

Allotments for California Rice

growers must choose between lower market prices and support prices with their production controls

Gordon R. Sitton

Few California rice growers—if any, according to available data—could increase their net 1955 farm incomes over those anticipated from lower world prices, by accepting marketing quotas and acreage allotments.

Adjustments to lower prices may take one of two directions. Growers could attempt to maintain prices received through agricultural price-support legislation and acreage restrictions, or they could accept lower prices and maintain rice production at a level higher than would be possible under acreage allotments and marketing quotas.

Idle Land and Machinery

If all rice growers are required to reduce their acreage planted to rice, large acreages will lie idle and specialized production equipment will not be fully used.

Because rice is grown in a pond of water, it can economically use soils that are too poorly drained or too alkaline for the production of other cultivated crops. Successful production of rice on these poorly drained clay soils usually requires a substantial investment of capital in land improvement and equipment.

Rice is planted after the heavy rains stop in the spring and must be harvested before the rains become too heavy in the fall. During that period, the grower must prepare a seedbed, seed the rice, allow from 140 to 170 days of growing time, and then harvest the crop. Improved drainage and big tractors and harvesters make it possible to accomplish these tasks in the time available. This equipment, acquired for rice, would be of little use for some crops that might replace rice.

As a result of the high capital requirement, many rice growers have invested all their capital in equipment and operating funds and, therefore, produce only on rented land. In Colusa County in 1950, 65% of the rice acreage was operated by tenants, and another 22% by men who owned some land and rented more.

Adequacy of equipment has been an important criterion considered by landlords, by lending agencies when application is made for production credit, and by county committees in apportioning rice allotments. The tenant-operator is

therefore forced to maintain a substantial inventory of equipment in order to acquire the other factors—land and operating capital—needed for production of a rice crop. If acreage allotments are imposed, landlords and credit agencies may also require compliance with allotments in order that the rice produced will be eligible for price support. The individual grower may therefore be forced to let his equipment stand idle.

Study of records of some 75 farms shows that a typical, well-equipped rice grower who plans to plant from 300 to 450 acres of rice per year will have an average investment in equipment of approximately \$22,000. This represents the average amount invested over the life of the equipment. The 65 horsepower crawler tractor, two self-propelled combines, and other equipment represented in this inventory would have a new cost of from \$45,000 to \$55,000 at 1954 prices.

Income under Allotments

Allotments to individual growers would be based on a percentage reduction from the average acreage during some base period. If the allotments were equal to two thirds of the average acreage planted during the years 1951-1954, a grower who had maintained 300 acres would be allotted 200 acres. The allotment for a grower who had expanded acreage—by 100 acres for each of the four years—from 300 to 600 acres would be 300 acres, if no adjustment were made for trend. Even an announced reduction of 10% from the base-period acreage would reduce this latter case from a 1954 acreage of 600 to a 1955 acreage of 405—a cut of 32.5%, again assuming no adjustment.

The table at the top of the next column on this page summarizes the relationships of gross income and costs for a tenant-operator who has been averaging 300 acres of rice per year under leasing arrangements providing for one-third crop-share rent, with the landlord providing the land, the water, one third of the fertilizer, and one third of the cost of drying. The costs are typical of 1954, including cash costs and depreciation but not interest on investment or wages to the farm operator.

Gross Income and Costs for Tenant-Operator

	No allotment	Allotment equal to two-thirds of base acreage
Gross Income		
$\frac{2}{3}$ x 300 acres x 35 cwt. x \$4.00	\$28,000	
$\frac{2}{3}$ x 200 acres x 35 cwt. x \$4.25		\$19,835
Costs:		
Fixed costs		
Taxes, depreciation, annual repairs	6,090	6,090
Variable costs		
Labor, seed, all other costs of production	12,890	8,595
Total costs	\$18,980	\$14,685
Net farm income		
Gross income less Total costs	\$9,020	\$5,150

The yield of 35 hundredweight of dry rice per acre is taken as average under normal weather conditions on soils used primarily for rice growing. No increase in yield per acre is assumed under allotment. Those farms that have a wide range in quality of soils growing rice might secure an increase in average yield by diverting the least productive land. An increase due to heavier application of fertilizer would be limited by the danger of overfertilization.

The prices assumed illustrate the small benefit to be expected by California growers. A price of \$4.00 ex-drier for rough rice is used as a probable lower limit for market prices in the absence of support at a high level. The price of \$4.25 assumed for rice grown under allotment represents an announced support price of \$4.65 less 40¢ for storage, handling, insurance, taxes, and loan service. Possible effects of varying these two prices are shown in the single column table on the next page.

The management income available to the tenant for all his resources with no allotments and with allotments equal to two thirds of the base acreage would be:

	No Allotment	Allotment
Net farm income	\$9,020	\$5,150
Value of operator's labor input	\$1,800	
Interest on investment in machinery	1,250	3,050
Management income	\$5,970	\$2,100

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RICE

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The return of \$2,100 under allotment would be the return to the grower for risking his time, equipment, and \$8-10,000 of borrowed operating capital.

A drop in yield of 9.78 hundredweight from 3,500 to 2,622 pounds per acre would reduce the tenant's net income of \$5,150 to zero. The state average yield has dropped to approximately this level or below four times in the past 14 years.

Amount of Reduction

The amount that net income is increased or decreased by price supports and a small cut in acreage depends upon the proportion of costs that does not change with total output—fixed costs—relative to those that do change with total outputs—variable costs. Assuming no saving in variable costs per acre as acreage is reduced, a 10% cut from the average acreage and an increase in the realized price from \$4.00 to \$4.25 would cause a small increase in income for those growers who have been maintaining a constant acreage during the base period. Any operator who had been expanding his acreage would take a proportionately greater cut in acreage and, therefore, greater reduction in net income. These relationships are illustrated in the following table:

Income-Price Relationships When Acreage Is Cut by One Third of the Average

Farm situation	Net income required from diverted acreage to equal net farm income from a \$4.00 price	Market price without support or allotments that would compare with \$4.25 and allotments	Net support price with a one-third cut in acreage that would equal \$4.00 and no allotment
	\$	\$	\$
Tenant-operator who has been producing rice on 300 acres every year	39.00	3.45	5.08
Tenant who has been producing rice on 150 acres every year	34.00	3.51	4.98
Owner-operator who has been producing rice on 150 acres every year	59.00	3.44	5.10
Owner-operator who has been producing rice on 300 acres every year	65.00	3.38	5.17
Tenant-operator who has been expanding his acreage by 100 per year from 300 in 1951 to 600 in 1954.....	19.00	3.59	5.07
Owner-operator who has been expanding his acreage by 100 per year from 300 in 1951 to 600 in 1954.....	48.00	3.31	5.63

Changes in Costs and Income

The decrease in income with the large reductions in acreage would be less if the variable costs per acre could be lowered.

Many cost items—water, seed, drying, and others—are incurred at a given amount per acre, which would probably not change materially with reduction in acreage.

Savings could be made in the variable cost of labor on those farms where the operator was devoting much of his time to management and hiring labor to do the manual work. This is the case on the 600-acre farms in the table. When acreage is reduced to 400 on these farms, the cash outlay can be reduced by \$12 per acre if the operator does the work previously done by a full-time hired man and part-time irrigator. The timing of labor needs would permit this substitution.

If the tenant-operator who had been growing rice on 600 acres could reduce his variable costs per acre to the amount estimated for the tenant with 300 acres, a reduction in acreage from 600 to 400 acres would cause his income to fall by only 1%, at the relative prices assumed. A further reduction to 300 acres, which would occur for this farm if the announced reduction were one third of average base acreage, would reduce net farm income to \$6,600—only 47% of the income from 600 acres of rice, even with the lower variable costs per acre.

Landlords of rice lands would also suffer reduced incomes under acreage allotments. In many cases, their incomes would be cut by a greater percentage than those of their tenants.

Substitute Crops

The drop in income under allotment would be smaller if a substitute crop could be grown. However, to have the same net income—as at the \$4.00 price—many growers would have to earn a greater return than from rice because the returns per acre on the reduced rice

acreage have been forced down by fixed costs.

Maintenance of income by planting other crops on diverted acreage would be difficult or impossible. Much of California's land now producing rice will not economically produce any other cultivated crop. The returns from pastures are low because of low livestock prices, and would be lower if large acreages of rice land were diverted to pasture. Prices of barley—the most probable alternative on most rice lands—have been forced to low levels by increased production on other diverted lands and the reduced demand from livestock feeders. Wheat and sugar beets are improbable under directives in force on December 1, 1954.

Level of Support

Income would be reduced less if the level of support were higher. For the tenant grower who had been operating 300 acres of rice to earn as much under allotments and support as he could earn with no allotments and a price of \$4.00, the realized return from support loans would have to rise to \$5.08 per hundredweight, which is well above any probable support level. As an alternative to this, the market price without allotments could fall to \$3.45 before net farm income fell as low as with allotments and a net support price of \$4.25.

The present condition of the world rice market does not indicate a probable price as low as those used in the illustrative example. Therefore, incomes should not be reduced as much by operating at market prices as at the support price assumed. To move United States rice into export channels may, however, require some help to export countries in obtaining the necessary dollar exchange.

Under present legislation, support levels are unlikely to be set high enough to offset the losses from severe cuts in acreage.

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Costs and Income

	Operator's fixed costs	Operator's variable costs per acre of rice	Net income without allotments	Average acreage reduced by		
				10% Net income would increase or decrease by	20%	33⅓%
				%	%	%
A tenant-operator who has an average of:						
150 acres	\$ 3,020	\$ 47.44	\$ 3,865	+3	-18	-44
300 acres	6,090	42.97	9,020	+1	-18	-42
600 acres	10,260	55.74	12,370	+7	-14	-43*
An owner-operator who has an average of:						
150 acres	3,550	63.27	7,960	+1	-16	-37
300 acres	7,170	57.85	17,475	-1	-16	-37
600 acres	12,675	70.48	29,035	+2	-14	-36*

*See section on changes in costs.