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Farm Program Flexibility Options and Sustainable Agriculture

Thomas Dobbs
South Dakota State University

David L. Becker
South Dakota State University

FARM PROGRAM FLEXIBILITY OPTIONS AND SUSTAINABLE AGRICULTURE

by

Thomas L. Dobbs and David L. Becker*

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*Dobbs is a Professor of Agricultural Economics and Becker is a full-time Research Assistant, both in the Department of Economics at SDSU, Brookings, SD.

Preface

This is one of a series of reports by the authors on implications for "conventional" and "sustainable" farming systems of various public policy options. Previously released were (1) a report by Dobbs, et al. (1990) which provided an overview of the implications of several policy options and (2) a report by Becker and Dobbs (1990) which focused on **mandatory supply controls**. The present report focuses on several "flexibility" policy options -- including **Normal Crop Acreage (NCA)** options and the 1990 Farm Bill's **Triple Base program** and **Integrated Farm Management Program Option (IFMPO)**.

The research leading to this series of sustainable agriculture policy reports has been funded by the South Dakota State University (SDSU) Agricultural Experiment Station and by Grant No. 88-56 from the Northwest Area Foundation (in St. Paul, MN). Appreciation is extended to Richard Shane, Clarence Mends, and John Cole for reviewing drafts of this report.

TLD and DLB
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Table of Contents

List of Figures

List of Tables

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Introduction

The phrase planting flexibility was influential in the formation of The Food, Agriculture, Conservation, and Trade Act of 1990 (the 1990 Farm Bill). Several planting flexibility proposals were introduced during the congressional debates leading up to the 1990 Farm Bill. Each proposal differed in the amount of planting flexibility given to farmers and which acres to use in the calculation of farm program benefits. In this report, we will look at three of those proposals -- the Normal Crop Acreage program, the Triple Base program, and the Integrated Farm Management Program Option.

For purposes of our analyses, we have selected 10 case farms (5 sustainable, and 5 conventional). The case farms used in this report are the same as those used in other recent research reported by the Economics Department at South Dakota State University (Dobbs, et al., 1990; Becker and Dobbs, 1990; Cole and Dobbs, 1990). Each sustainable and conventional farm represents one of five different agro-climatic areas within South Dakota: south-central, east-central, northeast, northwest, and southwest (Figure 1).

In this report, we will first describe the details of each flexibility option. Then, we will show the results of applying the various flexibility options to each sustainable and conventional case farm.

Flexibility Options

Normal Crop Acreage Programs

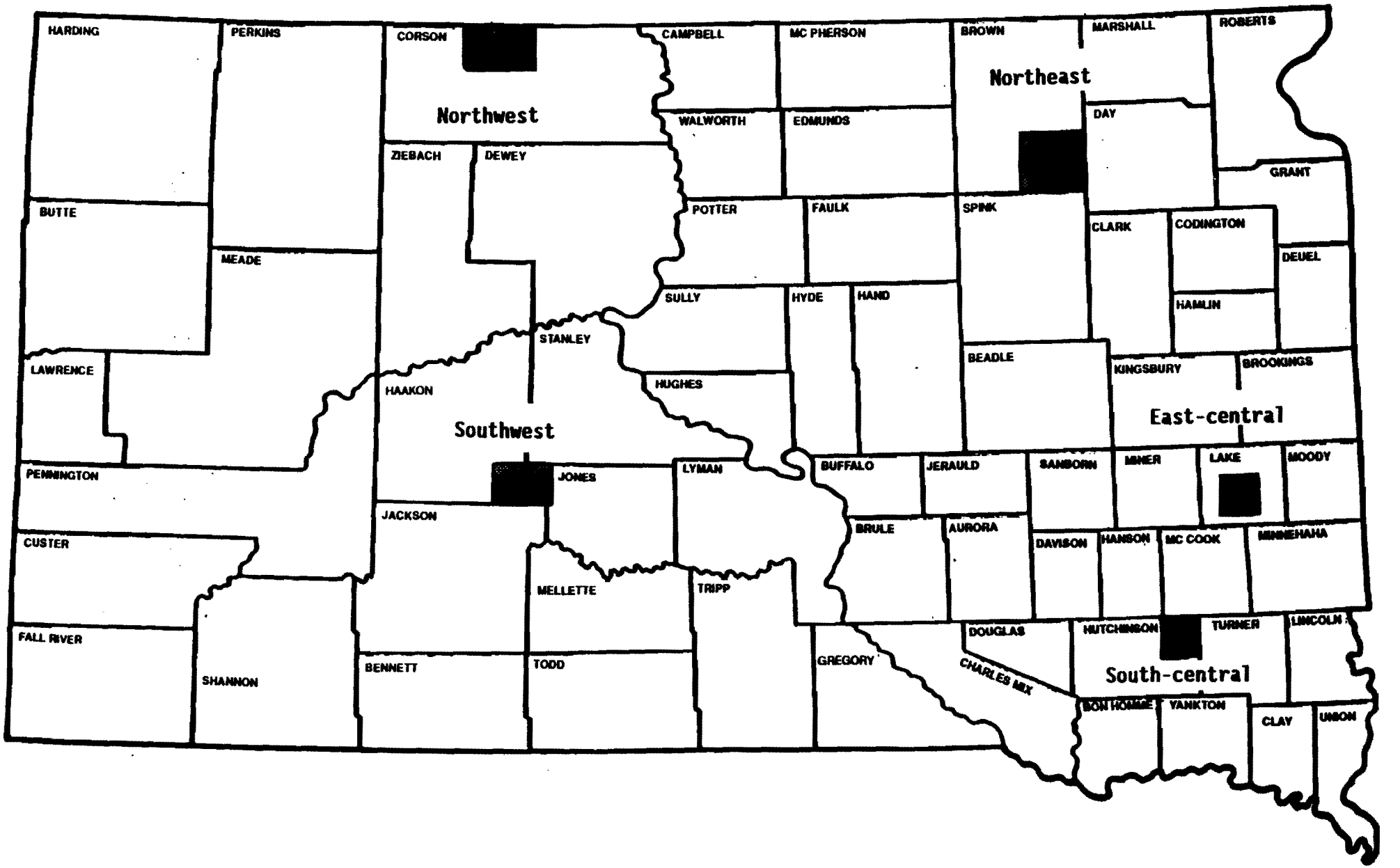
The Normal Crop Acreage (NCA) concept was the Bush Administration's original proposal for the 1990 Farm Bill. The NCA program is designed to allow farmers to make production decisions in response to market prices instead of government policies and incentives. Under this proposal, each farm would be assigned an NCA base, defined as the sum of a farm's individual program crop acreage bases (wheat, feed grains, cotton, and rice) plus the historical plantings of any oilseeds (soybeans, sunflowers, and rapeseed).

Acreage Reduction Program (ARP) requirements (commonly referred to as set-aside) would be announced annually for each program crop. The acres idled under the ARP would be a percentage of each program crop base. The acres eligible for deficiency payments for each program crop would be the crop acreage base less the acres idled under the ARP.

As an example, let's assume a sample farm with the following crop acreage bases and ARP requirements:

corn base	100 acres	10% ARP requirement
wheat base	100 acres	5% ARP requirement
historical soybean	100 acres	
	300 acres = the NCA base	

Figure 1. Locations of Case Study Farms in South Dakota



There would be 15 acres idled under the ARP, 10 for corn (100 x 10%) and 5 for wheat (100 x 5%). Deficiency payments would be made on 90 acres of corn (100 - 10) and 95 acres of wheat (100 - 5).

Two options of the NCA program are analyzed in this report -- a "standard" option and a "no deficiency payment reduction option". Under both options, the farmer would have to comply with the ARP requirements for the program crops to be eligible for program benefits. Any program crop and/or oilseed crop could be planted and harvested on the acres available for NCA base crops without loss of deficiency payments or base history. (The acres available for NCA base crops would be the NCA base minus the acres idled under the ARP). Using the above sample farm, the 300 acre NCA base would have 15 acres idled under the ARP and 285 NCA base crop acres available for any combination of program crops and/or oilseeds. Deficiency payments would be paid on 90 acres of corn and 95 acres of wheat, even if corn and wheat were not planted on the 285 NCA base crop acres. However, under the standard option, the planting and harvesting of any non-program (or non-qualified oilseed) crops on the acres available for NCA base crops would result in a loss of deficiency payments on an acre for acre basis. Thus, for example, if 10 acres of alfalfa were planted and harvested on the NCA base crop acres, 10 acres in deficiency payments would be lost. A proportional reduction would be made to each program crop's deficiency payment acres based on its percent of the total deficiency payment acres. For example, the deficiency payment reductions would be calculated for this sample farm as follows:

corn deficiency payment acres	90	(49%)
wheat deficiency payment acres	95	(51%)
total	185	

For the 10 acres of alfalfa planted and harvested on the NCA base crop acres, corn deficiency payments would be reduced by 4.9 acres (10 x 49%) and wheat deficiency payments would be reduced by 5.1 acres (10 x 51%).

The no deficiency payment reduction option is the same as the standard option except deficiency payments would not have to be reduced for the planting and harvesting of non-program (or non-qualified oilseed) crops on the acres available for NCA base crops. Using the above sample farm, a farmer could plant and harvest 10 acres of alfalfa on the NCA base crop acres and not incur any reduction in deficiency payments.

Certain crops could be planted and harvested on the acres idled under the ARP. However, deficiency payments would have to be reduced by the number of acres planted and harvested. We did not include such planting of crops on ARP acres in our analyses.

Triple Base Program

We will use the name "triple base program" for the final version of the 1990 Farm Bill passed by Congress. In calculating the acres eligible for deficiency payments under the triple base program, the ARP requirement must be met first. This ARP requirement would be a percentage of each program crop acreage base. In addition to the ARP requirements, 15 percent of each program

crop acreage base would be ineligible for deficiency payments; these acres will be referred to as Normal Flex Acres (NFA). This provision gives the farmer the option of planting and harvesting any program crop, oilseeds, and/or non-program crop (except fruits, vegetables, dry edible beans, peas, lentils, and potatoes) on the NFA. Any program crop grown on the NFA is eligible for price support loans, and base history will not be reduced for planting other crops on the NFA.

To illustrate, let's assume another sample farm with the following crop acreage base, ARP requirement, and NFA requirement:

wheat base	100 acres	5% ARP requirement 15% NFA requirement

There would be 5 acres idled under the ARP (100 x 5%). In addition, 15 flex acres (100 x 15%) would be ineligible for deficiency payments. That leaves 80 acres [100 - (5 + 15)] eligible for wheat deficiency payments. Using the above example, 80 acres could be planted to wheat and receive deficiency payments, 5 acres would be idled under the ARP (no deficiency payments), and 15 acres could be planted to almost any crop, including the base crop (no deficiency payments).

A farmer could voluntarily shift another 10 percent of the acres from each program crop base into what is termed Optional Flex Acres (OFA). The OFA could be planted to the same crops as those that are eligible under the NFA. The farmer would forgo deficiency payments on the OFA but would not lose any base history. The OFA alternative was not included in our analyses.

Integrated Farm Management Program Option

The primary sources of information used in describing the Integrated Farm Management Program Option (IFMPO) were the "Farm Program Options Guide", published by The Sustainable Agriculture Working Group (1991), and assorted farm program information sheets obtained from the Brookings County Agricultural Stabilization and Conservation Service Office. This program is described according to our best interpretation (as of mid-1991) of how the program would be implemented based on the information from these sources.

The IFMPO was approved by Congress as part of the 1990 Farm Bill. The IFMPO is a voluntary commodity program designed to give farmers additional flexibility in developing more diverse, resource-conserving crop rotations. The IFMPO will provide farm program payments for planting resource-conserving crops on acres eligible for deficiency payments and will allow some harvesting of acres idled under the ARP. Resource-conserving crops are defined by the 1990 Farm Bill as:

- forage legumes (such as clover, alfalfa, vetch, or medic),
- any legume grown for use as a forage or green manure,
- legume/small grain mixtures (such as oats/clover or rye/vetch),
- legume/grass mixtures,
- legume/grass/small grain mixtures.

Resource-conserving crops considered ineligible are any bean crop harvested for seed, malting barley, and wheat (except wheat interplanted with other small grains for non-human consumption).

Farmers participating in the IFMPO will be subject to the ARP requirement as well as the 15 percent NFA requirement. Under the IFMPO, at least 20 percent of the crop acreage base enrolled in the program must be planted to resource-conserving crops. This 20 percent may include acres idled under the ARP and planted to resource-conserving crops. For example, if the ARP requirement were 10 percent, you could use those acres plus an additional 10 percent to meet the 20 percent requirement. Planting a resource-conserving crop on the program crop's base acres would not result in any reduction of the base acres for future years. Also, base yields for program crops would not be reduced.

Deficiency payments will be paid on resource-conserving crops in the same manner as if the program crop had been planted (except on acres idled under the ARP and triple base acres). Haying and grazing of the resource-conserving crop on IFMPO acres eligible for deficiency payments is not permitted during the same 5-month period that the county does not allow haying and grazing of acres idled under the ARP. The exception is in the case of a small grain/legume mixture. In this case, haying and grazing are permitted any time after the small grain has been harvested in kernel form.

A farmer is permitted, at any time, to hay or graze up to one-half of the acres idled under the ARP, provided that those acres are planted to a resource-conserving crop. Also, he or she may harvest non-program small grains (e.g., buckwheat, rye, triticale, etc.) that are interplanted with legumes from acres idled under the ARP, with haying and grazing being allowed after the harvesting of the non-program small grain.

To illustrate the IFMPO, let's again assume a sample farm with the following characteristics:

wheat base	100 acres	20% IFMPO requirement (includes 5% ARP req.) 15% NFA requirement.

There would be 5 acres idled under the ARP (100 x 5%) that would be planted to a resource-conserving crop and not receive any deficiency payments. In addition, there would be 15 acres planted to a resource-conserving crop [100 x (20% IFMPO requirement - 5% already satisfied by the ARP)] that would receive deficiency payments. The 5 percent ARP and 15 percent additional resource conserving crop acres account for the 20 percent of the crop acreage base that will be enrolled in the IFMPO. Finally, the 15 flex acres (100 x 15% NFA requirement) would be ineligible for deficiency payments. The crop rotation on the above 100 acres would consist of 65 acres planted to wheat with deficiency payments, 5 acres (ARP requirement) planted to a resource-conserving crop with no deficiency payments, 15 acres planted to a resource-conserving crop with deficiency payments, and 15 flex acres planted to almost any crop (including wheat) with no deficiency payments.

Analysis of Normal Crop Acreage Programs

For each of the case farms, the two NCA options (the standard option and no deficiency payment reduction option) are compared to a 1990 baseline. The 1990 baseline is the same as that reported in Dobbs, et al. (1990).

Price, ARP, and Acreage Assumptions

In analyzing the effects of the NCA options, we first assumed that the sustainable farms would, in some cases, slightly modify their crop acreage allocations toward their desired rotation. Some sustainable farmers have been compromising their desired rotations to comply with ARP requirements and to avoid losing program base acres. We wanted to determine the implications of an NCA for their moving completely to the desired rotations they were "trying" to practice (e.g., a soybeans-corn-small grain-alfalfa 4-year rotation, in one case). Next, we assumed that each conventional farm adopted the same desired rotation as the sustainable farm in its region, together with the fertility, weed control, and other cultural practices of the sustainable farm; also, harvested crop yields for the conventional farm were now assumed to be the same as those on the sustainable farm. Each conventional and sustainable farm kept its own historical acreage base and base yields. In essence, the conventional farm has become a "conventional-converted-to-sustainable" farm.

Crop prices used in the NCA calculations were developed on the basis of data contained in Westhoff and Stephens (1990). It was assumed that crop prices would differ from those in the 1990 baseline after a period of adjustment. Corn, barley, oats, and grain sorghum prices are higher under the NCA option and wheat and soybean prices are lower. Prices for non-program crops other than soybeans were assumed to be the same as in the 1990 baseline. (Refer to the tables in Annex 1 for specific information about each farm in regard to crop acreage distributions, crop prices, ARP requirements, deficiency payments, etc.)

Results

Results of analyses of the two NCA policy options are shown in Figures 2 through 6. To the left in each figure are bars showing the 1990 baseline net income over all costs except management in dollars per acre for each conventional and sustainable farm. The results for each sustainable and conventional-converted-to-sustainable farm under the two NCA options (standard and no deficiency payment reduction) are shown in the center and right of each figure, respectively.

Results of the NCA analyses differ for the south- and east-central regions, compared to the northeast and western regions. In the south- and east-central regions, both sets of farms--the sustainable farms and the conventional-converted-to-sustainable farms--appear worse off under the standard NCA option. The farms in these two regions are adversely affected by lower soybean prices, which are assumed to be $4.29/bu. under the NCA options, compared to $4.99/bu. in the 1990 baseline. In the NCA options we analyzed, there were no deficiency payments to help offset the lower soybean price. In

Figure 2.

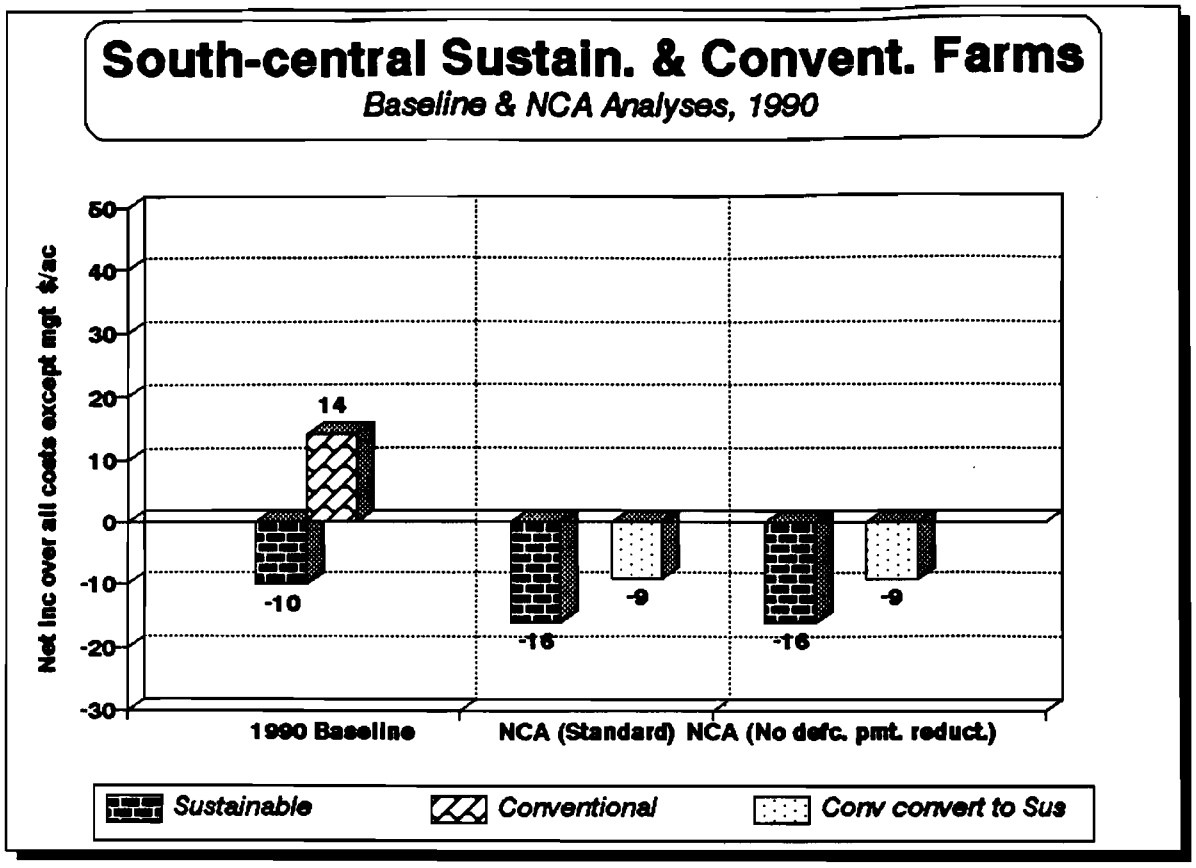


Figure 3.

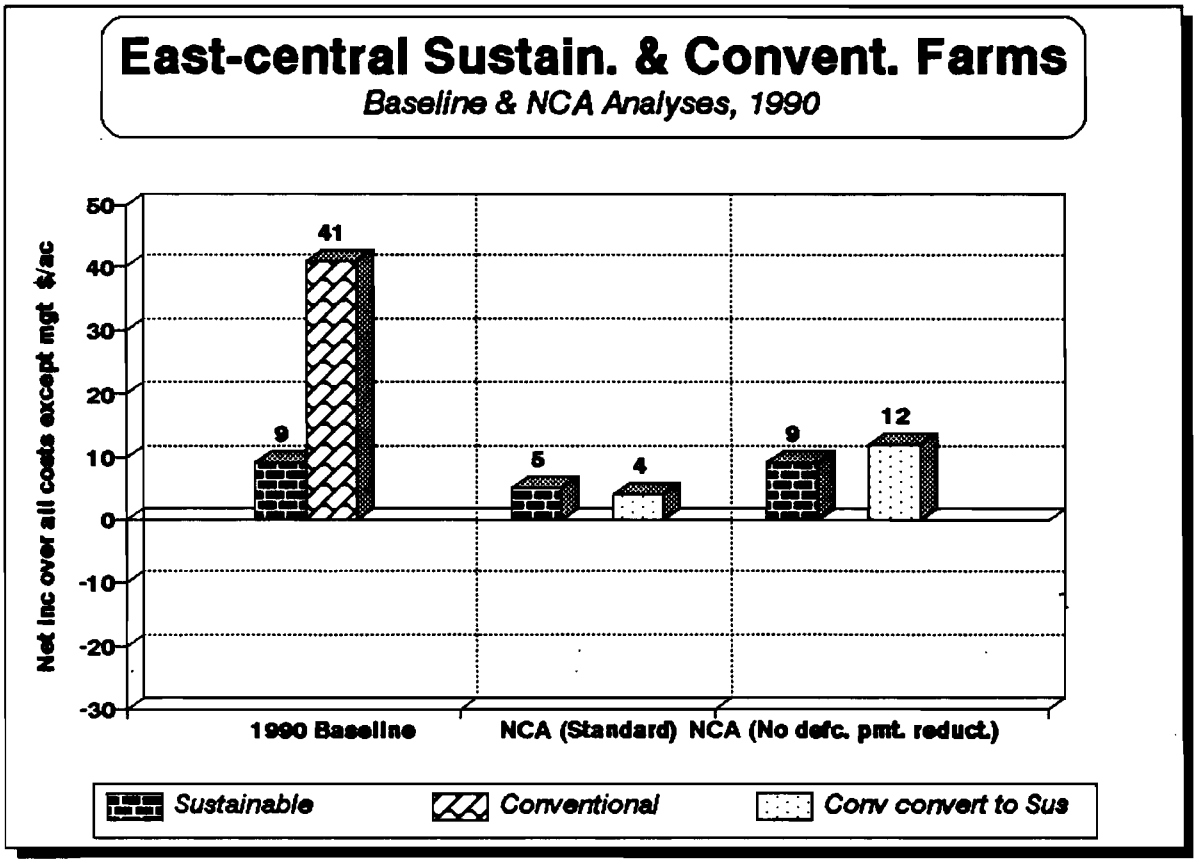


Figure 4.

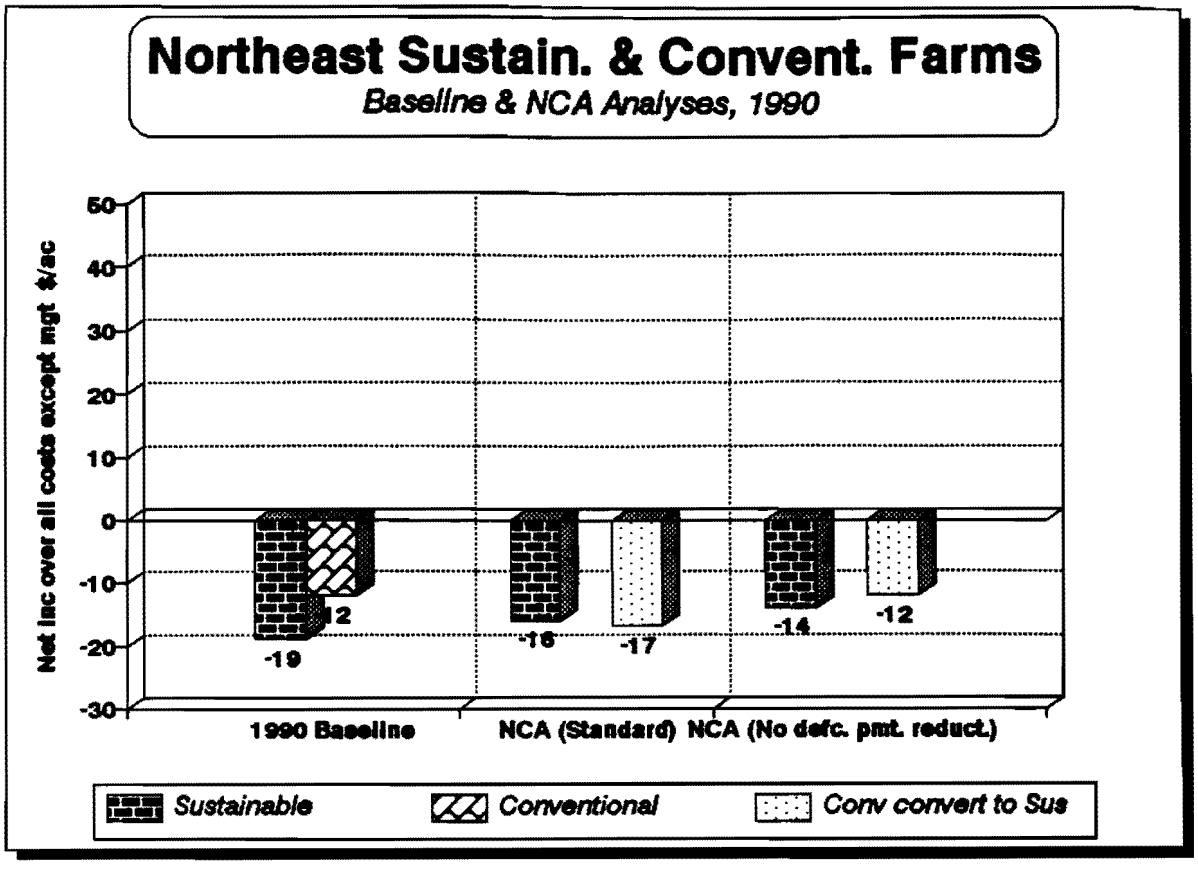


Figure 5.

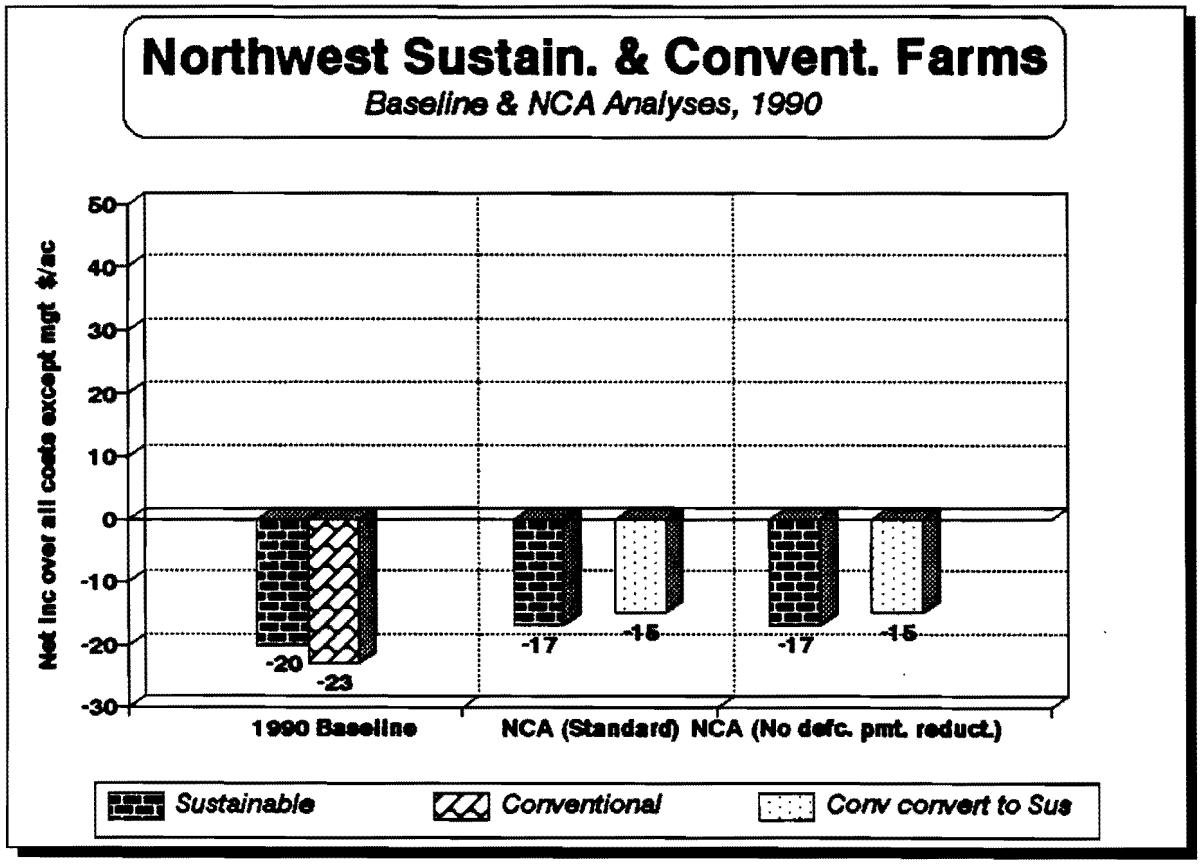
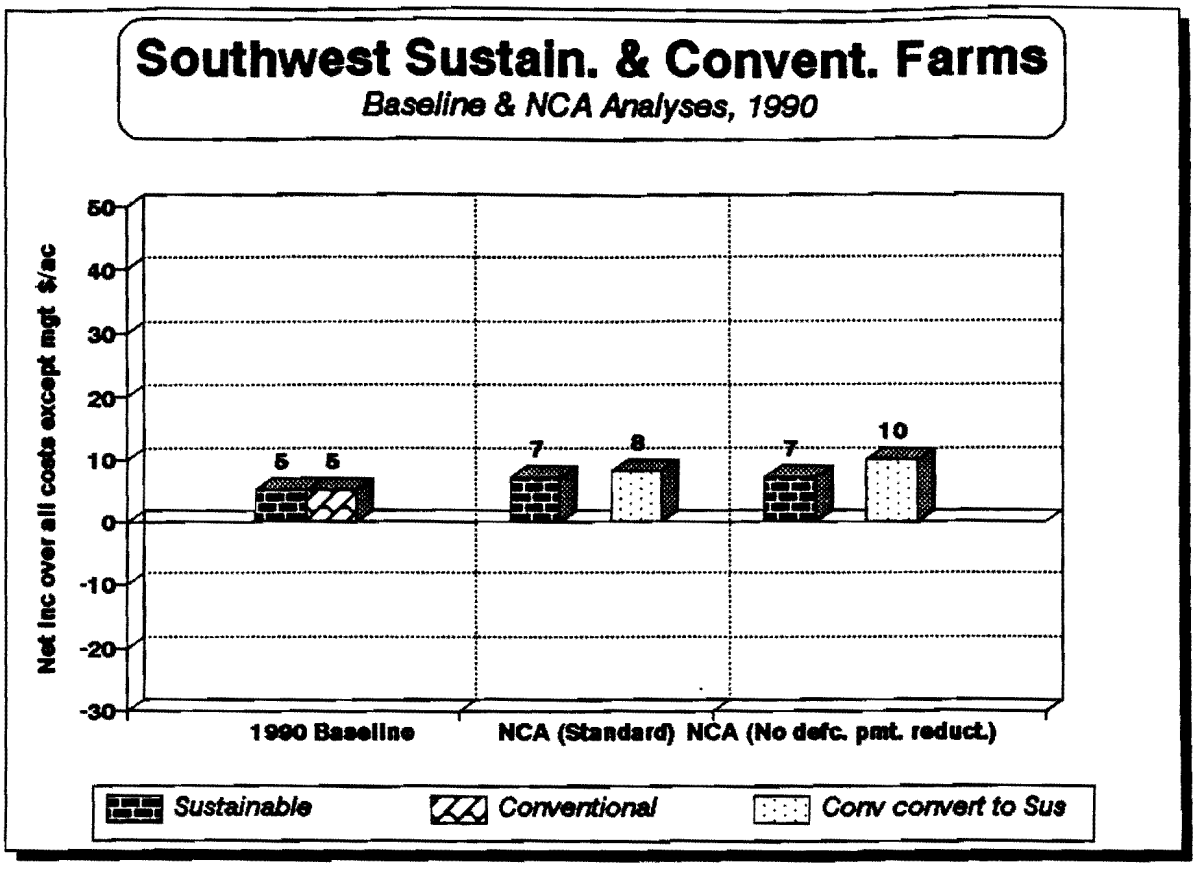


Figure 6.


Southwest Sustain. & Convent. Farms
Baseline & NCA Analyses, 1990
Net Inc over all costs except mgt $/ac
50
40
30
20
10
0
-10
-20
-30
5
5
7
8
7
10
1990 Baseline
NCA (Standard)
NCA (No defc. pmt. reduct.)
Sustainable
Conventional
Conv convert to Sus

contrast, though the wheat price also falls under the NCA option, the resulting higher wheat deficiency payment helps offset that decline.

Other reasons that net incomes fall for the conventional-converted-to-sustainable farms in the south- and east-central regions are: (1) the conventional farms grow less corn when they switch to the sustainable rotation; (2) corn deficiency payments per bushel of historic base are reduced, because of higher market prices for corn under the NCA proposal; and (3) the east-central conventional-converted-to-sustainable farm grows considerably fewer acres of soybeans and its soybeans now yield less than when conventional practices were used.

Removing the penalty for harvesting legumes and other non-program crops on NCA base crop acres (the NCA no deficiency payment reduction option, on the right side of Figures 2-6) does not make any difference in the south-central region, because no such crops are part of the sustainable rotation there. It does make a difference in the east-central region, however, because alfalfa is part of the sustainable rotation there. In the case of the sustainable farm, this latter version of the NCA option allows the sustainable farm to convert to its desired rotation without any loss of net income. Removing the penalty for harvesting legumes on acres available for NCA base crops adds $8/acre to net income of the conventional-converted-to-sustainable farm, compared to the standard NCA option; however, it still leaves net income of that farm far below its 1990 conventional farm baseline.

The NCA policy options have a somewhat more positive effect on net farm incomes in the northeast, northwest, and southwest regions. In most cases, both the sustainable and the conventional-converted-to-sustainable farms make as much or more income under either of the NCA options as they do under the 1990 baseline scenario. One exception is the northeast conventional-converted-to-sustainable farm, which earns $5/acre less than the baseline under the standard NCA option. However, when the penalty for harvesting legumes and other non-program crops on acres available for NCA base crops is removed, this farm recoups most of its historically-based deficiency payments and realizes the same net income (-$12/acre) as in its 1990 baseline.

Removal of the penalty for harvesting legumes and other non-program crops on acres available for NCA base crops has no effect on the northwest region farms, because green manure sweet clover--rather than a harvested legume like alfalfa--is the key legume in the case sustainable system in that region. There is some effect on the southwest conventional-converted-to-sustainable farm by removing this penalty. Since harvested alfalfa, millet, and buckwheat constitute a portion of the sustainable rotation in this region, some historically-based deficiency payments on that farm are recovered when the modified NCA option, rather than the standard option, is employed. (Refer to the tables in Annex 2 for additional information about economic results of the various policy options.)

There appears to be little difference in the profitability of sustainable and conventional farms in the wheat growing regions of northern and western South Dakota under baseline conditions. Thus, it is not surprising that NCA policy options, particularly ones which avoid government

program payment penalties for harvesting legumes and such non-program crops as millet and buckwheat, would appear to provide at least modest encouragement (or at least no discouragement) for farmers to convert from conventional to sustainable systems. A key assumption underlying that conclusion, however, is that the macro effects of NCA policies do not result in significantly adverse effects on the prices of such sustainable system crops as alfalfa hay, millet, and buckwheat. It is concern about just such potential adverse effects that has caused some sustainable agriculture proponents to advocate gradual, phased-in crop planting flexibility. It is hoped that phased-in and perhaps limited flexibility would remove some of the constraints to sustainable rotations without causing rapid expansions in acreage of hay and specialty crops (e.g., millet and buckwheat), which might result in sharp price declines in the markets for those crops.

Analysis of the Triple Base Program

Price, ARP, and Acreage Assumptions

In analyzing the effects of the triple base option, we first determined the number of program crop acres that would be eligible for deficiency payments on each conventional and sustainable case farm. This was done by following the same procedure as that used for the example farm described earlier in the triple base program discussion. Once the deficiency payment acres were determined, a crop rotation was developed to closely resemble the rotation used in the 1990 baseline. In determining what crops to plant on the NFA, we considered each farm's crop rotation and chose the crop that appeared to be the most profitable (excluding deficiency payments) and yet maintained the general principle of the rotation.

Two sets of prices were used in determining the net income for each farm. This was done because no crop price estimates for the triple base program were available. The first set of prices is called "triple base baseline prices". They are essentially the same as the prices used in calculating net income for the 1990 baseline. The second set of prices is called "triple base NCA flex prices". They are the same as those used in the NCA analysis with the exception of soybeans. The price of soybeans was higher with the triple base NCA flex prices than with the NCA analysis prices because of a change in the loan rate for soybeans under the triple base program. This second set involves the implicit assumption that aggregate supply, demand, and market price responses for a triple base program would be similar to the responses for an NCA program. (Refer to the tables in Annex 1 for specific information about each farm in regard to crop acreage distributions, crop prices, ARP requirements, deficiency payments, etc.)

Results

Results of the analyses using the two sets of triple base prices are shown in Figures 7 through 11. To the left in each figure are bars showing the net income over all costs except management under the 1990 baseline for each farm (this is the same baseline as reported in the previous NCA analysis figures). The two sets of bars to the right of the baseline in the center of the figure show the net income under the triple base options with baseline

Figure 7.

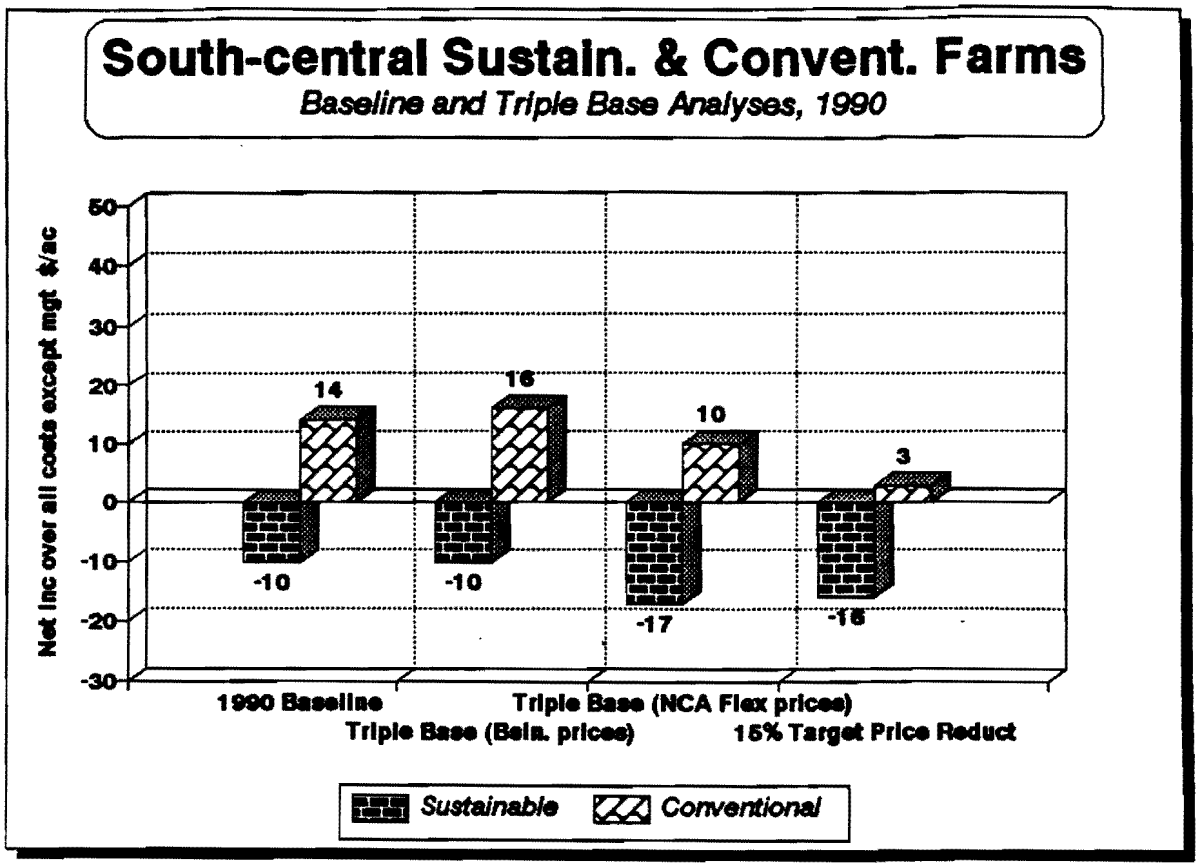


Figure 8.

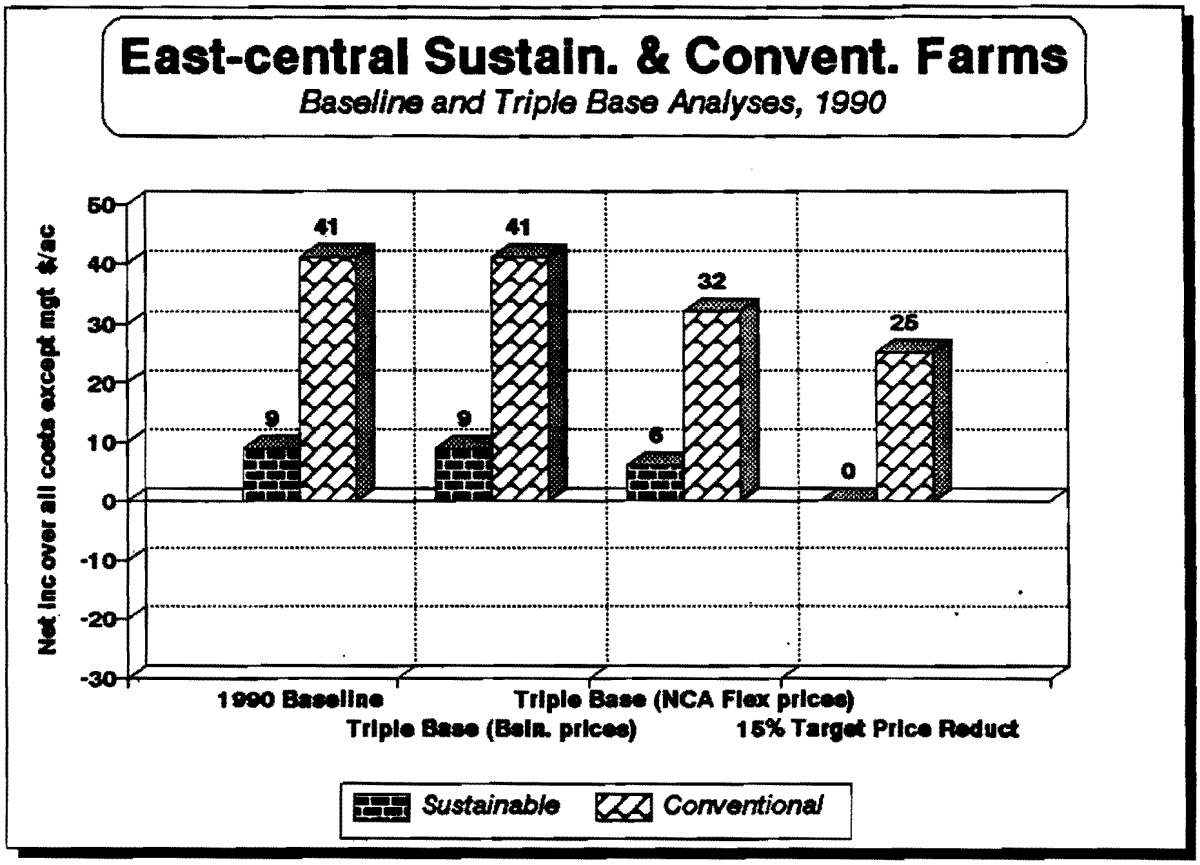


Figure 9.

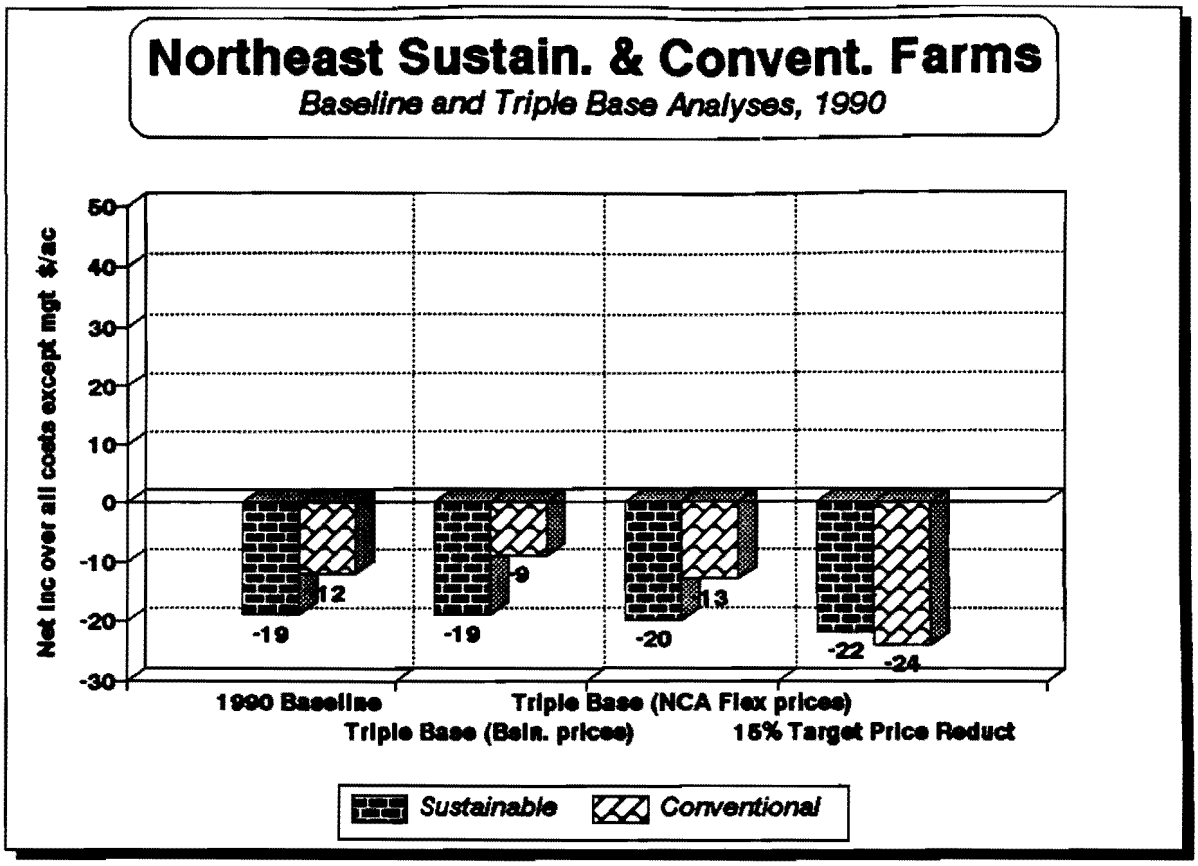


Figure 10.

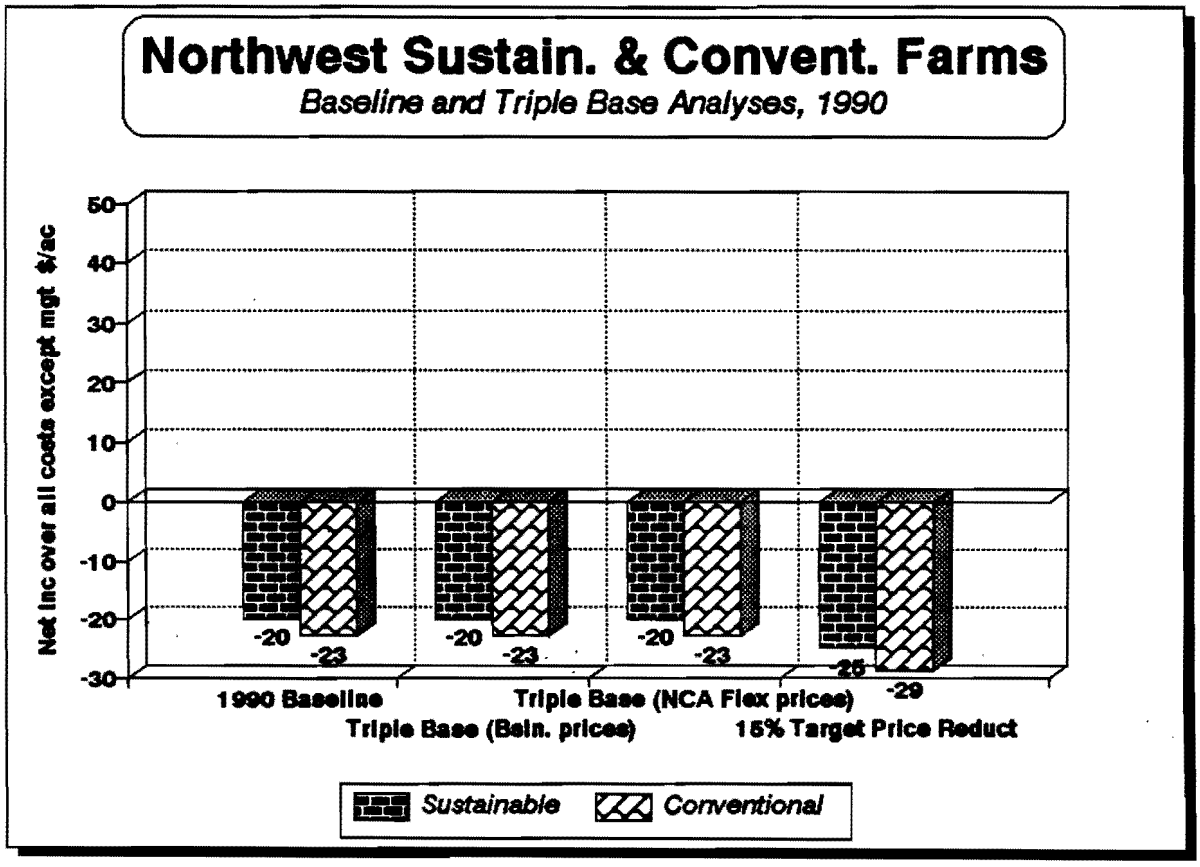
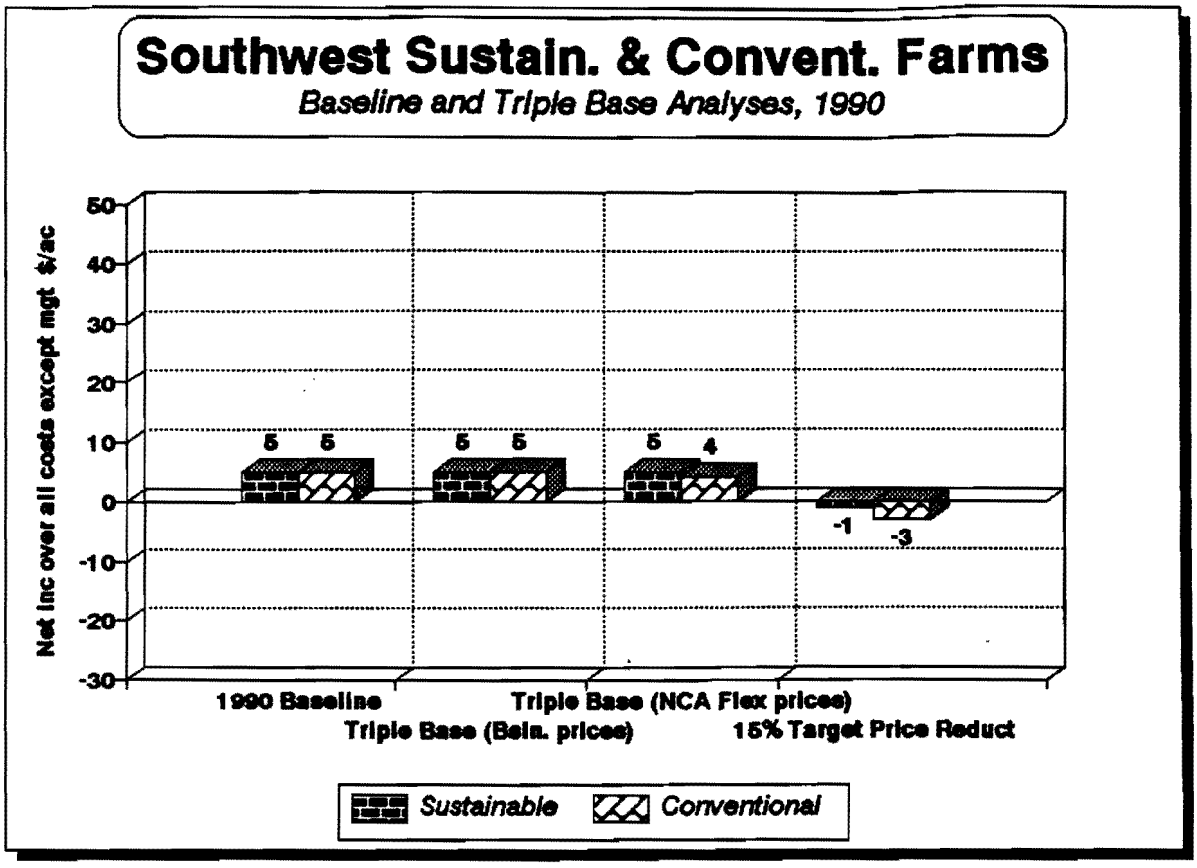


Figure 11.


Southwest Sustain. & Convent. Farms
Baseline and Triple Base Analyses, 1990
Net inc over all costs except mgt $/ac
50
40
30
20
10
0
-10
-20
-30
5
5
5
5
5
4
-1
-3
1990 Baseline
Triple Base (Bsln. prices)
Triple Base (NCA Flex prices)
15% Target Price Reduct
Sustainable
Conventional

prices and NCA flex prices, respectively. To the far right of each figure is a set of bars showing the net income when target prices are reduced by 15 percent. (The target price is a one of the factors used in computing the deficiency payment. Lower target prices result in lower deficiency payments.)

Results of the triple base analysis using baseline prices indicate no change in net income when compared with the 1990 baseline for most conventional and sustainable farms, and a slight increase in the case of the south-central and northeast region conventional farms. One reason that net incomes generally did not change, when triple base baseline prices were used, is that on some of the farms the acres for deficiency payments remained the same as under the 1990 baseline. This is because some farmers have a large enough base that not all the acres for deficiency payments were being planted, because of their desired crop rotations and ARP requirements under the 1990 baseline.

To illustrate, let's use a hypothetical farm with a 100-acre wheat base. Under the 1990 baseline, the ARP requirement is 5 percent of the base, or 5 acres (100 x 5%). This would leave 95 acres eligible for deficiency payments (100 - 5). But, let's assume the farmer only plants 75 acres, in order to maintain the desired rotation. He or she would only receive deficiency payments on the 75 planted acres (unless he or she participated in the 0-92 program, which was not assumed for any of our case farms in this analysis). Under the triple base program, the farm would have the same 5-acre ARP requirement, and an additional 15 percent of the program crop acreage base -- or 15 acres (100 x 15%) -- would be ineligible for deficiency payments under the NFA requirement. This would leave 80 acres [100 - (5 + 15)] eligible for deficiency payments. The hypothetical farmer, in this case, could still plant the desired 75 acres and not suffer a reduction in deficiency payments when compared with the 1990 baseline. However, this practice of not planting all of the permitted acres to a program crop would have resulted in an erosion of the crop acreage base over time under the 1985 Farm Bill; erosion of base is still possible under the 1990 Farm Bill. This was not factored into our results.

Another reason net incomes generally did not change when triple base baseline prices were used is that the positive effects of planting a different crop (such as soybeans) on the NFA sometimes outweighed the negative effects of losing some deficiency payments. In some cases, the net income per acre for soybeans was nearly equal to, or greater than that of, the program crop.

The slight increase in profits on the south-central conventional farm is due to a slight decrease in the set-aside acres and an increase in soybean acreage. On the northeast conventional farm, the slight increase in profits associated with the triple base program is due to decreased summer fallow set-aside acres and to increased soybean acreage.

Results of the triple base analysis using NCA flex prices differ for the south-central, east-central, and northeast regions, when compared to the western regions. In the south-central, east-central, and northeast regions, all sets of sustainable and conventional farms experience a decline in net

income when compared to the 1990 baseline. This is mainly due to the lower price for soybeans.

With the exception of the southwest conventional farm, which experiences a very slight decline in profits, the sustainable and conventional farms in the northwest and southwest regions receive the same net income when triple base NCA flex prices are used as in the 1990 baseline. This is because the decline in the wheat price (wheat being principal crop in these regions) is somewhat offset by a higher wheat deficiency payment. (Refer to the tables in Annex 2 for additional information about economic results of the various policy options.)

Overall, the triple base program had little estimated effect on the profitability of the conventional farms relative to that of the sustainable farms. Using baseline prices, the profitability of the sustainable farms were all unchanged and the profitability of the conventional farms increased by an average of $1.00/acre. Using NCA Flex prices, profitabilities decreased by an average of $2.20/acre on the sustainable farms and by an average of $3.00 on the conventional farms.

Under the 1985 Farm Bill, target prices were held constant the first two years (1986 and 1987), and then reduced in stages over the next three years (1988, 1989, and 1990). Target prices are to remain constant, at 1990 levels, under the 1990 Farm Bill. Since the triple base program is an indirect way of cutting target prices, we have included a straight 15 percent reduction in the target price (from 1990 baseline levels) to compare results with the changes in net income under the triple base program. See the last pair of bars in each of Figures 7 through 11.

A 15 percent reduction in target prices appears to reduce the profitability of both conventional and sustainable systems more than does the triple base program. Profitability is reduced by an average of $5.80/acre on the sustainable farms and by an average of $10.60/acre on the conventional farms when target prices are reduced by 15 percent from their 1990 levels, all other things (acreage set-asides, market prices, etc.) held constant.

Analysis of Integrated Farm Management Program Option

Under the IFMPO, sustainable and conventional farms from only three of the five areas were analyzed -- the south-central, east-central, and northwest areas. This was because the sustainable farms in these areas each were already raising some form of resource conserving crop. Thus, the IFMPO could be implemented without adding new crops to the rotations on those case sustainable farms and we did not have to develop new crop budgets for assumed IFMPO implementation on case conventional farms in those areas.

Price, ARP, and Acreage Assumptions

Two sets of prices were used in determining the net income for each case farm, since no crop price estimates for the IFMPO were available at the time the analysis was undertaken. The first set of prices is called "IFMPO baseline prices". They are the same as the prices used in calculating net

income for the 1990 baseline and the triple base (baseline prices) options. The second set of prices is called "IFMPO NCA flex prices". These prices are the same as the prices used in the NCA analysis, with the exception of the soybean price. The price of soybeans was higher with the IFMPO (as well as with the triple base analysis when NCA flex prices were used) than with the NCA analysis prices because of a change in the loan rate for soybeans under the 1990 Farm Bill.

In analyzing the effects of the IFMPO, we first assumed that the sustainable farms, in some cases, would slightly modify their crop acreage allocations toward their desired rotations. Next, we assumed that each conventional farm would adopt the same desired rotation as the sustainable farm in its region, together with fertility, weed control, and other cultural practices of the sustainable farm; also, harvested crop yields now were assumed to be the same as for the sustainable farm. Each conventional and sustainable farm kept its own historical acreage base and base yields. In essence, the conventional farm became a "conventional-converted-to-sustainable" farm. (Similar assumptions were made in the NCA analysis.)

It also was assumed that conventional farms would partially adopt the sustainable rotation for their respective areas. This was done by enrolling only the minimum portion (20%) of each crop acreage base in the IFMPO. The conventional farmer presumably would attempt to model the general pattern of the sustainable farmer's rotation on the IFMPO acres, while continuing to farm the other portion of his or her land conventionally. The following paragraphs will explain how this partial adoption of the sustainable rotation by the conventional farmer was done in each of the three regions.

In the south-central area, it was assumed that the conventional farmer would introduce the small grain (spring wheat)-with-sweet clover portion of the sustainable farmer's rotation. The small grain with sweet clover is planted in the spring and incorporated as a green manure crop before the small grain matures. Since the wheat is not harvested, it was assumed that this wheat-sweet clover combination would qualify as a resource-conserving crop.

In the east-central area, it was assumed that the conventional farmer would grow alfalfa and small grain (oats) seeded with alfalfa on the IFMPO acres. Also, some corn and soybeans would be grown sustainably in order for the conventional farmer to fully model the sustainable farmer's rotation of soybeans - corn - small grain/alfalfa - alfalfa. The acres of sustainably raised corn, soybeans, and some alfalfa were grown on non-IFMPO acres (or acres that could have been planted to conventional corn and soybeans).

In the Northwest area, the conventional farmer was assumed to grow sweet clover and small grain (oats) seeded with sweet clover on the IFMPO acres.

Refer to the tables in Annex 3 for specific information for each farm on crop acreage distributions, crop prices, ARP requirements, deficiency payments, etc. Tables in that annex also contain summary results of the IFMPO analysis.

Results

Results of the analyses using the two sets of IFMPO prices are shown in Figures 12 through 14. To the left in each figure are bars showing the net income over all costs except management under the 1990 baseline for each farm (this is the same baseline as reported in the previous NCA and triple base analyses). The set of bars to the right of the baseline in the center of each figure show the net income under the IFMPO with baseline prices. The set of bars to the far right in each figure show the net income with NCA flex prices under the IFMPO. Under the IFMPO, the conventional farms are shown fully adopting the sustainable rotation (labeled Conv convert to Su in the graph legend) and partially adopting the sustainable rotation (labeled Partial cnvt to Sus in the graph legend).

Results of the IFMPO analysis using baseline prices indicate a slight increase in net income for the sustainable farm in the northwest area and a slight decrease for the farm in the east-central area. The south-central sustainable farm was assumed not to enroll in the IFMPO. This farm has only a wheat base, and all acres for wheat deficiency payments can be planted while maintaining the desired crop rotation. Maximum deficiency payments can be received on that farm without need to enroll in the IFMPO. There appeared to be no advantages or disadvantages to the south-central sustainable farm from enrolling in the IFMPO.

The increase in net income for the sustainable farm in the northwest area is due to shifting to the desired rotation and recovering some deficiency payments under the IFMPO.

There appears to be no advantage to the IFMPO for the east-central sustainable farmer, relative to the standard triple base program. This appears to be due to the fact that under the IFMPO, traditionally underplanted program crop acres are not eligible for deficiency payments. The east-central sustainable farmer had been underplanting corn base. Thus, though his planted acres of corn were the same under the IFMPO as under the triple base program, his acres eligible for deficiency payments were less under the IFMPO.

Using IFMPO baseline prices, the results for the conventional farms in the south-central and east-central areas show a decline in net income from the baseline under the full conversion to the sustainable rotation. In the south-central area, this is because there are not enough resource conserving crop acres to recover all of the deficiency payments. In the east-central area, the decline is due to the adoption of crops, such as oats and alfalfa, that do not produce as much income as do corn and soybeans. Also, the sustainable soybean yield is lower than the conventional yield. The results for the northwest conventional farm show an increase in net income due to moving to the desired rotation and receiving full deficiency payments on corn, even though corn is no longer part of the rotation.

Using baseline prices with the partial conversion to the sustainable rotation causes the conventional farms in the south- and east-central areas to show a decline in net income when compared to the 1990 baseline. However, the decline is not as great as under the full conversion to sustainable rotations.

Figure 12.

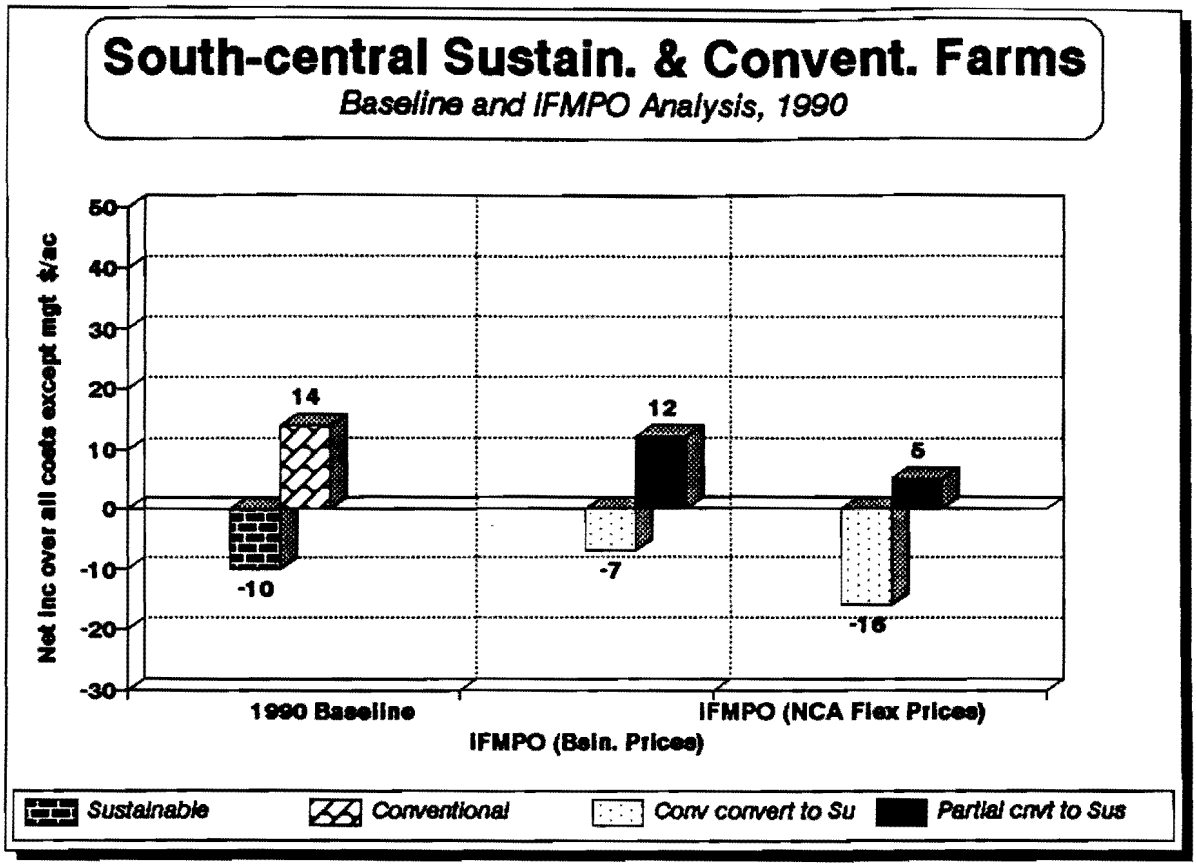


Figure 13.

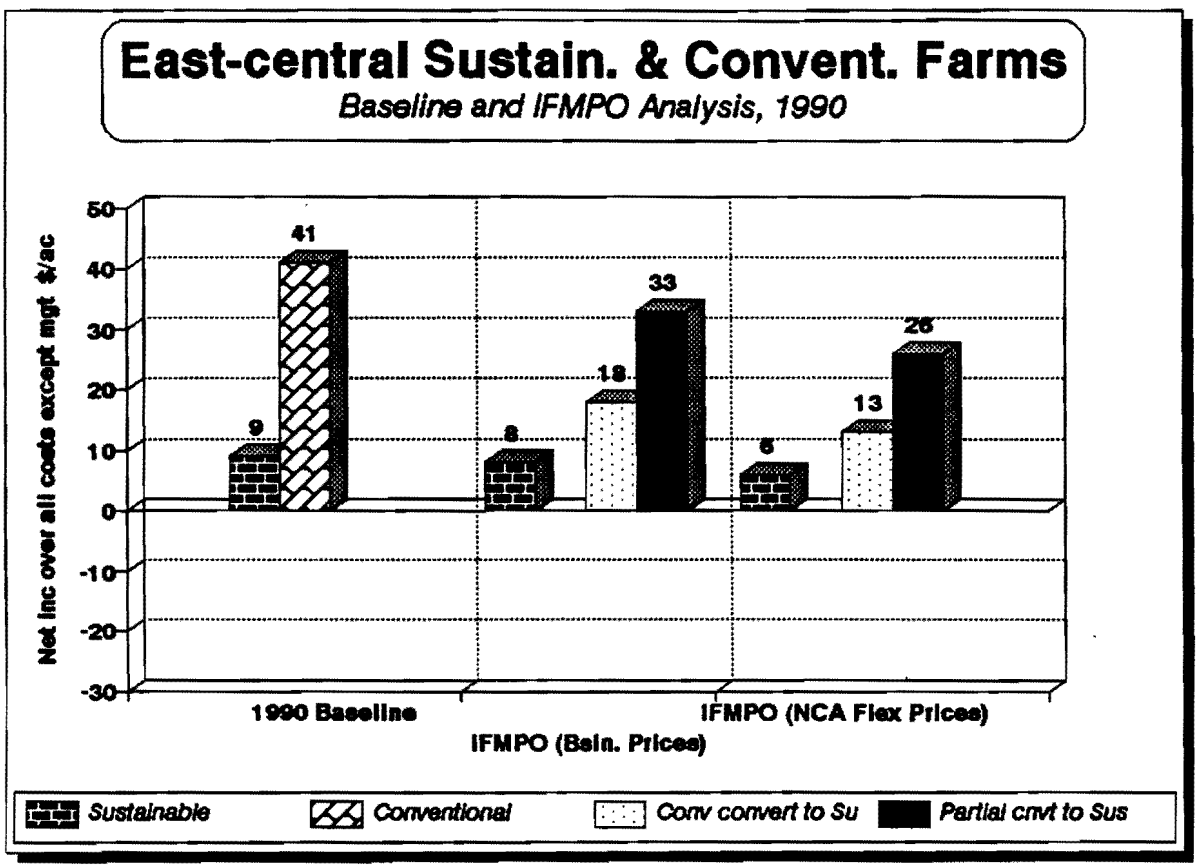
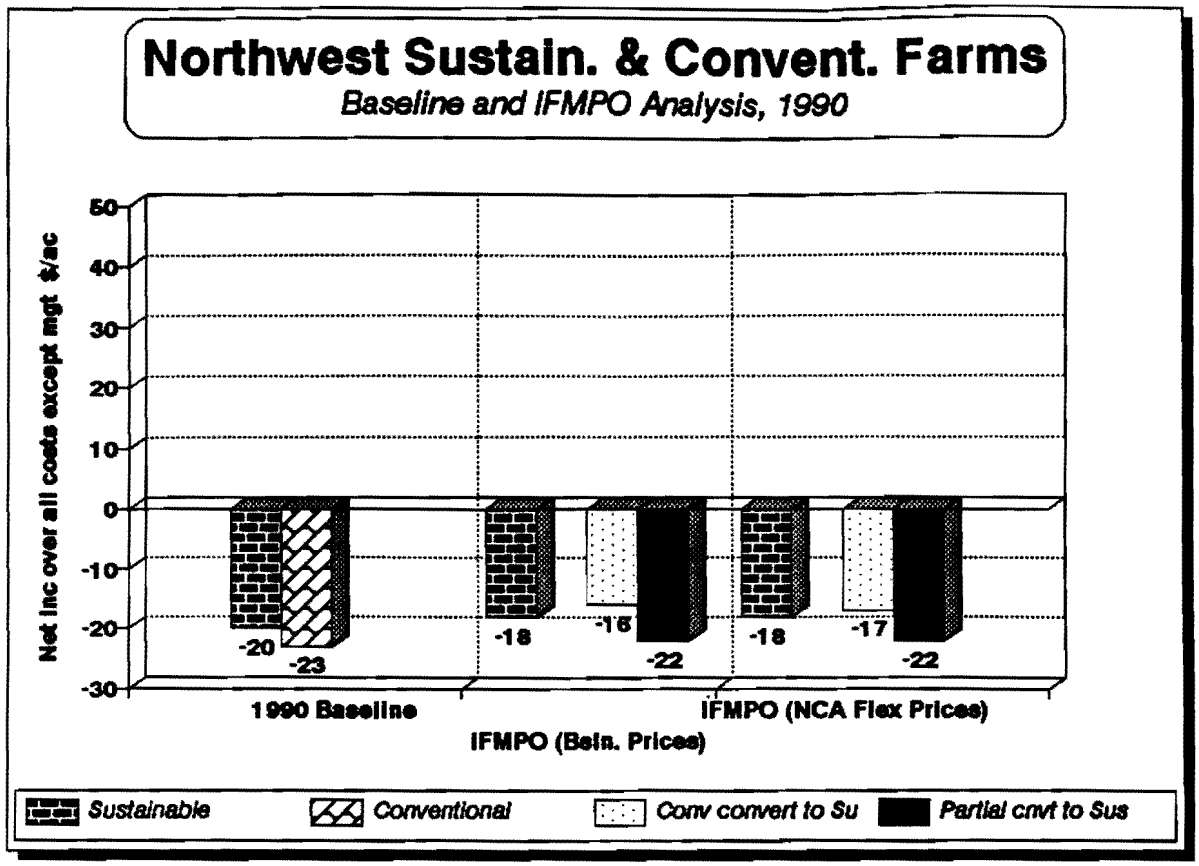


Figure 14.


Northwest Sustain. & Convent. Farms
Baseline and IFMPO Analysis, 1990
Net inc over all costs except mgt $/ac
50
40
30
20
10
0
-10
-20
-30
-20
-23
-18
-16
-22
-18
-17
-22
1990 Baseline
IFMPO (NCA Flex Prices)
IFMPO (Bsln. Prices)
Sustainable
Conventional
Conv convert to Su
Partial cnvt to Sus

This is because some of the profitable components of the conventional rotations are maintained (i.e., higher income per acre with conventional soybean yield and not as many acres in a crop like oats, that has relatively low returns per acre). The conventional farm in the northwest area experiences a slight increase in net income with the partial conversion and baseline prices. This increase is not as great as with the full conversion, however, due to some of the conventionally raised crops having a lower return per acre than the crops in the desired sustainable rotation.

The results using the NCA flex prices show a decrease in net income from the 1990 baseline for the east-central sustainable farm and a slight increase in net income from the 1990 baseline for the northwest sustainable farm. The decrease in the east-central area, again, is due to the loss of some deficiency payments from the underplanted corn base along with a lower soybean price. The increase in the northwest area is due to the shift to a desired rotation.

The results for the conventional farms using the IFMPO with NCA flex prices follow the same pattern as was described when the baseline prices were used. The conventional farms in the south- and east-central areas show a decline from the baseline under both the full and partial conversion to the sustainable rotation. However, the magnitude of the decline is greater than when the baseline prices were used, mainly because of the lower NCA flex soybean price. The conventional farm in the northwest area again experiences an increase under both the full and partial conversion to the sustainable rotation.

Conclusions

The policy options presented in this paper were applied to sets of conventional and sustainable case farms to determine the impact on the profitability of each farm. The NCA program offers some promise for encouraging more use of sustainable farming systems, particularly in the northern and western wheat growing regions of South Dakota. It may be necessary to introduce NCA policies gradually in order to remove some of the constraints to sustainable rotations without causing rapid expansions in hay and specialty crops (e.g., millet and buckwheat), which might result in sharp declines in the market prices for these crops.

Implementing the triple base program on the conventional and sustainable case farms does not result in major changes in absolute or relative profitability. For the most part, net income remained the same or declined only slightly on the case farms, mainly because of unused crop base on a number of the case study farms. Based on these results, the triple base program would probably not do much to encourage farmers to adopt sustainable systems.

Reducing target prices by 15 percent appears to have a greater negative effect on the net incomes of the conventional farms than on net incomes of the sustainable farms. This is due to the conventional farms having higher

proportions of their crop acreage devoted to program crops covered by target prices and resulting deficiency payments.

Adoption of the Integrated Farm Management Program Option (IFMPO) generally causes a decrease in net income for the conventional case farms in the corn-soybean areas and an increase for the conventional case farm in the wheat areas. The IFMPO has some potential to encourage shifts toward sustainable farming systems in certain agro-climatic areas because deficiency payments can be preserved while more diversified and resource-conserving crop rotations are adopted.

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Annex 1

Area Summary Tables

The tables in Annex 1 contain NCA and triple base policy analysis information about the sustainable and conventional farms from each of the five areas covered in this report. The tables contain such information as crop acreage, crop prices, ARP (set-aside) requirements, deficiency payments, and costs of commercial fertilizers and herbicides. Note that under the "Government Deficiency Payments" row (Whole Farm and per 100 Acres) in the "1990 Ideal NCA" column, there are two columns of deficiency payments. The first is for the "NCA Standard" option. The second (labeled "No Reduc.") is for the "NCA no deficiency payment reduction" option.

The oats price used in this analysis was based on a relatively high price forecast coming out of the 1988 and 1989 droughts.

Annex Table 1-1. South-central Area Summary Table

	1990 Baseline				1990 Ideal NCA				1990 Triple Base Baseline Prices				1990 Triple Base NCA Flex Prices			
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional	
CROP ACREAGE																
Spring Wheat.....	91	35.0%	---	0.0%	91	35.0%	130	32.5%	101	38.8%	---	0.0%	101	38.8%	---	0.0%
Corn.....	---	0.0%	166	41.5%	---	0.0%	---	0.0%	---	0.0%	143	35.8%	---	0.0%	143	35.8%
Oats.....	---	0.0%	61	15.3%	---	0.0%	---	0.0%	---	0.0%	54	13.5%	---	0.0%	54	13.5%
Soybeans.....	134	51.5%	121	30.3%	134	51.5%	192	48.0%	124	47.7%	159	39.8%	124	47.7%	159	39.8%
Alfalfa.....	---	0.0%	30	7.5%	---	0.0%	30	7.5%	---	0.0%	30	7.5%	---	0.0%	30	7.5%
Set-Aside.....	35	13.5%	22	5.5%	35	13.5%	48	12.0%	35	13.5%	14	3.5%	35	13.5%	14	3.5%
TOTAL.....	260		400		260		400		260		400		260		400	
TARGET PRICE ($/bu.)																
Spring Wheat.....	4.00		---		4.00		---		4.00		---		4.00		---	
Corn.....	---		2.75		---		2.75		---		2.75		---		2.75	
Oats.....	---		1.44		---		1.44		---		1.45		---		1.45	
S.D. FARM PRICE ($/bu.)																
Spring Wheat.....	3.27		---		3.17		---		3.27		---		3.17		---	
Corn.....	---		2.07		---		2.20		---		2.07		---		2.20	
Oats.....	---		1.68		---		1.70		---		1.68		---		1.70	
Soybeans.....	4.99		4.99		4.29		4.29		4.99		4.99		4.42		4.42	
Alfalfa ($/TON)...	---		50.00		---		50.00		---		50.00		---		50.00	
DEFICIENCY PAYMENTS ($/bu.)																
Spring Wheat.....	0.76		---		0.86		---		0.76		---		0.86		---	
Corn.....	---		0.58		---		0.45		---		0.58		---		0.45	
Oats.....	---		0.00		---		0.00		---		0.00		---		0.00	
SET-ASIDE REQUIREMENTS																
Spring Wheat.....	5%		---		5%		---		5%		---		5%		---	
Corn.....	---		10%		---		10%		---		7.5%		---		7.5%	
Oats.....	---		5%		---		5%		---		0%		---		0%	
Soybeans.....	---		---		---		---		---		---		---		---	
GOVT. DEFICIENCY PMTS. ($)						No Reduc.		No Reduc.								
Whole Farm.....	2,006		5,873		2,993	2,993	4,577	4,577	2,226		5,059		2,519		3,925	
per 100 Acres.....	772		1,468		1,151	1,151	1,144	1,144	856		1,265		969		981	
COST OF FERTILIZER ($)																
Whole Farm.....	0		4,258		0		368		0		3,724		0		3,724	
per 100 Acres.....	0		1,065		0		92		0		931		0		931	
COST OF HERBICIDE ($)																
Whole Farm.....	12		2,193		12		16		13		2,134		13		2,134	
per 100 Acres.....	5		548		5		4		5		534		5		534	

Annex Table 1-2. East-central Area Summary Table

	1990 Baseline				1990 Ideal NCA				1990 Triple Base Baseline Prices				1990 Triple Base NCA Flex Prices			
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional	
CROP ACREAGE																
Corn	180	25.0%	432	53.7%	180	25.0%	201	25.0%	180	25.0%	372	46.2%	180	25.0%	402	49.9%
Soybeans	180	25.0%	325	40.4%	180	25.0%	201	25.0%	180	25.0%	397	49.3%	180	25.0%	367	45.6%
Spring Wheat	61	8.5%	---	0.0%	53	7.4%	60	7.5%	51	7.1%	---	0.0%	51	7.1%	---	0.0%
Oats	74	10.3%	---	0.0%	82	11.4%	93	11.6%	98	13.6%	---	0.0%	98	13.6%	---	0.0%
Alfalfa	180	25.0%	---	0.0%	180	25.0%	201	25.0%	180	25.0%	---	0.0%	180	25.0%	---	0.0%
Non-Pd Set-Aside	45	6.3%	48	6.0%	45	6.3%	48	6.0%	31	4.3%	36	4.5%	31	4.3%	36	4.5%
TOTAL	720		805		720		804		720		805		720		805	
TARGET PRICE ($/bu.)																
Corn	2.75		2.75		2.75		2.75		2.75		2.75		2.75		2.75	
Spring Wheat	4.00		---		4.00		---		4.00		---		4.00		---	
Oats	1.44		---		1.44		---		1.45		---		1.45		---	
Barley	---		---		---		---		---		---		---		---	
S.D. FARM PRICE ($/bu.)																
Corn	2.07		2.07		2.20		2.20		2.07		2.07		2.20		2.20	
Soybeans	4.99		4.99		4.29		4.29		4.99		4.99		4.42		4.42	
Spring Wheat	3.27		---		3.17		3.17		3.27		---		3.17		---	
Oats	1.68		---		1.70		1.70		1.68		---		1.70		---	
Alfalfa ($/ton)	50.00		---		50.00		50.00		50.00		---		50.00		---	
Millet Hay ($/ton)	---		25.00		---		---		---		25.00		---		25.00	
DEFICIENCY PAYMENTS ($/bu.)																
Corn	0.58		0.58		0.45		0.45		0.58		0.58		0.45		0.45	
Spring Wheat	0.76		---		0.86		---		0.76		---		0.86		---	
Oats	0.00		---		0.00		---		0.00		---		0.00		---	
Barley	---		---		---		---		---		---		---		---	
SET-ASIDE REQUIREMENTS																
Corn	10%		10%		10%		10%		7.5%		7.5%		7.5%		7.5%	
Soybeans	---		---		---		---		---		---		---		---	
Spring Wheat	5%		---		5%		---		5%		---		5%		---	
Oats	5%		---		5%		---		0%		---		0%		---	
Barley	10%		---		10%		---		7.5%		---		7.5%		---	
GOVT. DEFICIENCY PMTS. ($)					No Reduc.		No Reduc.									
Whole Farm	8,699		17,790		7,000	10,353	7,380	13,802	8,471		15,319		6,986		11,885	
per 100 Acres	1,208		2,210		972	1,438	918	1,717	1,177		1,903		970		1,476	
COST OF FERTILIZER ($)																
Whole Farm	0		12,281		0		0		0		11,361		0		11,861	
per 100 Acres	0		1,526		0		0		0		1,411		0		1,473	
COST OF HERBICIDE ($)																
Whole Farm	720		15,775		720		804		720		16,755		720		16,427	
per 100 Acres	100		1,960		100		100		100		2,081		100		2,041	

Annex Table 1-3. Northeast Area Summary Table

	1990 Baseline				1990 Ideal NCA				1990 Triple Base Baseline Prices				1990 Triple Base NCA Flex Prices			
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional	
CROP ACREAGE																
Spring Wheat.....	200	25.0%	356	47.5%	200	25.0%	188	25.1%	200	25.0%	300	40.0%	200	25.0%	300	40.0%
Corn.....	---	0.0%	112	14.9%	---	0.0%	---	0.0%	---	0.0%	97	12.9%	---	0.0%	97	12.9%
Barley.....	---	0.0%	112	14.9%	---	0.0%	---	0.0%	---	0.0%	97	12.9%	---	0.0%	97	12.9%
Soybeans.....	90	11.3%	75	10.0%	67	8.4%	62	8.3%	90	11.3%	169	22.5%	90	11.3%	169	22.5%
Millet.....	35	4.4%	---	0.0%	17	2.1%	15	2.0%	35	4.4%	---	0.0%	35	4.4%	---	0.0%
Flax.....	50	6.3%	---	0.0%	50	6.2%	47	6.3%	50	6.3%	---	0.0%	50	6.3%	---	0.0%
Alfalfa.....	200	25.0%	50	6.7%	200	25.0%	188	25.1%	200	25.0%	50	6.7%	200	25.0%	50	6.7%
Summer Fallow.....	225	28.1%	45	6.0%	267	33.3%	250	33.3%	225	28.1%	37	4.9%	225	28.1%	37	4.9%
TOTAL.....	800		750		801		750		800		750		800		750	
TARGET PRICE ($/bu.)																
Spring Wheat.....	4.00		4.00		4.00		4.00		4.00		4.00		4.00		4.00	
Corn.....	---		2.75		---		2.75		---		2.75		---		2.75	
Barley.....	---		2.35		---		2.35		---		2.36		---		2.36	
S.D. FARM PRICE ($/bu.)																
Spring Wheat.....	3.27		3.27		3.17		3.17		3.27		3.27		3.17		3.17	
Corn.....	---		2.07		---		2.20		---		2.07		---		2.20	
Barley.....	---		1.90		---		1.98		---		1.90		---		1.98	
Soybeans.....	4.99		4.99		4.29		4.29		4.99		4.99		4.42		4.42	
Millet.....	2.80		---		2.80		2.80		2.80		---		2.80		---	
Flax.....	5.05		---		5.05		5.05		5.05		---		5.05		---	
Alfalfa ($/ton)....	50.00		50.00		50.00		50.00		50.00		50.00		50.00		50.00	
Brly Silage ($/ton)	---		19.10		---		---		---		19.10		---		19.42	
DEFICIENCY PAYMENTS ($/bu.)																
Spring Wheat.....	0.76		0.76		0.86		0.86		0.76		0.76		0.86		0.86	
Corn.....	---		0.58		---		0.45		---		0.58		---		0.45	
Barley.....	---		0.25		---		0.17		---		0.26		---		0.18	
SET-ASIDE REQUIREMENTS																
Spring Wheat.....	5%		5%		5%		5%		5%		5%		5%		5%	
Corn.....	---		10%		---		10%		---		7.5%		---		7.5%	
Barley.....	---		10%		---		10%		---		7.5%		---		7.5%	
Soybeans.....	---		---		---		---		---		---		---		---	
GOVT. DEFICIENCY PMTS. ($)						No Reduc.		No Reduc.								
Whole Farm.....	3,344		11,132		7,852	9,876	7,156	10,936	3,344		9,522		3,784		9,331	
per 100 Acres.....	418		1,484		980	1,233	954	1,458	418		1,270		473		1,244	
COST OF FERTILIZER ($)																
Whole Farm.....	0		7,064		0		0		0		6,536		0		6,536	
per 100 Acres.....	0		942		0		0		0		871		0		871	
COST OF HERBICIDE ($)																
Whole Farm.....	0		4,255		0		0		0		4,146		0		4,146	
per 100 Acres.....	0		567		0		0		0		553		0		553	

Annex Table 1-4. Northwest Area Summary table

	1990 Baseline				1990 Ideal NCA				1990 Triple Base Baseline Prices				1990 Triple Base NCA Flex Prices			
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional	
CROP ACREAGE																
Corn	78	8.8%	80	13.0%	---	0.0%	---	0.0%	75	8.4%	77	12.5%	75	8.4%	77	12.5%
Spring Wheat	325	36.5%	203	33.0%	303	34.0%	209	34.0%	274	30.8%	204	33.2%	274	30.8%	204	33.2%
Oats	42	4.7%	---	0.0%	142	16.0%	98	15.9%	96	10.8%	---	0.0%	96	10.8%	---	0.0%
Barley	---	0.0%	67	10.9%	---	0.0%	---	0.0%	---	0.0%	58	9.4%	---	0.0%	58	9.4%
Summer Fallow	445	50.0%	265	43.1%	445	50.0%	308	50.1%	445	50.0%	276	44.9%	445	50.0%	276	44.9%
Millet	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%
Sudan Grass	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%
TOTAL	890		615		890		615		890		615		890		615	
TARGET PRICE ($/bu.)																
Corn	2.75		2.75		2.75		2.75		2.75		2.75		2.75		2.75	
Spring Wheat	4.00		4.00		4.00		4.00		4.00		4.00		4.00		4.00	
Oats	1.44		---		1.44		---		1.45		---		1.45		---	
Barley	---		2.35		---		2.35		---		2.36		---		2.36	
S.D. FARM PRICE ($/bu.)																
Corn	2.07		2.07		2.20		2.20		2.07		2.07		2.20		2.20	
Spring Wheat	3.27		3.27		3.17		3.17		3.27		3.27		3.17		3.17	
Oats	1.68		---		1.70		---		1.68		---		1.70		---	
Barley	---		1.90		---		1.98		---		1.90		---		1.98	
Corn Silage ($/ton)	19.78		19.78		---		---		19.78		19.78		20.30		20.30	
Millet	---		---		---		---		---		---		---		---	
Sudan Grass ($/ton)	---		---		---		---		---		---		---		---	
DEFICIENCY PAYMENTS ($/bu.)																
Corn	0.58		0.58		0.45		0.45		0.58		0.58		0.45		0.45	
Spring Wheat	0.76		0.76		0.86		0.86		0.76		0.76		0.86		0.86	
Oats	0.00		---		0.00		---		0.00		---		0.00		---	
Barley	---		0.25		---		0.17		---		0.26		---		0.18	
SET-ASIDE REQUIREMENTS																
Corn	10%		10%		10%		10%		7.5%		7.5%		7.5%		7.5%	
Spring Wheat	5%		5%		5%		5%		5%		5%		5%		5%	
Oats	5%		---		5%		---		0%		---		0%		---	
Barley	---		10%		---		10%		---		7.5%		---		7.5%	
GOVT. DEFICIENCY PMTS. ($)						No Reduc.		No Reduc.								
Whole Farm	5,803		4,655		6,206	6,206	5,291	5,291	5,053		4,568		5,254		4,500	
per 100 Acres	652		757		697	697	860	860	568		743		590		732	
COST OF FERTILIZER ($)																
Whole Farm	4,005		2,574		4,005		2,763		4,005		2,491		4,005		2,491	
per 100 Acres	450		419		450		449		450		405		450		405	
COST OF HERBICIDE ($)																
Whole Farm	0		728		0		0		0		704		0		704	
per 100 Acres	0		118		0		0		0		114		0		114	

Annex Table 1-5. Southwest Area Summary Table

	1990 Baseline				1990 Ideal NCA				1990 Triple Base Baseline Prices				1990 Triple Base NCA Flex Prices			
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional	
CROP ACREAGE																
Winter Wheat.....	852	33.1%	855	34.2%	852	33.1%	828	33.1%	852	33.1%	855	34.2%	852	33.1%	855	34.2%
Grain Sorghum.....	---	0.0%	450	18.0%	---	0.0%	---	0.0%	---	0.0%	450	18.0%	---	0.0%	450	18.0%
Oats.....	---	0.0%	165	6.6%	---	0.0%	---	0.0%	---	0.0%	165	6.6%	---	0.0%	165	6.6%
Buckwheat.....	426	16.5%	---	0.0%	426	16.5%	412	16.5%	426	16.5%	---	0.0%	426	16.5%	---	0.0%
Millet.....	426	16.5%	---	0.0%	426	16.5%	412	16.5%	426	16.5%	---	0.0%	426	16.5%	---	0.0%
Forage Sorghum.....	---	0.0%	50	2.0%	---	0.0%	---	0.0%	---	0.0%	50	2.0%	---	0.0%	50	2.0%
Alfalfa.....	20	0.8%	125	5.0%	20	0.8%	20	0.8%	20	0.8%	125	5.0%	20	0.8%	125	5.0%
Summer Fallow.....	852	33.1%	855	34.2%	852	33.1%	828	33.1%	852	33.1%	855	34.2%	852	33.1%	855	34.2%
Sudan Grass.....	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%
TOTAL.....	2,576		2,500		2,576		2,500		2,576		2,500		2,576		2,500	
TARGET PRICE ($/bu.)																
Winter Wheat.....	4.00		4.00		4.00		4.00		4.00		4.00		4.00		4.00	
Grain Sorghum.....	---		2.60		---		2.60		---		2.61		---		2.61	
Oats.....	---		1.44		---		1.44		---		1.45		---		1.45	
S.D. FARM PRICE ($/bu.)																
Winter Wheat.....	3.27		3.27		3.17		3.17		3.27		3.27		3.17		3.17	
Grain Sorghum.....	---		1.82		---		1.89		---		1.82		---		1.89	
Oats.....	---		1.68		---		1.70		---		1.68		---		1.70	
Buckwheat.....	5.28		---		5.28		5.28		5.28		---		5.28		---	
Millet.....	2.80		---		2.80		2.80		2.80		---		2.80		---	
Forage Sorghum($/ton)	---		36.00		---		---		---		36.00		---		36.00	
Alfalfa ($/ton).....	50.00		50.00		50.00		50.00		50.00		50.00		50.00		50.00	
Oats Hay ($/ton).....	---		45.00		---		---		---		45.00		---		45.00	
DEFICIENCY PAYMENTS ($/bu.)																
Winter Wheat.....	0.76		0.76		0.86		0.86		0.76		0.76		0.86		0.86	
Grain Sorghum.....	---		0.51		---		0.44		---		0.52		---		0.45	
Oats.....	---		0.00		---		0.00		---		0.00		---		0.00	
SET-ASIDE REQUIREMENTS																
Winter Wheat.....	5%		5%		5%		5%		5%		5%		5%		5%	
Grain Sorghum.....	---		10%		---		10%		---		7.5%		---		7.5%	
Oats.....	---		5%		---		5%		---		0%		---		0%	
GOVT. DEFICIENCY PMTS. ($)						No Reduc.		No Reduc.								
Whole Farm.....	18,131		24,659		27,114	27,114	28,104	32,843	18,131		24,605		20,516		0	
per 100 Acres.....	704		986		1,053	1,053	1,124	1,314	704		984		796		0	
COST OF FERTILIZER ($)																
Whole Farm.....	0		8,371		0		0		0		8,371		0		8,371	
per 100 Acres.....	0		335		0		0		0		335		0		335	
COST OF HERBICIDE ($)																
Whole Farm.....	0		1,758		0		0		0		1,758		0		1,758	
per 100 Acres.....	0		70		0		0		0		70		0		70	

Annex 2

Area Cost and Return Indicators

The tables in Annex 2 contain NCA, triple base, and target price reduction summary results for the case sustainable and conventional farms covered in this report. Figures in parentheses represent negative values.

Annex Table 2-1. South-central Area Cost and Return Indicators Summary

Sustainable Farm (260 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	106	100	100	106	99	100
Direct Costs Other Than Labor ($/acre)	36	36	36	36	36	36
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	40	34	34	39	33	34
Net Income Over All Costs Except Land & Mgt. ($/acre)	28	21	21	27	21	22
Net Income Over All Costs Except Management ($/acre)	(10)	(16)	(16)	(10)	(17)	(16)
Net Income Over All Costs Except Mgt. ($/whole farm)	(2,518)	(4,186)	(4,186)	(2,585)	(4,387)	(4,101)

Conventional Farm (400 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	165	105	105	165	160	155
Direct Costs Other Than Labor ($/acre)	67	36	36	64	64	67
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	64	40	40	66	60	53
Net Income Over All Costs Except Land & Mgt. ($/acre)	51	28	28	53	47	41
Net Income Over All Costs Except Management ($/acre)	14	(9)	(9)	16	10	3
Net Income Over All Costs Except Mgt. ($/whole farm)	5,423	(3,611)	(3,611)	6,225	4,033	1,271

Annex Table 2-2. East-central Area Cost and Return Indicators Summary

Sustainable Farm (720 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	130	126	131	131	128	121
Direct Costs Other Than Labor ($/acre)	42	42	42	42	42	42
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	56	52	56	56	53	47
Net Income Over All Costs Except Land & Mgt. ($/acre)	44	41	45	45	42	36
Net Income Over All Costs Except Management ($/acre)	9	5	9	9	6	0
Net Income Over All Costs Except Mgt. ($/whole farm)	6,173	3,472	6,825	6,509	4,543	(91)

Conventional Farm (805 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	204	126	134	202	195	188
Direct Costs Other Than Labor ($/acre)	90	42	42	89	90	90
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	84	51	59	84	75	68
Net Income Over All Costs Except Land & Mgt. ($/acre)	76	40	48	77	68	61
Net Income Over All Costs Except Management ($/acre)	41	4	12	41	32	25
Net Income Over All Costs Except Mgt. ($/whole farm)	32,786	3,491	9,913	33,124	25,897	20,210

Annex Table 2-3. Northeast Area Cost and Return Indicators Summary

Sustainable Farm (800 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	60	60	62	60	59	57
Direct Costs Other Than Labor ($/acre)	24	23	23	24	24	24
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	14	16	19	14	13	11
Net Income Over All Costs Except Land & Mgt. ($/acre)	7	6	12	7	6	4
Net Income Over All Costs Except Management ($/acre)	(19)	(16)	(14)	(19)	(20)	(22)
Net Income Over All Costs Except Mgt. ($/whole farm)	(14,935)	(13,175)	(11,150)	(14,935)	(15,815)	(17,575)

Conventional Farm (750 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	103	59	64	106	103	91
Direct Costs Other Than Labor ($/acre)	51	23	23	50	50	51
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	22	16	21	25	22	10
Net Income Over All Costs Except Land & Mgt. ($/acre)	13	9	14	16	13	1
Net Income Over All Costs Except Management ($/acre)	(12)	(17)	(12)	(9)	(13)	(24)
Net Income Over All Costs Except Mgt. ($/whole farm)	(9,342)	(12,508)	(8,729)	(7,092)	(9,488)	(18,098)

Annex Table 2-4. Northwest Area Cost and Return Indicators Summary

Sustainable Farm (890 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	43	42	42	44	44	38
Direct Costs Other Than Labor ($/acre)	26	24	24	26	26	26
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	0	2	2	0	0	(5)
Net Income Over All Costs Except Land & Mgt. ($/acre)	(5)	(2)	(2)	(5)	(5)	(10)
Net Income Over All Costs Except Management ($/acre)	(20)	(17)	(17)	(20)	(20)	(25)
Net Income Over All Costs Except Mgt. ($/whole farm)	(17,812)	(14,996)	(14,996)	(17,881)	(17,867)	(22,281)

Conventional Farm (615 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	51	44	44	49	49	45
Direct Costs Other Than Labor ($/acre)	30	24	24	30	30	30
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	0	3	3	(1)	(1)	(6)
Net Income Over All Costs Except Land & Mgt. ($/acre)	(8)	0	0	(8)	(8)	(14)
Net Income Over All Costs Except Management ($/acre)	(23)	(15)	(15)	(23)	(23)	(29)
Net Income Over All Costs Except Mgt. ($/whole farm)	(14,073)	(9,422)	(9,422)	(14,450)	(14,339)	(17,736)

Annex Table 2-5. Southwest Area Cost and Return Indicators Summary

Sustainable Farm (2,576 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	69	72	72	69	69	63
Direct Costs Other Than Labor ($/acre)	23	23	23	23	23	23
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	28	30	30	28	28	22
Net Income Over All Costs Except Land & Mgt. ($/acre)	22	24	24	22	22	16
Net Income Over All Costs Except Management ($/acre)	5	7	7	5	5	(1)
Net Income Over All Costs Except Mgt. ($/whole farm)	12,806	19,233	19,233	12,806	12,635	(1,508)

Conventional Farm (2,500 acres)

	1990 Baseline	1990 Ideal NCA	Ideal NCA with NO Defc. Pmt.Reduct.	1990 Triple Base with Bsln. Prices	1990 Triple Base with NCA Flex prices	1990 Baseline 15% T.P. Reduct.
Gross Income ($/acre)	74	72	74	74	74	66
Direct Costs Other Than Labor ($/acre)	27	23	23	27	27	27
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	28	31	33	28	28	20
Net Income Over All Costs Except Land & Mgt. ($/acre)	22	25	27	22	21	14
Net Income Over All Costs Except Management ($/acre)	5	8	10	5	4	(3)
Net Income Over All Costs Except Mgt. ($/whole farm)	11,437	20,224	24,963	11,384	11,143	(7,854)

Annex 3

Integrated Farm Management Program Option
Data and Summary Tables

The tables in Annex 3 contain IFMPO analysis information and results for the sustainable and conventional farms covered in this report. The tables contain such information as crop acreage, crop prices, ARP (set-aside) requirements, deficiency payments, costs of commercial fertilizers and herbicides, and effects of the IFMPO on various measures of income. Figures in parentheses represent negative values.

Annex Table 3-1. South-central Area Integrated Farm Management Program Option Summary

	1990 Baseline				IFMPO Baseline Prices				IFMPO NCA Flex Prices				Partial IFMPO Baseline Prices		Partial IFMPO NCA Flex Prices	
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Conventional		Conventional	
CROP ACREAGE																
Spring Wheat.....	91	35.0%	---	0.0%	NA	ERR	130	32.5%	NA	ERR	130	32.5%	---	0.0%	---	0.0%
Corn.....	---	0.0%	166	41.5%	NA	ERR	---	0.0%	NA	ERR	---	0.0%	120	30.0%	120	30.0%
Oats.....	---	0.0%	61	15.3%	NA	ERR	---	0.0%	NA	ERR	---	0.0%	41	10.3%	41	10.3%
Soybeans.....	134	51.5%	121	30.3%	NA	ERR	192	48.0%	NA	ERR	192	48.0%	166	41.5%	166	41.5%
Alfalfa.....	---	0.0%	30	7.5%	NA	ERR	30	7.5%	NA	ERR	30	7.5%	30	7.5%	30	7.5%
Set-Aside.....	35	13.5%	22	5.5%	NA	ERR	48	12.0%	NA	ERR	48	12.0%	43	10.8%	43	10.8%
TOTAL.....	260		400		NA		400		NA		400		400		400	
TARGET PRICE ($/bu.)																
Spring Wheat.....	4.00		---		NA		---		NA		---		---		---	
Corn.....	---		2.75		NA		2.75		NA		2.75		2.75		2.75	
Oats.....	---		1.44		NA		1.45		NA		1.45		1.45		1.45	
S.O. FARM PRICE ($/bu.)																
Spring Wheat.....	3.27		---		NA		3.27		NA		3.17		---		---	
Corn.....	---		2.07		NA		---		NA		---		2.07		2.20	
Oats.....	---		1.68		NA		---		NA		---		1.68		1.70	
Soybeans.....	4.99		4.99		NA		4.99		NA		4.42		4.99		4.42	
Alfalfa ($/TON)...	---		50.00		NA		50.00		NA		50.00		50.00		50.00	
DEFICIENCY PAYMENTS ($/bu.)																
Spring Wheat.....	0.76		---		NA		---		NA		---		---		---	
Corn.....	---		0.58		NA		0.58		NA		0.45		0.58		0.45	
Oats.....	---		0.00		NA		0.00		NA		0.00		0.00		0.00	
SET-ASIDE REQUIREMENTS																
Spring Wheat.....	5%		---		NA		---		NA		---		---		---	
Corn.....	---		10%		NA		7.5%		NA		7.5%		7.5%		7.5%	
Oats.....	---		5%		NA		0%		NA		0%		0%		0%	
Soybeans.....	---		---		NA		---		NA		---		---		---	
GOVT. DEFICIENCY PMTS. ($)																
Whole Farm.....	2,006		5,873		NA		1,451		NA		1,125		5,059		3,925	
per 100 Acres.....	772		1,468		NA		363		NA		281		1,265		981	
COST OF FERTILIZER ($)																
Whole Farm.....	0		4,258		NA		368		NA		368		3,106		3,106	
per 100 Acres.....	0		1,065		NA		92		NA		92		777		777	
COST OF HERBICIDE ($)																
Whole Farm.....	12		2,193		NA		16		NA		16		1,924		1,924	
per 100 Acres.....	5		548		NA		4		NA		4		481		481	

Annex Table 3-2. East-central Area Integrated Farm Management Program Option Summary

	1990 Baseline				IFMPO Baseline Prices				IFMPO NCA Flex Prices				Partial IFMPO Baseline Prices		Partial IFMPO NCA Flex Prices	
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Conventional		Conventional	
CROP ACREAGE																
Corn	180	25.0%	432	53.7%	180	25.0%	201	25.0%	180	25.0%	201	25.0%	324	40.2%	324	40.2%
Soybeans	180	25.0%	325	40.4%	180	25.0%	201	25.0%	180	25.0%	201	25.0%	325	40.4%	325	40.4%
Spring Wheat	61	8.5%	---	0.0%	42	5.8%	---	0.0%	42	5.8%	---	0.0%	---	0.0%	---	0.0%
Oats	74	10.3%	---	0.0%	122	16.9%	183	22.8%	122	16.9%	183	22.8%	60	7.5%	60	7.5%
Alfalfa	180	25.0%	---	0.0%	180	25.0%	201	25.0%	180	25.0%	201	25.0%	78	9.7%	78	9.7%
Non-Pd Set-Aside	45	6.3%	48	6.0%	16	2.2%	18	2.2%	16	2.2%	18	2.2%	18	2.2%	18	2.2%
TOTAL	720		805		720		804		720		804		805		805	
TARGET PRICE ($/bu.)																
Corn	2.75		2.75		2.75		2.75		2.75		2.75		2.75		2.75	
Spring Wheat	4.00		---		4.00		---		4.00		---		---		---	
Oats	1.44		---		1.45		---		1.45		---		---		---	
Barley	---		---		---		---		---		---		---		---	
S.D. FARM PRICE ($/bu.)																
Corn	2.07		2.07		2.07		2.07		2.20		2.20		2.07		2.20	
Soybeans	4.99		4.99		4.99		4.99		4.42		4.42		4.99		4.42	
Spring Wheat	3.27		---		3.27		---		3.17		---		---		---	
Oats	1.68		---		1.68		1.68		1.70		1.70		1.68		1.70	
Alfalfa ($/ton)	50.00		---		50.00		50.00		50.00		50.00		50.00		50.00	
Millet Hay ($/ton)	---		25.00		---		---		---		---		---		---	
DEFICIENCY PAYMENTS ($/bu.)																
Corn	0.58		0.58		0.58		0.58		0.45		0.45		0.58		0.45	
Spring Wheat	0.76		---		0.76		---		0.86		---		---		---	
Oats	0.00		---		0.00		---		0.00		---		---		---	
Barley	---		---		---		---		---		---		---		---	
SET-ASIDE REQUIREMENTS																
Corn	10%		10%		7.5%		7.5%		7.5%		7.5%		7.5%		7.5%	
Soybeans	---		---		---		---		---		---		---		---	
Spring Wheat	5%		---		5%		---		5%		---		---		---	
Oats	5%		---		0%		---		0%		---		---		---	
Barley	10%		---		7.5%		---		7.5%		---		---		---	
GOVT. DEFICIENCY PMTS. ($)																
Whole Farm	8,699		17,790		7,009		15,319		5,852		11,885		15,319		11,885	
per 100 Acres	1,208		2,210		973		1,905		813		1,478		1,903		1,476	
COST OF FERTILIZER ($)																
Whole Farm	0		12,281		0		0		0		0		7,409		7,409	
per 100 Acres	0		1,526		0		0		0		0		920		920	
COST OF HERBICIDE ($)																
Whole Farm	720		15,775		720		804		720		804		10,971		10,971	
per 100 Acres	100		1,960		100		100		100		100		1,363		1,363	

Annex Table 3-3. Northwest Area Integrated Farm Management Program Option Summary

	1990 Baseline				IFMPO Baseline Prices				IFMPO NCA Flex Prices				Partial IFMPO Baseline Prices		Partial IFMPO NCA Flex Prices	
	Sustainable		Conventional		Sustainable		Conventional		Sustainable		Conventional		Conventional		Conventional	
CROP ACREAGE																
Corn	78	8.8%	80	13.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	65	10.6%	65	10.6%
Spring Wheat	325	36.5%	203	33.0%	303	34.0%	209	34.0%	303	34.0%	209	34.0%	166	27.0%	166	27.0%
Oats	42	4.7%	---	0.0%	142	16.0%	98	15.9%	142	16.0%	98	15.9%	43	7.0%	43	7.0%
Barley	---	0.0%	67	10.9%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	49	8.0%	49	8.0%
Summer Fallow	445	50.0%	265	43.1%	445	50.0%	308	50.1%	445	50.0%	308	50.1%	292	47.5%	292	47.5%
Millet	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%
Sudan Grass	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%
TOTAL	890		615		890		615		890		615		615		615	
TARGET PRICE ($/bu.)																
Corn	2.75		2.75		2.75		2.75		2.75		2.75		2.75		2.75	
Spring Wheat	4.00		4.00		4.00		4.00		4.00		4.00		4.00		4.00	
Oats	1.44		---		1.45		---		1.45		---		---		---	
Barley	---		2.35		---		2.36		---		2.36		2.36		2.36	
S.D. FARM PRICE ($/bu.)																
Corn	2.07		2.07		---		---		---		---		2.07		2.20	
Spring Wheat	3.27		3.27		3.27		3.27		3.17		3.17		3.27		3.17	
Oats	1.68		---		1.68		1.68		1.70		1.70		1.68		1.70	
Barley	---		1.90		---		---		---		---		1.90		1.98	
Corn Silage ($/ton)	19.78		19.78		---		---		---		---		19.78		20.30	
Millet	---		---		---		---		---		---		---		---	
Sudan Grass ($/ton)	---		---		---		---		---		---		---		---	
DEFICIENCY PAYMENTS ($/bu.)																
Corn	0.58		0.58		0.58		0.58		0.45		0.45		0.58		0.45	
Spring Wheat	0.76		0.76		0.76		0.76		0.86		0.86		0.76		0.86	
Oats	0.00		---		0.00		---		0.00		---		---		---	
Barley	---		0.25		---		0.26		---		0.18		0.26		0.18	
SET-ASIDE REQUIREMENTS																
Corn	10%		10%		7.5%		7.5%		7.5%		7.5%		7.5%		7.5%	
Spring Wheat	5%		5%		5%		5%		5%		5%		5%		5%	
Oats	5%		---		0%		---		0%		---		---		---	
Barley	---		10%		---		7.5%		---		7.5%		7.5%		7.5%	
GOVT. DEFICIENCY PMTS. ($)																
Whole Farm	5,803		4,655		4,862		4,568		5,106		4,500		4,568		4,500	
per 100 Acres	652		757		546		743		574		732		743		732	
COST OF FERTILIZER ($)																
Whole Farm	4,005		2,574		4,005		2,763		4,005		2,763		2,450		2,450	
per 100 Acres	450		419		450		449		450		449		398		398	
COST OF HERBICIDE ($)																
Whole Farm	0		728		0		0		0		0		585		585	
per 100 Acres	0		118		0		0		0		0		95		95	

Annex Table 3-4. South-central Area Cost and Return Indicators for Baseline and IFMPO

Sustainable Farm (260 acres)

	1990 Baseline	IFMPO with Bsln. Prices	IFMPO with NCA Flex prices
Gross Income ($/acre)	106	NA	NA
Direct Costs Other Than Labor ($/acre)	36	NA	NA
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	40	NA	NA
Net Income Over All Costs Except Land & Mgt. ($/acre)	28	NA	NA
Net Income Over All Costs Except Management ($/acre)	(10)	NA	NA
Net Income Over All Costs Except Mgt. ($/whole farm)	(2,518)	NA	NA

Conventional Farm (400 acres)

	1990 Baseline	IFMPO with Bsln. Prices	IFMPO with NCA Flex prices	Partial IFMPO with Bsln. Prices	Partial IFMPO with NCA Flex prices
Gross Income ($/acre)	165	107	98	154	147
Direct Costs Other Than Labor ($/acre)	67	36	36	59	59
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	64	42	33	62	55
Net Income Over All Costs Except Land & Mgt. ($/acre)	51	30	21	49	43
Net Income Over All Costs Except Management ($/acre)	14	(7)	(16)	12	5
Net Income Over All Costs Except Mgt. ($/whole farm)	5,423	(2,912)	(6,405)	4,761	2,176

Annex Table 3-5. East-central Area Cost and Return Indicators for Baseline and IFMPO

Sustainable Farm (720 acres)

	1990 Baseline	IFMPO with Bsln. Prices	IFMPO with NCA Flex prices
Gross Income ($/acre)	130	131	128
Direct Costs Other Than Labor ($/acre)	42	43	43
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	56	55	53
Net Income Over All Costs Except Land & Mgt. ($/acre)	44	44	41
Net Income Over All Costs Except Management ($/acre)	9	8	6
Net Income Over All Costs Except Mgt. ($/whole farm)	6,173	5,645	4,043

Conventional Farm (805 acres)

	1990 Baseline	IFMPO with Bsln. Prices	IFMPO with NCA Flex prices	Partial IFMPO with Bsln. Prices	Partial IFMPO with NCA Flex prices
Gross Income ($/acre)	204	141	136	181	174
Direct Costs Other Than Labor ($/acre)	90	43	43	73	73
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	84	65	60	77	70
Net Income Over All Costs Except Land & Mgt. ($/acre)	76	53	49	69	61
Net Income Over All Costs Except Management ($/acre)	41	18	13	33	26
Net Income Over All Costs Except Mgt. ($/whole farm)	32,786	14,148	10,343	26,412	20,622

Annex Table 3-6. Northwest Area Cost and Return Indicators for Baseline and IFMPO

Sustainable Farm (890 acres)

	1990 Baseline	IFMPO with Bsln. Prices	IFMPO with NCA Flex prices
Gross Income ($/acre)	43	41	41
Direct Costs Other Than Labor ($/acre)	26	24	24
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	0	1	1
Net Income Over All Costs Except Land & Mgt. ($/acre)	(5)	(3)	(3)
Net Income Over All Costs Except Management ($/acre)	(20)	(18)	(18)
Net Income Over All Costs Except Mgt. ($/whole farm)	(17,812)	(15,845)	(16,066)

Conventional Farm (615 acres)

	1990 Baseline	IFMPO with Bsln. Prices	IFMPO with NCA Flex prices	Partial IFMPO with Bsln. Prices	Partial IFMPO with NCA Flex prices
Gross Income ($/acre)	51	43	42	41	41
Direct Costs Other Than Labor ($/acre)	30	24	24	29	29
Net Income Over All Costs Except Land, Labor, and Management ($/acre)	0	3	2	0	0
Net Income Over All Costs Except Land & Mgt. ($/acre)	(8)	(1)	(1)	(7)	(7)
Net Income Over All Costs Except Management ($/acre)	(23)	(16)	(17)	(22)	(22)
Net Income Over All Costs Except Mgt. ($/whole farm)	(14,073)	(9,825)	(10,213)	(13,682)	(13,552)