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CC308 1983 Acreage Reduction Programs

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1983 ACREAGE REDUCTION PROGRAMS

by

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In 1983, Nebraska farmers will again have an opportunity to participate in voluntary acreage reduction programs for wheat, corn, sorghum, barley and oats. Sign-up began at local ASCS offices on October 1, 1982 and will continue through March 31, 1983. This publication outlines some of the more important provisions of the 1983 program for wheat and feed grains and attempts to help producers decide whether or not they should participate. 1/

Acreage Bases

The acreage base for 1983 crops will be the same as for 1982 except where crops have been in a rotation. For example, there is a two-year rotation of summer fallow and wheat in some areas of Nebraska. If 1982 was a "summer fallow year," last year's base may have been zero. However, 1983 would then be a "wheat year." Thus, the base in 1983 would be the acreage planted in 1981 or the average of the last two wheat years (1979 and 1981). Producers who practice rotation farming were given their 1983 bases at the same time 1982 bases were established.

As in 1982, farms where both corn and sorghum are produced will have both crops grouped together in a single acreage base. Also, barley and oats will be grouped together. This will give producers flexibility to switch between crops in each base.

Acreage Reduction Requirements

Producers who choose to participate must reduce the acreage of the crop planted for harvest by at least 20 percent from the established base. Unlike 1982, there will be a paid diversion on a portion of the required acreage reduction. For feed grains, the paid diversion will be on 10 percent of the acreage base. For wheat, the paid diversion will be on 5 percent of the acreage base.

Though the diversion will be calculated as a percentage of the acreage base, the remainder of the acreage reduction (i.e., the nonpaid portion) will be calculated as a percentage of the planted acreage. For feed grains, the reduced acreage requirement is 12.50 percent of the planted acreage. For wheat the reduced acreage requirement is 18.75 percent.

1/ A payment in kind (PIK) program is under consideration as this circular goes to press. This program would be designed to encourage farmers to reduce acreage beyond the 20% discussed in this circular. The authors will provide an analysis of the PIK program when details become available.

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Suppose, for example, that a corn producer has a 100 acre base. If he chooses to participate in the 1983 acreage reduction program, he could grow corn on only 80 acres. A diversion payment would be made on 10 acres, but there would be no direct compensation for the other 10 acres. Note that the non-compensated acres amount to 12.50 percent of the planted acres.

If the same producer chose to grow only 40 acres of corn in 1983, he would still be required to have 10 acres for the paid diversion. However, the remaining part of the acreage reduction would be only 5 acres (12.50 percent x 40 acres).

Program Benefits

There are five potential benefits for those who comply with 1983 programs:

*Regular (nonrecourse) loans. These are 9-month loans at the prevailing Commodity Credit Corporation interest rate. They may be repaid at any time during the term of the loan. Or at the maturity date of the loan, a producer has the option of forfeiting the grain which has been collateral for the loan. In so doing, the principal and interest owed on the loan is forgiven, provided the loan collateral delivered to the CCC is of sufficient quantity and quality to liquidate the loan.

*Target price protection (deficiency payments). If national average farm prices during the first five months of the marketing year for each crop fail to meet the respective target prices shown in Table 1, the government will make up the difference to producers in (direct) deficiency payments to producers. By law, deficiency payments may not exceed the difference between the regular loan rate and the target price. One-half of the estimated deficiency payment can be paid at sign-up or shortly thereafter. The maximum and estimated deficiency payments are also shown in Table 1.

*Diversion payments. Payments will be made according to the following formula: eligible acres x ASCS established yield x ASCS established price. (Eligible acres are those required for the paid diversion). The following prices per bushel will apply to 1983 crops: wheat, $2.70; corn, $1.50; sorghum, $1.50; barley, $1.00; and oats, $0.75. One-half of the diversion payment can be paid at sign-up or shortly thereafter.

*Storage facility loan eligibility. Loans to build on-farm grain storage will be available to participating producers, provided that certain volume and dollar limits are not exceeded. The availability of these loans is also subject to an overall limit on the pool of funds established for this purpose. Interest rates will be based on the government's cost of funds, but will likely be less than rates from commercial lenders.

*Reserve Loans. Since 1977, the farmer-owned grain reserve has been an important supplement to the regular CCC loan program. It has provided long-term (3 year) loans to producers at higher rates than regular loans. Interest and storage costs have been subsidized. Since the imposition of the Russian grain embargo in January, 1980, direct entry of grain into the reserve without having first been in the regular loan program has been possible. However, as this is written, operating details of the reserve for the 1983 grain have not been announced. Our analysis assumes no benefits from the reserve in 1983 - to the extent the reserve can be beneficially used, participation returns are understated.

Table 1. SUMMARY OF 1983 FARM PROGRAM BENEFITS

	Wheat ($/bu)	Corn ($/bu)	Sorghum ($/bu)	Barley ($/bu)	Oats ($/bu)
Target price	$4.30	$2.86	$2.72	$2.60	$1.60
Loan rate	3.65	2.65	2.52	2.16	1.36
Max. deficiency pmt.	.65	.21	.20	.44	.24
(Estimated def. pmt.)	(.65)	(.21)	(.20)	(.15)	0
Diversion pmt.	2.70	1.50	1.50	1.00	.75

Conservation Use Acreage

Cropland that was devoted to a small grain or row crop in two of the last three years or in one of the last two years if in a summer fallow rotation pattern will be eligible for conservation use acreage. Land that was in a permanent hay crop such as alfalfa that was designated to meet the 1982 conservation use requirement, will be regarded as having been cropped in 1982 to meet one year of the two year requirement. Thus, land in alfalfa two of the last three years would not qualify. However, this land would become acceptable if the producer will seed an equal amount of alfalfa on otherwise eligible land.

Conservation use acreage must be protected from wind and water erosion. National approved practices applicable to Nebraska are annual, biennial, or perennial grasses or legumes but excluding soybeans; small grains including volunteer stands (other than weeds) which must be clipped prior to hard dough stage; and prior year crop residue from the use of "no till" or "minimum till" practices. Weeds must be controlled in any approved cover. Specific practices may be developed at the local level by county ASC committees in consultation with the Soil Conservation Service (SCS) District Conservationist, and approved by the state ASC committee, with the concurrence of the SCS State Conservationist. This acreage can be grazed except during the six principal growing months. This 6-month period will be determined by the local ASC committee during the period February 28 - October 31. Mechanical harvesting of any crop will be prohibited.

Compliance Requirements

There will be no cross compliance requirement between crops on a farm in 1983. Cross compliance would require a producer to comply with program requirements for all crops on a farm in order to be eligible for benefits on any single crop. Because corn/sorghum and barley/oats are grouped together, producers may participate in the corn/sorghum program but not the barley/oats program or vice versa. However, producers could not participate on corn without participating on sorghum.

Also, there is no offsetting compliance requirement in effect for 1982. Offsetting compliance is a requirement that owners and operators of a farm who participate in the acreage reduction program for one crop must not exceed the acreage base for that crop on other farms that they own or operate.

Should You Participate?

As with any short run planning decision, the appropriate economic criterion for comparing participation with non-participation is "return over cash costs." The relevant cash costs are those which will occur from the time you make the decision through harvest. For feed grains which are spring planted, this will probably be total cash costs. But, for winter wheat, you will likely consider only the costs of harvest plus the cost of any spring insect control, top-dress fertilizer, or hail insurance which may be incurred between the time of your decision and harvest.

The reason for only considering cash costs is that land mortgage payments, machinery interest, depreciation, labor and management, and even the costs you have invested in the growing wheat crop up until now are fixed. They will not change whether you participate or not. Thus, your objective is to maximize your return over cash, or variable, costs. This will not guarantee that you will cover all of your fixed costs, but it will show you which options will allow you to minimize your loss or maximize your profit.

The worksheet in this bulletin provides a framework for comparing your expected return over cash costs from participation vs. non-participation for a single crop. The example in the worksheet is for a circle of irrigated corn. Complete instructions and a blank worksheet are also included for your use.

An "electronic worksheet" in the form of a computer program, FARMPROGRAM, is available on the AGNET system. It compares the returns over variable costs from non-participation with those from three potential participation options. It also offers a comparison over a range of possible prices.

Consider the Cost of a Wrong Decision

If it would be difficult for you to write down an estimate of the market price for your 1983 crop, you're not alone. When future prices are uncertain, it is helpful to calculate the outcomes resulting from several different prices. An example is shown in the Table 2, using the $2.25 corn price and the other information shown in the example in the worksheet as a base.

Table 2. SUMMARY OF RETURNS OVER CASH COSTS RESULTING FROM ALTERNATIVE CORN PRICES AND PARTICIPATION OPTIONS.

Corn Price	Return Over Cash Costs		
		Participation	
$/bu	Non-Participation	Deficiency and Diversion Payments only	Deficiency and Diversion Payments and 9-Month loan
$1.75	$4,712	$8,884	$18,361
2.00	9,100	12,394	18,361
2.25	13,488	15,904	18,361
2.50	17,875	19,414	18,361
2.75	22,262	21,572	17,009

WORKSHEET FOR COMPARING RETURNS OVER CASH COSTS
PARTICIPATION vs NON-PARTICIPATION -- 1983 REDUCED ACREAGE PROGRAM

Crop Corn

If You do not Participate	If You do Participate
a. 130 ac. Acres you intend to plant (Harvest)	e. 130 ac Base acreage
b. 135 bu/ac Expected yield per acre	f. 104 ac Acres you intend to plant (harvest)
c. $2.25/bu Expected market price per bu.	g. 13 ac Diverted acres (Paid)
d. $200/a. Expected cash costs per acre (from now through harvest)	h. 13 ac Reduced acres (Unpaid)
	i. $1.50/bu Diversion Pmt Rate/bu.
	j. 130 bu/ac ASCS established yield
	k. $ 0 /ac Expected Value of Production from div. & reduced acres
	l. $10 /ac Expected cash costs on div. & reduced acres
	m. $.21/bu Expected deficiency payment per bushel
	n. $2.65/bu County rate-Regular loan
	o. $2.90/bu County rate - Reserve loan*
	p. $.025/bu/mo Storage Cost per bu per month

Non-Participation

Expected Returns

130 (a) ac x 135 (b) bu/A = 17,550 (g) bu.

17,550 (g) bu x $ 2.25 (c)/bu = $ 39,488 (r)

Expected Cash Costs

130 (a) ac x $ 200 (d) /a = $ 26,000 (s)

Expected Returns over Cash Costs (r-s) $ 13,488 (t)

(now calculate returns over cash costs from participation on the next page and note the difference below)

Difference in favor of Participation (Participation or Non-participation) = $ 4,873

(Compare item (t) on this page with item (gg) on the next page)

Participation

Expected Returns

From Production

104 (f) ac X 135 (b) bu/ac = 14,040 (u) bu

Cash Sale or Loan

_____ (u) bu X $ _____ (c) /bu =

14,040 (u) bu X $ 2.65 (n or o) /bu = $ 37,206 (v)

From deficiency payment

104 (f) ac X 130 (j) bu/ac X $ .21 (m) /bu = $ 2,839 (w)

From Diversion payment

13 (g) ac X 130 (j) bu/a X $ 1.50 (i) /bu = $ 2,535 (x)

From Production on diverted and reduced acres

26 (g + h) ac X $ 0 (k) /ac = $ 0 (y)

From Storage

_____ (u) bu X $.265/bu = $ 0 (z) *

Total Returns (v + w + x + y + z) $ 42,580 (aa) **

Expected Cash Costs

For Production

104 (f) ac X $ 200 (d) /ac = $ 20,800 (bb)

For diverted and reduced acres

26 (g + h) ac X $ 10 (l) /ac = $ 260 (cc)

For Storage

14040 (u) bu X $ .025 (p) /bu/mo X 9 mo. = $ 3,159 (dd)

For Interest $ — (ee)

Total Cash Costs (bb + cc + dd + ee) $ 24,219 (ff)

Expected Returns over Cash Costs (aa - ff) $ 18,361 (gg)

* If available

** Does not consider the saving in interest costs resulting from advance payments.

Some observations that can be made, given the range in corn prices from $1.75 to $2.75 per bushel:

1. Program participation using a 9-month loan shows the highest returns over variable costs at corn prices of $1.75, $2.00 and $2.25. At a corn price of $2.50, participation without using the loan program shows the highest return. The reason is that storage costs become a factor. In order to receive the $2.65 loan, nine months of storage would have to be anticipated. With storage costs projected at 22.5 cents/bushel, net return from the loan becomes less than selling for cash at $2.50. The decision to use the loan may be made at harvest time (or later) in 1983. Thus, the higher of the two participation options may be used here. At a corn price of $2.75, non-participation produces the largest return over variable costs.

2. The "cost of a wrong decision" can be identified. For example, if you participate, and corn turns out to be $2.75, the wrong decision would cost you $690. Conversely, if you don't participate and corn turns out to be $1.75, your wrong decision could cost you $13,649. Which wrong decision can you afford? Which one can't you afford?

3. Participation in the program narrows the range of potential returns over cash costs. Are you willing to risk a return of $4,712 under non-participation in order to have a chance at $22,262? Or would you rather participate and be assured of returns in the range of $18,361 to $21,572?

4. By doing some additional calculations, it can be determined that the returns from participation and non-participation are equal at a price of $2.71. Thus, if you expect the corn price to be below $2.71, it would be advisable to participate. If you expect the corn price to be above $2.71, it would be advisable not to participate.

Factors Which Affect Your Decision

The outcome of the "return over cash costs" calculation on the worksheet as well as other aspects of your decision will likely depend on factors which are unique to you and your farm. Some of these are:

1. Your expected yield vs. ASCS established yields.
2. The compatibility of your acreage bases with your cropping plans for 1983.
3. Availability and cost of storage.
4. Do you usually feed all or most of your grain?
5. Are you able to use or sell forage produced on acres devoted to conservation use?
6. National average price vs. local average price for individual grains.
7. Your personal expectation of grain prices for your 1983 crop.
8. Your financial position, and consequently your need for a "guaranteed minimum price" for your 1983 crop.
9. Your attitude toward risk.
10. Possible income tax implications due to differences in the amount and timing of income.

INSTRUCTIONS FOR USING WORKSHEET

Information Needed

Item

a. Enter the number of acres of the crop which you would plant if you do not participate in the program. In the case of winter wheat, it would be the number of acres which you would intend to harvest. In an effort to keep this worksheet as simple as possible, only one crop can be calculated on each worksheet. Thus, you may need to calculate separate worksheets for corn and grain sorghum, which have a combined base for program purposes.

b. Enter your most realistic estimate of the yield per acre.

c. Enter your present estimate of the market price you feel you could get for your 1983 crop. This would be a harvest time price or a price net of storage and carrying charges if not sold at harvest.

d. Enter your estimated cash production costs per acre which will occur from now through harvest. This will probably be total cash costs for spring planted crops. For winter wheat, it will only be harvesting and hauling, plus possibly hail insurance, insect spray, or top-dress fertilizer.

e. Enter your base acreage which includes this crop. For example, if you have a combined corn-sorghum base, but are considering planting all corn, enter the combined base.

f. Enter the acreage you would plant if you participate in the program. The maximum would be the base, less 20 percent.

g. Enter the number of paid diverted acres. This will be 5% of the wheat base acres or 10% of feed grain base acres.

h. Enter the number of "unpaid" reduced acres. This should be at least 18.75% of planted (harvested) wheat acres or 12.5% of planted feed grain acres.

i. Enter the payment rate per bu. for the diverted acres (wheat $2.70, corn and sorghum $1.50, barley $1.00 and oats $.75).

j. Enter the ASCS established yield for this crop.

k. Enter an estimate of the gross value which you expect to receive from the diverted and reduced acres. This could be the value of off-season grazing. You may receive benefits which are difficult to quantify, such as tilling the acres to get rid of a weed problem, using them to establish a legume, or summer fallowing them to store moisture for the following year's crop. In some areas, and particularly on farms without livestock, these acres may yield no quantifiable value.

l. Enter the cash costs per acre which you will incur on diverted and reduced acres. This may be the cost of temporary fencing for off-season grazing, the cost of tillage and planting a conserving crop, or just the cost of tillage to eliminate weeds.

m. Enter your estimate of the probable deficiency payment for this crop. You may want to re-read the section on target price protection to see how deficiencies are calculated. The amount of the deficiency payment depends on your estimate of what market prices will be. The maximum deficiency payments per bushel for each crop are: wheat 65¢, corn 21¢, grain sorghum 20¢, barley 44¢, and oats 24¢.

n. Enter your county rate for the regular 9-month loan on this crop. The national average rates are presented in Table 1. Individual counties in Nebraska may be above or below the national average.

o. Enter your county rate for the reserve loan on this crop, if a reserve loan program is available.

p. Enter your monthly storage cost per bushel. This is necessary if you want to consider program benefits under either of the loan programs. This could be the cost of commercial storage, your cash costs of existing storage, or estimated annual costs of storage which you anticipate building.

Calculating Returns Over Cash Costs

The calculation of returns and cash costs under non-participation is fairly straightforward, using the information from items (a) through (d).

Under the participation option, the returns can be calculated by source:

From Production -- bushels which you produce (item u) can be sold for a cash price (item c) or placed under loan (item n or o). The amount of the proceeds from the cash sale or loan is placed in item (v). Remember to figure storage costs in the cost section of the worksheet if you use a loan price.

From deficiency payment -- multiply the acreage of the crop (item f) times the ASCS yield (item j) times the expected deficiency payment per bushel (item m), and write the result in item w.

From diversion payment -- multiply the diverted acres (item g) times the ASCS yield (item j) times the diversion payment rate bushel (item i) and record the result (item x).

From production on diverted and reduced acres -- multiply the total reduced acreage (item g plus item h) times the value of production (item k) and record the result (item y).

From storage -- if a reserve loan program becomes available, and you intend to use it, calculate the storage payment and record it (item z).

Now add items v through z and record the total in item aa.

The cash costs are also calculated by source:

For production -- multiply the acreage of the crop (item f) times the cost per acre (item d) and record the result (item bb).

For diverted and reduced acres -- multiply the total reduced acreage (item g plus item h) times the cost per acre (item l) and record the result (item cc).

For storage -- multiply the bushels produced (item u) times the storage cost per bu. per month (item p) times the months stored and record the result (item dd).

For interest -- this blank (item ee) is for interest on regular or reserve loans. Interest would be payable when the loan is redeemed. But, if the market price does not reach a level which would cause you to redeem the regular loan, or the trigger level on the reserve loan, there is no interest charge. Thus, you may not want to consider an interest cost.

Add items bb through ee and record the total in item ff. Then, subtract total cash costs (item ff) from total returns (item aa) and record the result in item gg.

Finally, calculate the difference between returns over cash costs from non-participation (item t) and those from participation (item gg). Note the difference at the bottom of the first page and the option (participation or non-participation) which produced the greater return over cash costs.

WORKSHEET FOR COMPARING RETURNS OVER CASH COSTS
PARTICIPATION vs NON-PARTICIPATION -- 1983 REDUCED ACREAGE PROGRAM

Crop_____

If You do not Participate	If You do Participate
a._____ac. Acres you intend to plant (Harvest)	e._____ac Base acreage
b._____bu/ac Expected yield per acre	f._____ac Acres you intend to plant (harvest)
c.$____/bu Expected market price per bu.	g._____ac Diverted acres (Paid)
d.$____/a. Expected cash costs per acre (from now through harvest)	h._____ac Reduced acres (Unpaid)
	i.$____/bu Diversion Pmt Rate/bu.
	j._____bu/ac ASCS established yield
	k.$____/ac Expected Value of Production from div. & reduced acres
	l.$____/ac Expected cash costs on div. & reduced acres
	m.$____/bu Expected deficiency payment per bushel
	n.$____/bu County rate-Regular loan
	o.$____/bu County rate - Reserve loan*
	p.$____/bu/mo Storage Cost per bu per month

Non-Participation

Expected Returns

_____ac (a) x _____bu/A (b) = _____bu. (g)

_____bu (g) x $_____/bu (c) = $_____ (r)

Expected Cash Costs

_____ac (a) x $_____/a (d) = $_____ (s)

Expected Returns over Cash Costs (r-s) $_____ (t)

(now calculate returns over cash costs from participation on the next page and note the difference below)

Difference in favor of _____ = $_____
(Participation or Non-participation)

(Compare item (t) on this page with item (gg) on the next page)

Participation

Expected Returns

From Production

_____ (f) ac X _____ (b) bu/ac = _____ (u) bu

Cash Sale or Loan

_____ (u) bu X $_____ (c) /bu =

_____ (u) bu X $_____ (n or o) /bu = $_____ (v)

From deficiency payment

_____ (f) ac X _____ (j) bu/ac X $_____ (m) /bu = $_____ (w)

From Diversion payment

_____ (g) ac X _____ (j) bu/a X $_____ (i) /bu = $_____ (x)

From Production on diverted and reduced acres

_____ (g + h) ac X $_____ (k) /ac = $_____ (y)

From Storage

_____ (u) bu X $.265/bu = $_____ (z) *

Total Returns (v + w + x + y + z) $_____ (aa) **

Expected Cash Costs

For Production

_____ (f) ac X $_____ (d) /ac = $_____ (bb)

For diverted and reduced acres

_____ (g + h) ac X $_____ (l) /ac = $_____ (cc)

For Storage

_____ (u) bu X $_____ (p) /bu/mo X _____ mo. = $_____ (dd)

For Interest $_____ (ee)

Total Cash Costs (bb + cc + dd + ee) $_____ (ff)

Expected Returns over Cash Costs (aa - ff) $_____ (gg)

* If available

** Does not consider the saving in interest costs resulting from advance payments.