(3)	Percent of base harvested2/		80%	70%	50%	0
(4)	Gross = (1) x (2) x (3)					✕
Deficiency Payment						
(5)	Program yield	✕				
(6)	(3) x (5)	✕				✕
(7)3/	a. ($4.30-FPWH) if $3.65 < FPWH < $4.30	✕				✕
	b. $.65 if FPWH ≤ $3.65	✕	65	65	65	✕
	c. 0 if FPWH ≥ $4.30	✕	0	0	0	✕
(8)	Payment = (6) x (7)	✕				✕
(9)	Interest on advance = .0244 x (6)	✕				✕
Diversion Payment						
(10)	(5) x .135	✕				
(11)	Interest on advance = .005063 x (5)	✕				
Value of PIK						
(12)	Percent of base	✕	✕	10%	30%	95%
(13)	.95 x (1) x (5) x (12)	✕	✕			
(14)	(bid ___ %) x (1) x (5) x 95%	✕	✕			
Gross From Crop Grown and Program						
(15)	(4) + (8) + (9) + (10) + (11) + (13) + (14)					
Variable (Direct) Costs						
(16)	Per acre					✕
(17)	(3) x (16)					✕
Cost for Cover Crop						
(18)	Per acre 4/	✕				
(19)	[100% - (3)]	✕	20%	30%	50%	100%
(20)	(18) x (19)	✕				
Net Return over Variable Costs						
(21)	(15) - (17) - (20)					
(22)	Net return over variable costs per base acre on alternative crops if (3) A is not 100%5/					
(23)	Adjusted net return (21) + (22)					

FOOTNOTES TO TABLE 7

[1]/ Set at expected level or solve FPWH for breakeven price. This is accomplished by setting the equation for net return over variable costs in columns B, C and D equal to the equation for net returns over variable costs in column A, then solving for FPWH.

[2]/ The value in column A may be less than or greater than 100 percent. In that case, estimate net returns over variable costs from the use of those acres in alternate crops and enter in line (22) (see footnote [5]/).

[3]/ In calculating the breakeven farm price of wheat (FPWH), first use (7c), i.e., zero, in the formula. If the answer for FPWH is less than $4.30, then use (7a) in the formula. If this answer is less than $3.65, use (7b), i.e., .65, in the formula.

[4]/ Include additional costs related to the planting and plowing under of winter wheat in order to comply. Deduct from these costs value for hay and grazing.

[5]/ This line is to be calculated if the value in line 3, column A is different from 100 percent. If below 100 percent, calculate the net return over variable costs for the alternative crop per acre and multiply that number by (100 percent minus the value in line 3, column A). Enter this product in line 22, column A only. If line 3, column A is greater than 100 percent (i.e., base acreage is less than normal plantings of corn) calculate the net returns over variable costs per acre for the alternative crop that would be grown in place of corn, multiply this number by (the value in line 3, column A less 100 percent). Enter this product in line 22, columns B, C, D and E.

[6]/ Set the value in line (1) for all the alternatives at the expected price of wheat. Calculate the net return over variable costs in columns A, B, C and D. Enter the highest value obtained in line (21) or (23), if applicable, in line (21) or (23) of column E. Add the value in (18E) to (21E) and enter this figure in (15E). Deduct from (15E) the sum of (10E) and (11E) and enter this difference in (14E). Solve for the breakeven bid with the following equation. Breakeven bid = (14E) ÷ (1E) x (5E) x .95.

Current and Future Support Rates

The recent and projected levels of the regular loan, target, reserve loan and reserve release or trigger prices are compiled in Table 8. The loan levels for the reserve on feed grains and wheat will be the same as for the regular loan and immediate entry will not be allowed in 1983 crops. The grain must first be placed in the 9 month regular loan.

The projected targets on corn and wheat are the minimum rates provided in the Agriculture and Food Act of 1981. The regular loan was set at a level reflecting the same difference with the target as in 1983. The reserve loan was set at the same level as the regular loan. These projections are assumed and not derived from any legislation. Levels for other feed grain were set at levels consistent with corn.

Modified Dairy Program

Through Congressional action in August, the dairy price support program will be changed for the period from October 1982 to September 1984. The basic provisions are:[1]

(1) Price support level for manufacturing grade milk which is used in making cheese, butter, and similar dairy products will remain at the current level of $13.10 per cwt. for fiscal years 1983 and 1984--ending September 30, 1984.

(2) For fiscal year 1985, beginning on October 1, 1984, the support level would be at the percentage of parity which $13.10 per cwt. represents on October 1, 1983. It is estimated that will be about 63 percent.

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[1] Glynn McBride, "Market Outlook," _Michigan Farmer_, September 3, 1982.

Table 8

Support Rates on Feed Grains, Wheat, and Soybeans,
1981, 1982, Announced for 1983, and Projected to 1985

	Crop Years				
				Projected	
	1981/82	1982/83	1983/84	1984/85	1985/86
			$/bu.		
Corn					
Regular Loan	2.40	2.55	2.65	2.82	2.97
Target	2.40	2.70	2.86	3.03	3.18
Reserve Loan	2.55	2.90	2.65	2.82	2.97
Reserve Release	3.15	3.25	3.25[a]	3.36	3.48
Sorghum					
Regular Loan	2.28	2.42	2.52	2.68	2.82
Target	2.55	2.60	2.72	2.88	3.02
Reserve Loan	2.42	2.75	2.52	2.68	2.82
Reserve Release	3.00	3.10	3.10[a]	3.20	3.31
Oats					
Regular Loan	1.24	1.31	1.36	1.56	1.65
Target	-	1.50	1.60	1.80	1.89
Reserve Loan	1.31	1.49	1.36	1.56	1.65
Reserve Release	1.45	1.65	1.65[a]	1.71	1.76
Barley					
Regular Loan	1.95	2.08	2.16	2.31	2.45
Target	2.60	2.60	2.60	2.75	2.89
Reserve Loan	2.07	2.37	2.16	2.31	2.45
Reserve Release	2.55	2.65	2.65[a]	2.74	2.84
Wheat					
Regular Loan	3.20	3.55	3.65	3.80	4.00
Target	3.81	4.05	4.30	4.45	4.65
Reserve Loan	3.50	4.00	3.65	3.80	4.00
Reserve Release	4.65	4.65	4.65[a]	4.77	4.88
Soybeans					
Regular Loan	5.02	5.02	5.02	5.02	5.02

[a]Forecast.

(3) In order to further encourage reduction of dairy surpluses, the Secretary is authorized to provide for a deduction of 50 cents per cwt. from the proceeds of all milk sold by farmers with the funds being paid to the CCC to offset the cost of handling surpluses, if projected surplus purchases would be 5 billion pounds milk equivalent. This is not refundable.

(4) Further, the Secretary would be authorized to provide for an additional 50 cents per cwt. assessment beginning April 1, 1983, if projected government surplus purchases are above 7.5 billion pounds of milk equivalent, but this second assessment would end whenever projected purchases fall below 7.5 billion pounds.

If the second assessment is levied, however, the Secretary must also provide a system under which individual farmers can get refunds, thus escaping part or all of the additional assessment if they reduce production.

Producers would be eligible for a refund of the second 50 cent assessment if they reduce their production by a percent set by the Secretary which presumably would be tied to the national surplus situation. The Secretary could use the 1982 marketing year (October 1, 1981 to September 30, 1982) or an average of production in the 1981 and 1982 years as a base from which individual producers would reduce production in order to get a refund of all or part of the second 50 cent assessment.

In removing either of the assessments, the Secretary could act at any time during a fiscal year that projected surpluses fall below the trigger levels.

The first assessments were scheduled to commence on December 1, 1932. However, these deductions have been held up by litigation and alternatives for the dairy program are being pursued. Considering the quantities of dairy products purchased by the CCC in this past marketing year and current trends in production and current utilization, the second 50 cent assessment beginning on April 1, 1983 would virtually be assured if the plrogram were allowed to operate. The logistics of collecting the assessment outside of the Federal milk marketing orders may cause some problems, but we will assume that milk producers' net prices will decline about in line with the deductions.

This would mean the average price received by farmers for milk would be under $12.80 per cwt. in 1983, compared to around $13.70 in 1982. Prices received in 1984 would remain close to those in 1983 until the fall quarter. A rough indication of what 63 percent of parity would be in October 1984 can be derived from the parity formula on milk and certain assumptions about the rate of inflation in farm costs. Even assuming a modest rate of inflation, the jump in the support level at that time could be as much as $1.50 per cwt. In the meantime, however, there may be additional modifications to the dairy program.