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AN ECONOMIC ANALYSIS OF 1966 COTTON PLANTING ALTERNATIVES

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Statement of Review from State ASCS Office

This publication has been reviewed by representatives of the State ASCS office and the basic provisions of the 1966 cotton program presented here are the same as provisions administered by the State office. The county ASCS office should be consulted on conservation uses approved for diverted acres and for meeting conserving base requirements.

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SUMMARY

The objectives of this study were to analyze the profitability of three diversion rates specified by the 1966 cotton program as well as that of planting in skip-row patterns. A computer was used to consider costs and returns that might result from all of the meaningful combinations of expected actual yields, projected yields, variable costs, opportunity costs of skipped rows, and additional yields from skip-row planting patterns. The following generalizations can be made based on this study:

(1) If the expected actual yield is 150 pounds above projected yield, it will usually pay to divert 12.5 per cent on large allotments or zero per cent on allotments of 10 acres or less.

(2) If expected actual yield is equal to projected yield and variable costs are less than $80 per acre of cotton planted solid, it will pay to divert 12.5 or zero per cent depending on allotment size.

(3) Twenty-five per cent is never a more profitable diversion level than 35, 12.5, or zero per cent.

(4) Planting a skip-row pattern of four-four is more profitable than solid planting if the expected actual yield is above 380 pounds on a solid planted acre, and 35 per cent is the best diversion level. Planting four-four is more profitable than solid planting for any level of diversion if the expected actual yield is above 700 pounds on a solid-planted acre.

(5) Four-four is the best of the skip-row patterns to plant under most yield conditions if opportunity costs are between zero and $35 per acre. If opportunity costs do not exist but instead opportunity returns are possible because of productive use of skipped rows in some other use or because payments result from some other program, then two-four planting should be compared with four-four planting by the methods outlined. Land that was profitably planted two-two in 1965 should in most cases be planted four-four in 1966 for maximum returns.

AN ECONOMIC ANALYSIS OF 1966 COTTON PLANTING ALTERNATIVES*

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Cotton legislation effective with the 1966 crop, has posed two difficult decisions for most cotton farmers. These decisions are (1) whether to divert 12.5, 25, or 35 per cent of their allotment, and (2) whether to plant solid or to use one of the skip-row patterns. In many individual farm circumstances, there will be several dollars difference in the profit resulting from one decision as compared with another. Every farmer should give careful consideration to all pertinent data for his farm before making his decision on the number of acres to divert and whether to plant solid or use a skip-row pattern.

Decision to Divert Cotton Acreage, Solid Planting

There are a number of factors that should be considered by a farmer when making his decision on how much of his cotton acreage to divert. These factors are projected yield, expected yield, variable cost, and allotment size. Fixed costs do not affect these decisions because they do not change as acreages or yields change. Only variable costs are used because these are the costs that change as a farmer reduces the number of acres of cotton he produces.

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*The work of Victor M. Yellen, Graduate Assistant, Department of Agricultural Economics and Rural Sociology, in programming and use of the computer in connection with analyzing various alternatives under the new cotton program is gratefully acknowledged.

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Projected yield is the yield that the county Agricultural Stabilization and Conservation Service office assigns a farmer based on 3 years of yield data. (For 1966, the years used are 1962, 1963, and 1964.) Expected yield is the yield that the farmer expects to produce in 1966. Variable costs are the costs that vary as acreages and yields change. The following is an example of the variable costs to produce an acre of cotton with two yield levels:

500-pound yield	Costs per acre	750-pound yield	Costs per acre
Seed	$ 2.88	Seed	$ 2.88
Fertilizer	15.62	Fertilizer	17.62
Insecticide	13.65	Insecticide	13.65
Pre-emergence oil	1.50	Pre-emergence oil	1.50
Post-emergence oil	1.50	Post-emergence oil	1.50
Fuel, oil and repairs	7.80	Fuel, oil and repairs	7.80
Equip. & oper. exp.	1.50	Equip. & oper. exp.	1.50
Custom picking	30.00	Custom picking	37.50
Ginning	12.75	Ginning	19.12
Total variable costs per acre	$87.20	Total variable costs per acre	$105.08

Which Diversion Level to Choose?

The 1966 cotton program allows farmers to choose a participation plan based on their individual farm situations. As there are three diversion levels to be considered for each of the many combinations of variable costs, projected yield, expected, yield, and allotment size, the problem of choice can become complex. One way of solving this problem is to develop budgets for the alternative choices. An example of data to use in budgeting follows:

Budgeted Outcomes for Four Levels of Participation in the 1966 Cotton Program

Assumptions

(1) 10-acre effective allotment
(2) Projected yield 500 lb.
(3) Expected yield 750 lb.

		Levels of diversion			
		0	12½%	25%	35%
I.	Value of crop produced				
	a. Lint 750 lb. @ 21¢....	$ 157.50	$ 157.50	$ 157.50	$ 157.50
	b. Seed .7 ton @ $45.00 .	31.50	31.50	31.50	31.50
	c. Total receipts per acre	189.00	189.00	189.00	189.00
	d. Number of acres	10.00	8.75	7.50	6.50
	e. Total receipts	$1,890.00	$1,653.75	$1,417.50	$1,228.50
II.	Support payments 500 lb. (p.y.) x 9.42¢ x 6.5 a. (65% of allotment)	306.15	306.15	306.15	306.15
III.	Diversion payments 500 lb. (p.y.) x 10.5¢ x 3.5 a. (35% of allotment)	183.75	183.75	183.75	183.75
IV.	Additional diversion payments 500 lb. (p.y.) x 10.5¢ x diverted acres	0	65.62	131.25	183.75
V.	Total income and payments	$2,379.90	$2,209.27	$2,038.65	$1,902.15
VI.	Total variable costs (also includes conservation costs, if any)	$1,050.80	$ 919.45	$ 788.10	$ 683.02
VII.	Income minus costs (10 acres)	$1,329.10	$1,289.82	$1,250.55	$1,219.13
	Income minus costs per allotment acre	$ 132.91	$ 128.98	$ 125.06	$ 121.91

The most profitable level of diversion under the above assumption is the zero level. This same budgeting procedure, however, will show that the 35-per cent level of diversion is the most profitable if expected yield is 500 pounds and variable costs are $87.20 per acre.

There are so many alternatives that budgeting all of them would be practically impossible. A computer, therefore, was used to derive a set of tables to simplify the problem of choosing the most profitable level of participation. Appendix Tables 1 - 8 show income minus costs on an allotment acre basis.

The tables can be used to determine which level of diversion would be the most profitable for a farmer based on his actual yield and variable costs. Each table represents one level of projected yield. Appendix Tables 1, 2, and 3 should be used by a farmer with a 10-acre allotment or less, and Appendix Tables 4, 5, and 6 should be used by farmers with more than a 10-acre cotton allotment.

How to Use the Tables

To determine if you should divert 35 per cent or none of your 10-acre allotment, let's take an example and see how to make a decision using the tables. Let's assume that your projected yield is 500 pounds with an expected yield of 600 pounds, and your variable costs are $90 per acre. Therefore, to determine which alternative would be most profitable, let's look at Appendix Table 2, which is for your projected yield of 500 pounds per acre.

Refer to the last line in the table and the column of figures above the 600-pound expected yield. Draw a line straight upward at right of this column of figures until you come to the $90-dollar variable cost per acre figures at left side of the table. Draw a horizontal line below the $90-dollar level to the right until it intersects the vertical line. Label this Point A. Point A is to the right and below the stair-step

line, which indicates it would be more profitable for you to plant your entire allotment of 10 acres.

The figure $110.10 represents the return above variable cost per allotment acre for no diversion or a total of $1,101.00 for 10 acres. The $107.09 represents return above variable cost per allotment acre if you divert 35 per cent or a total of $1,070.90 for the 10 acres.

The stair-step lines on the tables represent the divisions between diverting the minimum and maximum acres to get the greatest profit. All points below and to the right of these lines indicate that it is more profitable to plant all your allotment. The area above and to the left indicates it is more profitable to divert 35 per cent of your allotment.

The top figure in each set of two in the tables indicates the net income above variable costs for no diversion and the bottom figure is for 35 per cent diversion. To determine the most profitable decision for you, use the table that represents your projected yield. Draw a line upward from your expected yield and a line to the right from your variable costs. The intersection of these two lines determines which decision would give you the highest net income per allotment acre.

If your allotment is greater than 10 acres, then you need to use Appendix Tables 4, 5 and 6. These are used in the same manner as Appendix Tables 1, 2 and 3. For example, assume your projected yield is 600 pounds with an expected yield of 600 pounds and a variable cost of $100 per acre. Using Appendix Table 6, select your actual yield of 600 pounds and your variable cost of $100. Draw a vertical and horizontal line. The line will intersect at Point B, which is above the

stair-step line. Point B indicates that you would have a higher net income per acre if you diverted 35 per cent of your allotment. The figures $92.01 and $89.33 represent the net income per acre for 35 per cent diversion and 12½ per cent diversion, respectively.

Your variable costs and expected yields are very important in determining which alternative is the more profitable. In the case of the last example, it would have been more profitable to divert only 12½ per cent if your variable costs were only $80 per acre. On the other hand, if your expected yield was 700 pounds (with variable costs $100), it would have been more profitable to divert only 12½ per cent.

In general, the higher your expected yield is in relation to your projected yield the more it will pay you to plant more acres or divert the least acreage. In most cases, if your expected yield is 150 pounds above your projected yield, it will pay you to divert 12½ per cent or zero per cent for the farmer with 10 or less allotted acres. Also, relatively low variable costs will indicate that your most profitable decision is to divert the minimum amount. In general, if expected yield is equal to projected yield and variable costs are less than $80, it will pay you to divert the minimum (12.5 or zero per cent).

In conclusion, for solid planted cotton (1) if your yields are low and variable costs are relatively high, you should divert 35 per cent; and (2) if yields are high and variable costs are relatively low, you should divert 12½ or zero per cent. It is never more profitable to divert 25 per cent, although the net incomes per acre near the stair-step line in the tables are approximately the same for all three levels

of diversion. An important point to remember is that your expected yield should be such that chances are you will be equally as likely to have a yield above as below it. Chances of gaining by choice of a particular diversion plan will tend to be offset by risks of losing.

Decision to Plant Cotton in Skip-Row Patterns

The decision to plant cotton in a skip-row pattern depends primarily on four factors: (1) additional yield obtained from planting additional land in cotton, (2) additional costs of preparing more land and harvesting and ginning more cotton, (3) the forgone returns (opportunity costs) from other crops or enterprises for which the additional land could have been used, and (4) rules of the 1966 cotton program that relate skipped rows to diverted acreage. A possible fifth factor, the effect on future projected yield of planting skipped rows, will be discussed later in this section since this factor is related to decisions to be made for more than one production period.

The four primary factors may be placed in either added costs or added returns categories. Factor 4 in the rules can be interpreted as affecting opportunity costs and, thus, the decision to plant in a skip-row pattern depends on a comparison of added returns, factor 1, with the added costs, factors 2, 3, and 4.

Added Returns

Greater yields per acre of allotment have been consistently obtained from planting cotton in patterns of two rows skipped, two rows planted; two rows skipped, one row planted; two rows skipped, four rows planted;

and four rows skipped, four rows planted. Increased yields have averaged 50 per cent greater for the two-four and the two-two patterns and 33 per cent for the two-one and the four-four patterns.[1] Other patterns are possible, but on the basis of acceptance by farmers they have not appeared profitable. Most skip-row plantings are of the patterns described above. The two planted-four skipped pattern was specifically analyzed because of a 1966 program rule that nullifies the effect of increased yields from the two-two pattern.

The new rule says, essentially, that 1.54 acres of land or 0.77 acre of cotton planted two-two will count as 1.0 acre of cotton allotment when formerly 2.0 acres of land or 1.0 acre of cotton planted would have been counted as an allotment acre. The rule says 1.16 acres of land or 0.77 acres of cotton planted two-one will count as 1.0 acre of allotment. Fifty per cent increased yield under the old rule for two-two would have meant: 0.50 times yield of 1.0 acre (solid) plus yield of 1.0 acre (solid) = 1.5 times the yield of 1.0 acre (solid). Fifty per cent increased yield under the new rule means: 0.50 times yield of 0.77 acre (solid) plus yield of 0.77 acre (solid) = 1.15 times the yield of 1.0 acre (solid). The real effect of the new rule, therefore, is to cut the actual increased yield of two-two planting to only 15 per cent greater yield on allotment than could be obtained by planting solid. A similar analysis of two-one showed that the actual increased yield on two-one

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[1]Sturke, D. G., and Boseck, J. K., Skip-Row Cotton Produces Highest Yields, Highlights of Agricultural Research, Vol. 9, No. 4, Alabama Agricultural Experiment Station, Auburn, Alabama, 1962.

would be only 3 per cent. The relevant added yields on allotments that must be used for comparison with solid planting are 15 per cent greater for two-two, 3 per cent greater for two-one, 50 per cent greater for two-four, and 33 per cent greater for four-four. A comparison of two-one with two-two indicated that two-two will always be the most profitable, and two-one was dropped from the analysis.

Added returns may be defined as added yield times price or actual yield on solid-planted cotton times the percentage increase in yield from skip-row planting times price per pound. Price per pound under the new program is 21 cents since diversion and support payments are not related to added yield in any year. Added return is affected by level of diversion, however, and must be accounted for, as follows, to obtain a complete picture of added return on lint cotton:

Lint added return = increased yield on skip-row planting (15, 33, or 50 per cent) times actual yield on solid-planted cotton times 21 cents times percentage of allotment planted (0.875 or 0.65 acres).

Added return on seed may be calculated in a similar way. Approximately 1.86 pounds of seed are obtained for each pound of lint and if seed sells for $45 per ton, a value of 4.2 cents in seed is obtained for each pound of lint. For example:

Seed added return = increased yield on skip-row planting (15, 33, or 50 per cent) times actual yield on solid-planted cotton times 4.2 cents times percentage of allotment planted (0.875 or 0.65).

Added Costs

Ginning and harvesting costs increase as yields increase from skip-row patterns of planting. Land preparation and opportunity costs change also according to the skip-row pattern used. Added ginning and harvesting costs were estimated in the following way. Ginning and harvesting costs were assumed to be 8.7 cents per pound of lint harvested and added cost was calculated as follows:

> Ginning and harvesting added cost = increased yield on skip-row (15, 33, or 50 per cent) times 8.7 cents times percentage of allotment planted (o.875 or 0.65).

Added costs attributed to foregone returns (opportunity costs) and land preparation costs are not related to actual yield. Added land preparation costs are affected significantly, however, by the skip-row pattern. Opportunity costs are significantly related to program rules on use of skipped rows as diverted acres.

The two-two pattern requires more cost for land preparation than solid, but because only 0.77 of an acre of cotton is planted other variable costs of production are less. Increases and decreases are such that on the average they tend to balance each other and added land preparation costs were treated as zero for the two-two case. Land preparation costs are not cancelled in the four-four case and added costs were budgeted at $10 per allotment acre. (See fuel and equipment expense on page 2.) Two additional acres must be prepared for each allotment acre planted in the two-four pattern and added land preparation costs were budgeted at $20 per allotment acre.

Opportunity costs in Alabama are likely to be represented by alternative returns from corn or soybeans. Thirty-five dollars per acre was the highest opportunity cost considered in this study. The cost represents the return that might be earned on yields of 65 bushels of corn or 30 bushels of soybeans per acre of idle skipped rows. Different effects of opportunity costs ranging from zero to $35 were also studied. Added land preparation costs and opportunity costs were designated as follows:

> Added land preparation and opportunity costs = added land preparation costs (zero, $10, or $20) times added land greater than the amount used for solid-planted cotton plus opportunity costs (zero to $35) times added land greater than the amount used for solid-planted cotton.

The definition of added land greater than the amount used for solid planting is complicated by 1966 program rules. These rules state that farmers planting skip-row patterns containing at least four skipped rows may count skipped rows as diverted acreage. Two rows or one row skipped cannot be counted as diverted acreage. Added acres of skipped rows that contribute to opportunity costs thus can be reduced by the amount of diversion in the case of four-four and two-four, but not for two-two. The following cases indicate this effect:

> Added land greater than the amount used for solid planting = acres two-two, four-four, or two-four minus acres solid times per cent diversion minus skipped rows counted as diverted acres.

Two-two: $(1.54 - 1.0) \times 0.65 - 0.0 = 0.351$ added acre for 35 per cent diversion

(1.54 - 1.0) x 0.875 - 0.0 = 0.471 added acre for 12.5 per cent diversion

Four-four: (2.0 - 1.0) x 0.65 - 0.35 = 0.30 added acre for 35 per cent diversion

(2.0 - 1.0) x 0.875 - 0.125 = 0.75 added acre for 12.5 per cent diversion

Two-four: (3.0 - 1.0) x 0.65 - 0.35 = 0.95 added acre for 35 per cent diversion

(3.0 - 1.0) x 0.875 - 0.125 = 1.625 added acres for 12.5 per cent diversion

All possible combinations of added land preparation and opportunity costs can be calculated using the foregoing procedure. These combinations were calculated as well as net added returns stated as follows:

Added net return = added lint return + added seed return - added ginning and harvesting costs - added land preparation and opportunity costs.

The decision to plant a particular kind of skip-row pattern depends not only on whether added net return from skipped rows is positive but from which pattern net return is greatest. Some comparisons of added net returns are presented in Table 1.

All significant possibilities of comparing skip-row patterns, diversion levels, actual yields, variable costs, and opportunity costs may be made by use of Figure 1. Figure 1, a summary diagram, indicates highest net revenue is obtained by planting solid or four-four. Use the figure as follows: Estimate your expected actual yield and draw a line upward from the bottom of the chart. Estimate your variable costs of production and draw a line from this cost to the right. The intersection of these two lines (Point A, Figure 1) is interpreted as follows.

TABLE 1. ADDED NET REVENUE FOR PLANTING FOUR-FOUR, TWO-TWO, AND TWO-FOUR FOR DIFFERENT LEVELS OF ACTUAL YIELD, DIVERSION LEVELS AND OPPORTUNITY COSTS

Actual yield for solid planting	Per cent of allotment planted	Opportunity cost of land is $35/acre			Opportunity cost of land is $0/acre		
		4x4	2x2	2x4	4x4	2x2	2x4
		(Dollars)					
400	.875	-14.68	-7.54	-60.50	11.56	8.95	-3.62
	.65	.66	-5.65	-30.80	11.16	6.64	2.45
500	.875	-9.93	-5.30	-53.28	16.32	11.19	3.60
	.65	4.19	-3.97	-25.43	14.69	8.32	7.82
600	.875	-5.16	-3.06	-46.06	21.09	13.43	10.82
	.65	7.74	-2.32	-20.08	18.24	9.97	13.17
700	.875	-.39	-.82	-38.85	25.86	15.67	18.00
	.65	11.28	-.66	-14.70	21.78	11.63	18.55
800	.875	4.36	1.42	-31.63	30.61	17.91	25.25
	.65	14.82	1.02	-9.32	25.32	13.31	23.90
900	.875	9.12	3.65	-24.40	35.37	20.14	32.48
	.65	18.35	2.67	-4.00	28.85	14.96	29.25
1,000	.875	13.90	5.89	-17.18	40.15	22.38	39.70
	.65	21.89	4.34	1.37	32.39	16.63	34.62

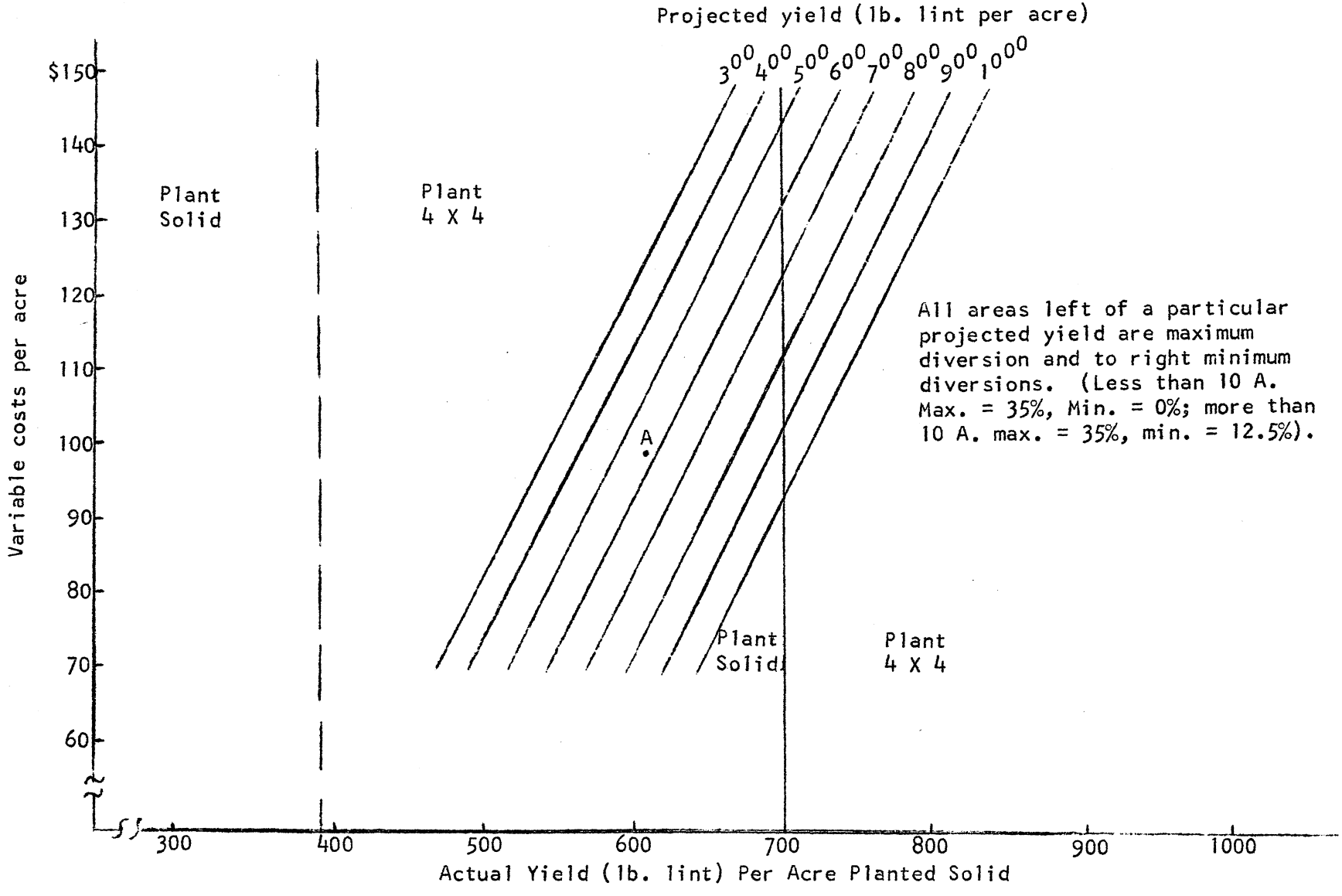


Figure 1. Chart for use in deciding on most profitable alternatives under 1966 cotton program.

If the intersection is to the left of your projected yield line, you should divert the maximum possible. If it is the right, you should divert the minimum possible. The minimum will be 12.5 per cent if your allotment is more than 10 acres and zero per cent if your allotment is 10 acres or less.

The intersection of lines for actual yield and variable costs also gives additional information about skip-row planting alternatives. If the intersection of the two lines you draw is to the right of the solid vertical line on the chart (a break-even line based on $35 per acre opportunity cost), net revenue as defined for four-four planting gives a more profitable situation than solid planting. Furthermore, added net revenue from four-four planting is greater than added net revenue from two-one, two-two, or two-four. If the intersection is to the left of the broken vertical line on the chart, solid planting is probably the most profitable.

Point A on Figure 1 is an example of an intersection point between the vertical broken line and the vertical solid line. One of two conclusions about skip-row planting is reached : (1) plant solid and divert 12.5 or zero per cent (depending on allotment size) because the point is to the right of the projected yield line representing 500 pounds, or (2) plant four-four and divert 35 per cent because the point is to the left of the projected yield line representing 600 pounds. In general, if expected actual yield on solid planting is between 380 and 700 pounds, the decision to plant a skip-row pattern is inter-related with the decision to divert the maximum or minimum amounts of acreage. Both decisions can be made, however, with the help of Figure 1.

One may move the vertical lines at 700 pounds and 380 pounds actual yield to accommodate levels of opportunity cost different from $35 per acre. The solid vertical line moves to the left at a rate of 11.7 pounds actual yield for every dollar reduction of opportunity cost. The broken vertical line moves to the left at a rate of 6.3 pounds actual yield for a dollar reduction of opportunity cost.

Planting two-two and two-one would never be profitable under the assumptions of this study. Planting two-four would be the best alternative if opportunity costs were zero and expected yield on solid planting was over 900 pounds per acre. Two-four becomes even more profitable in relation to four-four if there are opportunity returns possible from the skipped rows.

Projected yields other than in 100-pound units may be used by drawing in new projected yield lines in Figure 1. Skipped row net revenue may be estimated closely by adding the appropriate added net revenues from Table 1 to revenues from solid planting in Appendix Tables 1 through 8.

The possible fifth factor affecting skip-row decisions is that diversion and support payments are made on the basis of projected yield. Projected yield at present is the average of 3 years actual yields regardless of whether they were obtained from skip-row or from solid planting. The economic implications are that if the decision this year is to plant solid as opposed to skip-row planting in the past, then future accumulated added returns of solid over skip-row planting must outweigh the future accumulated sum of reductions in support and diversion payments because of reductions in future projected yield. The situation

as described, however, is unlikely to occur in view of profitability indicated by four-four pattern in Figure 1. An individual who is already planting skip-row is not likely to face conditions that would indicate solid planting. Accumulated added returns from four-four planting must also outweigh the future accumulated reductions that might occur because of choosing four-four over two-four. Only producers who have expected yields in the neighborhood of 900 pounds for solid planting or who have opportunity returns from skipped rows should consider this alternative. Methods used in this analysis can be used to answer this question.

APPENDIX TABLE 1. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OF 10 ACRES OR LESS WITH PROJECTED YIELD OF 400 POUNDS LINT PER ACRE

Variable cost/acre	0	200	300	400	500	600	700	800
$120		-30.44	-5.25	19.93	45.12	70.30	95.49	120.67
		-8.63	25.00	41.37	57.74	74.11	90.48	106.85
110		-20.44	4.75	29.93	55.12	80.30	105.49	130.67
		-15.13	31.50	47.87	64.24	80.61	96.98	113.35
100		-10.44	14.75	39.93	65.12	90.30	115.49	140.67
		21.63	38.00	54.37	70.74	87.11	103.48	119.85
90		-.44	24.75	49.93	75.12	100.30	125.49	150.67
		28.13	44.50	60.87	77.24	93.61	109.98	126.35
			Divert 35%					
80		9.56	34.75	59.93	85.12	110.30	135.49	160.67
		34.63	51.00	67.37	83.74	100.11	116.48	132.85
						No Diversion		
70		19.56	44.75	69.93	95.12	120.30	145.49	170.67
		41.13	57.50	73.87	90.24	106.61	122.98	139.35
60		29.56	54.75	79.93	105.12	130.30	155.49	180.67
		47.63	64.00	80.37	96.74	113.11	129.48	145.85
50		39.56	64.75	89.93	115.12	140.30	165.49	190.67
		54.13	70.50	86.87	103.24	119.61	135.98	152.35
40		49.56	74.75	99.93	125.12	150.30	175.49	200.67
		60.63	77.00	93.37	109.74	126.11	142.48	158.85
0								

Expected yield (pounds of lint) per acre, solid planted

APPENDIX TABLE 2. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OF 10 ACRES OR LESS WITH PROJECTED YIELD OF 500 POUNDS LINT PER ACRE

Variable cost/acre	200	300	400	500	600	700	800
$120	-20.64 22.11	4.54 38.48	29.73 54.85	54.91 71.22	80.10 87.59	105.28 103.96	130.47 120.33
110	-10.64 28.61	14.54 44.98	39.73 61.35	64.91 77.72	90.10 94.09	115.28 110.46	140.47 126.83
100	-.64 35.11	24.54 51.48	49.73 67.85	74.91 84.22	100.10 100.59	125.28 116.96	150.47 133.33
		Divert 35%					
90	9.36 41.61	34.54 57.98	59.73 74.35	84.91 90.72	110.10 107.09	135.28 123.46	160.47 139.83
80	19.36 48.11	44.54 64.48	69.73 80.85	94.91 97.22	120.10 113.59	145.28 129.96	170.47 146.33
						No Diversion	
70	29.36 54.61	54.54 70.98	79.73 87.35	104.91 103.72	130.10 120.09	155.28 136.46	180.47 152.83
60	39.36 61.11	64.54 77.48	89.73 93.85	114.91 110.22	140.10 126.59	165.28 142.96	190.47 159.33
50	49.36 67.61	74.54 83.98	99.73 100.35	124.91 116.72	150.10 133.09	175.28 149.46	200.47 165.83
40	59.36 74.11	84.54 90.48	109.73 106.85	134.91 123.22	160.10 139.59	185.28 155.96	210.47 172.33
0	0						

Expected yield (pounds of lint) per acre, solid planted

APPENDIX TABLE 3. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OF 10 ACRES OR LESS WITH PROJECTED YIELD OF 600 POUNDS LINT PER ACRE

Variable cost/acre	0	200	300	400	500	600	700	800
$120	-10.84	14.34	39.53	64.71	89.90	115.08		140.27
	35.58	51.95	68.32	84.69	101.06	117.43		133.80
110	-.84	24.34	49.53	74.71	99.90	123.93		150.27
	42.08	58.45	74.82	91.19	107.56	125.08		140.30
100	9.16	34.34	59.53	84.71	109.90	135.08		160.27
	48.58	64.95	81.32	97.69	114.06	130.43		146.80
		Divert 35%						
90	19.16	44.34	69.53	94.71	119.90	145.08		170.27
	55.08	71.45	87.82	104.19	120.56	136.93		153.30
80	29.16	54.34	79.53	104.71	129.90	155.08		180.27
	61.58	77.95	94.32	110.69	127.06	143.43		159.80
						No Diversion		
70	39.16	64.34	89.53	114.71	139.90	165.08		190.27
	68.08	84.45	100.82	117.19	133.56	149.93		166.30
60	49.16	74.34	99.53	124.71	149.90	175.08		200.27
	74.58	90.95	107.32	123.69	140.06	156.43		172.80
50	59.16	84.34	109.53	134.71	159.90	185.08		210.27
	81.08	97.45	113.82	130.19	146.56	162.93		179.30
40	69.16	94.34	119.53	144.71	169.90	195.08		220.27
	87.58	103.95	120.32	136.69	153.06	169.43		185.80
0								

Expected yield (pounds of lint) per acre, solid planted

APPENDIX TABLE 4. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OVER 10 ACRES WITH PROJECTED YIELD OF 400 POUNDS LINT PER ACRE

Variable cost/acre	400	500	600	700	800	900	1,000
$120	12.89	34.93	56.96	79.00	101.04	123.67	145.11
	26.67	43.04	59.41	75.78	92.15	108.52	124.89
110	21.64	43.68	65.71	87.75	109.79	131.82	153.86
	33.17	49.54	65.91	82.28	98.65	115.02	131.39
	Divert 35%						
100	30.39	52.43	74.46	96.50	118.54	140.57	162.61
	39.67	56.04	72.41	88.78	105.15	121.52	137.89
				Divert 12.5%			
90	39.14	61.18	83.21	105.25	127.29	149.32	171.36
	46.17	62.54	78.91	95.28	111.65	128.02	144.39
80	47.89	69.93	91.96	114.00	136.04	158.07	180.11
	52.67	69.04	85.41	101.78	118.15	134.52	150.89
70	56.64	78.68	100.71	122.75	144.79	166.82	188.86
	59.17	75.54	91.91	108.28	124.65	141.02	157.39
60	65.39	87.43	109.46	131.50	153.54	175.57	197.61
	65.67	82.04	98.41	114.78	131.15	147.52	163.89
50	74.14	96.18	118.21	140.25	162.29	184.32	206.36
	72.17	88.54	104.91	121.28	137.65	154.02	170.39
0							

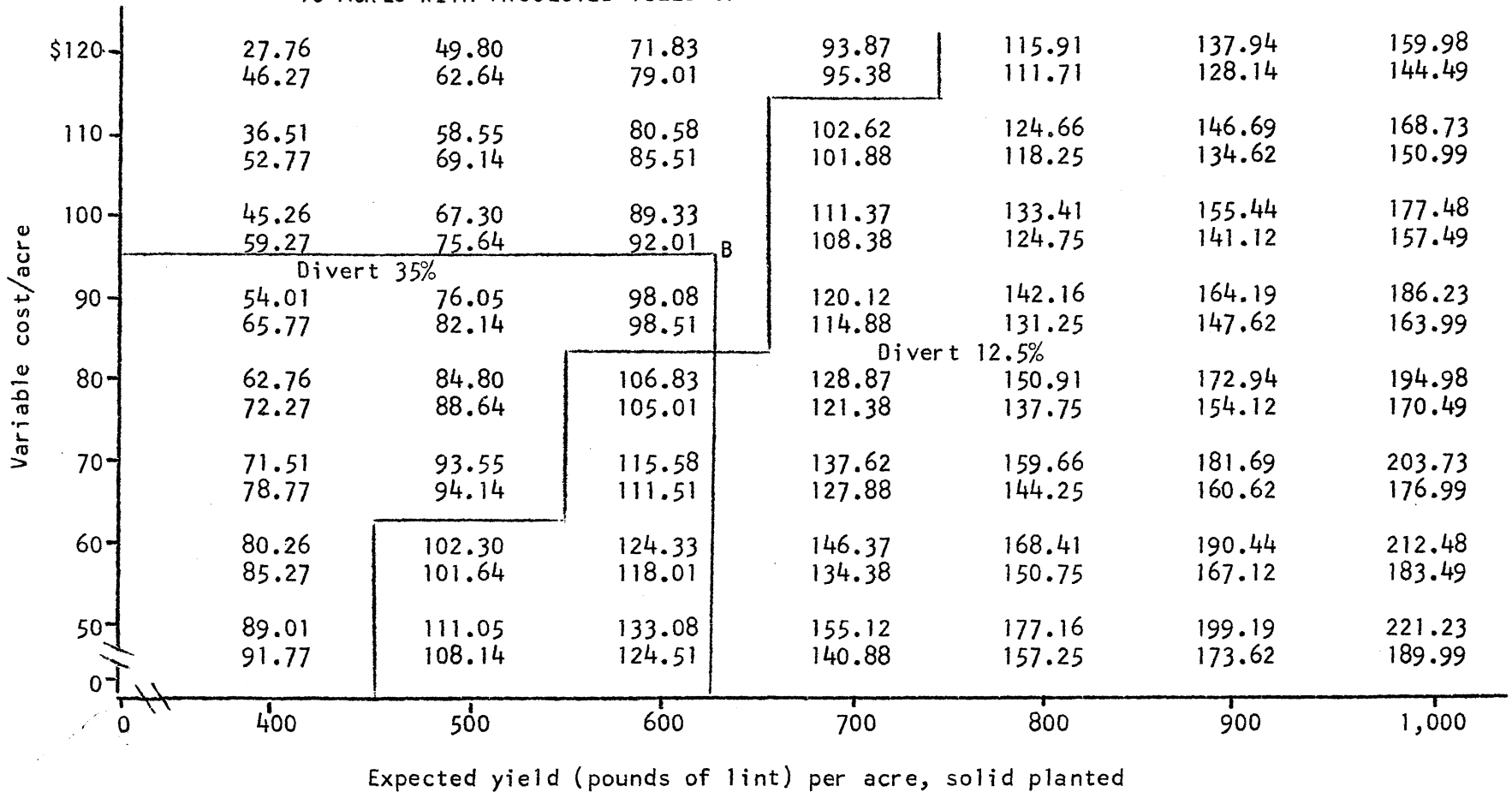
Expected yield (pounds of lint) per acre, solid planted

APPENDIX TABLE 5. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OVER 10 ACRES WITH PROJECTED YIELD OF 500 POUNDS LINT PER ACRE

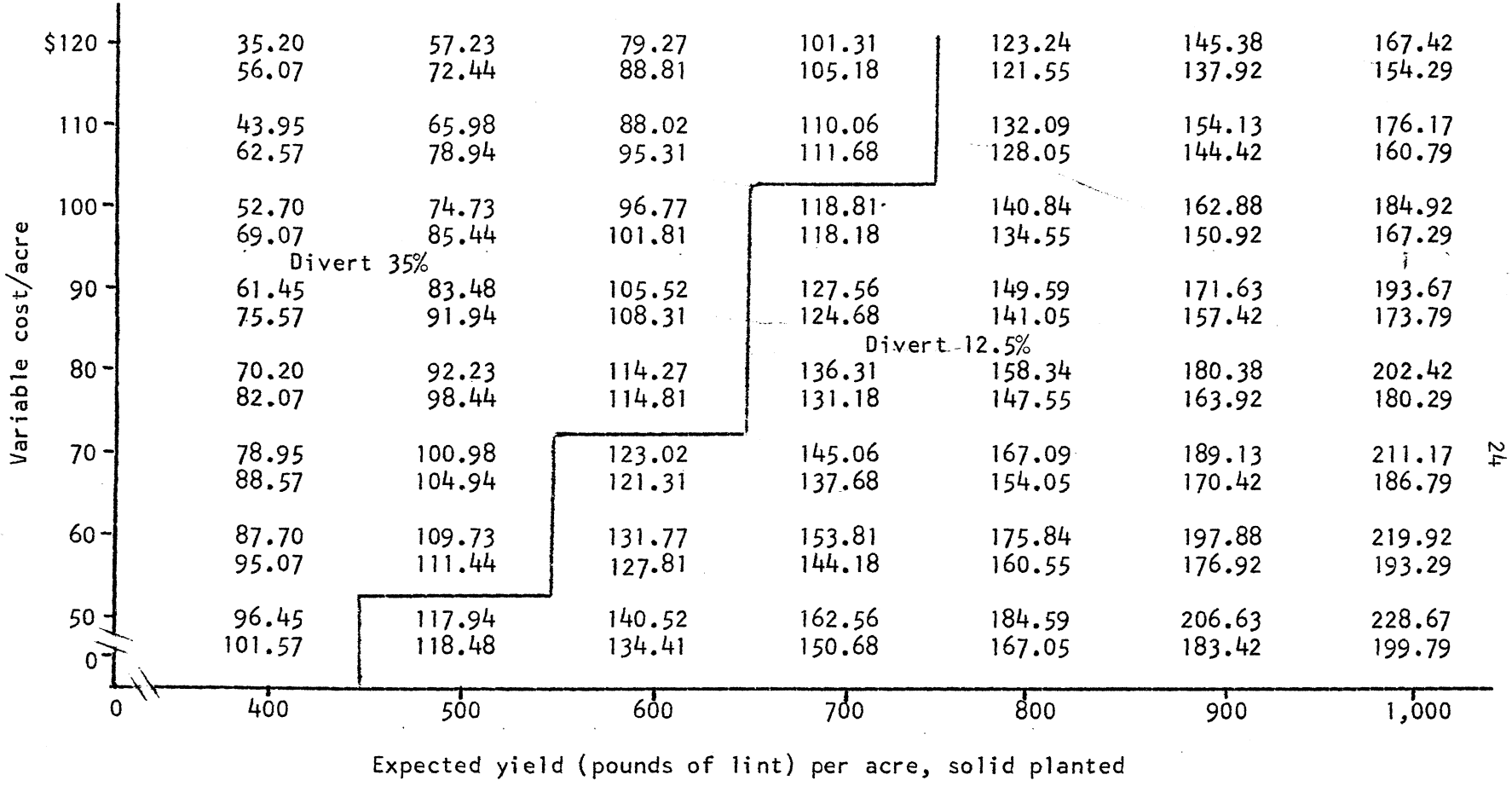
Variable cost/acre	400	500	600	700	800	900	1,000
$120	20.32	42.36	64.40	86.44	108.47	130.51	152.22
	36.47	52.84	69.21	85.58	101.95	118.32	134.69
110	29.07	51.11	73.15	95.19	117.22	139.26	161.30
	42.97	59.34	75.71	92.08	108.45	124.82	141.19
	Divert 35%						
100	37.82	59.86	81.90	103.94	125.97	148.01	170.05
	49.47	65.84	82.21	98.58	114.95	131.32	147.69
90	46.57	68.61	90.65	112.69	134.72	156.76	178.80
	55.97	72.34	88.71	105.08	121.45	137.82	154.19
				Divert 12.5%			
80	55.32	77.36	99.40	121.44	143.47	165.51	187.55
	62.47	78.84	95.21	111.58	127.95	144.32	160.69
70	64.07	86.11	108.15	130.19	152.22	174.26	196.30
	68.97	85.34	101.71	118.08	134.45	150.82	167.19
60	72.82	94.96	116.90	138.94	160.97	183.01	205.05
	75.47	91.84	108.21	124.58	140.95	157.32	173.69
50	81.57	103.61	125.65	147.69	169.72	191.76	213.80
	81.97	98.34	114.71	131.08	147.45	163.82	180.19
0							

Expected yield (pounds of lint) per acre, solid planted

APPENDIX TABLE 6. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OVER 10 ACRES WITH PROJECTED YIELD OF 600 POUNDS LINT PER ACRE



APPENDIX TABLE 7. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OVER 10 ACRES WITH PROJECTED YIELD OF 700 POUNDS LINT PER ACRE



APPENDIX TABLE 8. NET INCOME PER ACRE OF COTTON ALLOTMENT FOR ALLOTMENTS OVER 10 ACRES WITH PROJECTED YIELD OF 800 POUNDS LINT PER ACRE

Variable cost/acre	0	400	500	600	700	800	900	1,000
$120		42.63	64.67	86.71	108.74	130.78	152.82	174.85
		65.86	82.24	98.61	114.98	131.35	147.72	164.09
110		51.38	73.42	95.46	117.49	139.53	161.57	183.60
		72.36	88.74	105.11	121.48	137.85	154.22	170.59
100		60.13	82.17	104.21	126.24	148.28	170.32	192.35
		78.86	95.24	111.61	127.98	144.35	160.72	177.09
		Divert 35%						
90		68.88	90.92	112.96	134.99	157.03	179.07	201.10
		85.36	101.74	118.11	134.48	150.85	167.22	183.59
						Divert 12.5%		
80		77.63	99.67	121.71	143.74	165.78	187.82	209.85
		91.86	108.24	124.61	140.98	157.35	173.72	190.09
70		86.38	108.42	130.46	152.49	174.53	196.57	218.60
		98.36	114.74	131.11	147.48	163.85	180.22	196.59
60		95.13	117.17	139.21	161.24	183.28	205.32	227.35
		104.86	121.24	137.61	153.98	170.35	186.72	203.09
50		103.88	125.92	147.96	169.99	192.03	214.07	236.10
		111.36	127.74	144.11	160.48	176.85	193.22	209.59
0								

Expected yield (pounds of lint) per acre, solid planted