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*AGRICULTURAL EXTENSION SERVICE*
*UNIVERSITY OF CALIFORNIA*

Grains

# THE CEREAL INDUSTRY IN SAN LUIS OBISPO COUNTY

by
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## Early History of the Industry

Cereal grains have been important to the agricultural industry in San Luis Obispo County since the 1870's. Since livestock feeding was not of much importance in this area at that time the main emphasis in cereals was in cereal hay production and milling wheat production. In 1887 records show that there were 80,000 acres of wheat grown here annually. Between 1920 and 1930 wheat acreage rose to a high of 140,000 acres. Paso Robles became the largest shipping point in the United States for hard white spring wheat.

## Cereal Grains Grown Here

Wheat, barley, oats, and cereal hay are the cereal grain crops produced in San Luis Obispo County.

The wheat is mainly the hard white spring type, Ramona 50. It is grown almost entirely in the Carrisa Plains area in the eastern half of the county. Hard white spring wheat is sold for flour milling. There is a small amount of feed wheat grown in the county. The milling wheat is delivered to flour mills in San Francisco and Los Angeles.

Some barley is grown in all areas of the county, but most is grown from Shandon to Paso Robles and to the north and south. At one time malting companies purchased Atlas and Haanchen varieties of barley grown here. Very little barley grown here is now sold to malting companies. Most of our barley is sold to various cattle feed yards along the Central Coast. Some goes to Sinton and Brown at Betteravia, Phelans at Arroyo Grande and Fat City in the Salinas Valley. Part of the barley crop is made into feed for use by local ranchers. The most popular variety is Arivat.

There is a very small acreage of oats grown for grain. Most of the oat crop is harvested for hay. The hay is used for livestock here in the county and some is sold to horse owners in other areas. Most of the hay crop is grown in the coastal area of the county.

## Size of the Industry - 1968

| | Acreage | Value |
|---|---|---|
| Total cultivated crop acres | 238,045 | |
| Total cereal crop acres | 187,102 | 6,461,602 |
| Wheat | 63,900 | 1,538,000 |
| Barley | 63,000 | 2,517,000 |
| Oats | 1,202 | 46,500 |
| Cereal Hay | 59,000 | 2,171,000 |
| Grain stubble pasture | 187,102 | 187,102 |

San Luis Obispo County is the fifth largest wheat producing county in California and is the ninth largest barley producing county in California.

## Acreage Trends

There has been quite a change in acreages of wheat and barley over the years. The county cereal grain industry began with wheat as the dominant cereal grain. Due to development of the livestock feeding industry along the central coast and also due to government acreage controls, the acreage totals for wheat have slowly fallen while barley acreages have increased.

Oats grown for grain have remained fairly static in acreage, rising to a high of 8,600 acres in 1963. In 1965 there was a sharp decline in oat acreage and acreages have fallen off sharply since with only 1,200 acres of oats grown in 1968.

Cereal hay acreage has been increasing gradually over the past 20 years until almost twice as many acres of cereal hay is now grown as there was 20 years ago.

## Acreage of Cereal Crops in San Luis Obispo County
(19 years)

| | Barley | Wheat | Oats | Cereal Hay |
|---|---|---|---|---|
| 1950 | 47,700 | 117,700 | 8,500 | 48,500 |
| 1951 | 46,600 | 132,200 | 6,180 | 36,900 |
| 1952 | 49,600 | 133,500 | 5,100 | 36,100 |
| 1953 | 48,300 | 135,100 | 5,800 | 35,800 |
| 1954 | 63,300 | 102,100 | 6,300 | 43,500 |
| 1955 | 67,300 | 91,700 | 5,100 | 44,800 |
| 1956 | 73,800 | 82,600 | 7,600 | 45,800 |
| 1957 | 100,300 | 57,500 | 7,500 | 48,400 |
| 1958 | 83,600 | 88,200 | 7,100 | 46,100 |
| 1959 | 53,300 | 81,200 | 4,900 | 63,300 |
| 1960 | 48,300 | 77,800 | 5,800 | 62,500 |
| 1961 | 40,200 | 76,300 | 7,500 | 50,500 |
| 1962 | 60,500 | 70,200 | 7,200 | 49,500 |
| 1963 | 63,200 | 65,200 | 8,600 | 50,700 |
| 1964 | 66,900 | 52,200 | 8,400 | 43,600 |
| 1965 | 61,500 | 58,000 | 3,500 | 46,000 |
| 1966 | 70,000 | 56,000 | 2,000 | 57,000 |
| 1967 | 65,000 | 68,000 | 1,140 | 56,000 |
| 1968 | 63,000 | 63,900 | 1,202 | 59,000 |

## CHANGES IN CULTURAL OPERATIONS

### High Degree of Mechanization

The industry started in the "horse and buggy" days using horses and mules and a tremendous amount of manpower. Harvesting of the cereal grain and hay crop required several operations mainly done by man and animal. The age of the tractor, hay baler and combine harvester-thresher took over. Grain harvesting progressed from the pull type combine requiring three to four men to the self-propelled combine requiring one man. Hay harvesting has also become completely mechanized.

Mechanization has changed the planting operation by introducing bulk handling of seed and fertilizer, thereby cutting manpower and making the job easier.

### Increased Use of Fertilizers

Due to experimental work and experience of Curtis Berryman, there has been a tremendous increase in the use of various commercial fertilizers, Plant nutrient requirements for cereal grains have been determined for the different areas of the county. Growers have been using fertilizers more and more in an effort to increase yields and income.

### Control of Weeds and Insect Pests

Growers are more aware of the need to control weeds and insect pests for increased yields. The advent of the use of airplanes for crop spraying has helped to speed the use of chemical weed and insect control in the hilly terrain of many of our cereal grain fields.

### Use of High Yielding, Disease-resistant Varieties

Over the years, the variety adaptation testing by the farm advisor has helped growers to be aware of improved varieties. Growers have utilized better varieties as they have become available. Plant breeders have gradually improved grain varieties. Increased plant breeding efforts by the University Experiment Stations and commercial companies suggest that we are entering an era of super cereal grain varieties.

## Enlargement of Operation

Another change growers are making in an effort to increase efficiency is in using larger farmland units.

## Costs of Production

Production costs have, of course, increased over the years. Even over the short period of two years since the last cost analysis was made on cereal grain production, there has been a cost increase. Agricultural wages have taken a jump; equipment and repair parts continuously increase in cost; and real estate tax assessments have increased.

The practice of summer-fallowing in most cereal grain areas of San Luis Obispo County requires twice as much land as annual planted acreage. This has caused the capital investment in land to be high. The complete cost analysis for cereal grains and hay are outlined in the accompanying cost analysis worksheets.

# PROBLEMS FACING SAN LUIS OBISPO COUNTY CEREAL GRAIN GROWERS

## Increased Capital Investment

The high degree of mechanization and the rise in costs of equipment is pushing capital investment to new heights. Growers are enlarging operations where possible in an effort to combat this problem.

## Increasing Real Estate Taxes

New assessment methods and high sales records have caused real estate taxes on cereal grainland to reach unrealistic heights. Some efforts are being made by governing bodies to alleviate this situation. Pressures from landowners may force a tax reform. High real estate taxes are causing farmlands to be sold to speculators. Growers are leasing more farmland from these absentee owners.

## Increasing Costs of Financing

High interest rates may force many growers to curtail operations. Growers may attempt to retrench by lower use of fertilizers and poor management practices. This

increased cost may cause more growers to consider selling and discontinue their farming operations. Marginal operators will have no choice.

Low Grain Prices

This is the crux of the whole situation. Growers could afford increases in all costs if an equitable price was received for their production. Grain prices are much lower now than they were 20 years ago, yet costs have increased four or five times.

Average Cereal Crop Prices in San Luis Obispo County

FOB Ranch

| | Barley | Wheat | Oats | Cereal Hay |
|---|---|---|---|---|
| 1960 | $2.25/cwt | $3.08/cwt | $2.70/cwt | $23.00/ton |
| 1961 | 2.45 | 3.50 | 2.45 | 21.00 |
| 1962 | 2.55 | 3.35 | 2.60 | 24.00 |
| 1963 | 2.55 | 3.22 | 2.50 | 29.00 |
| 1964 | 2.40 | 2.48 | 2.60 | 26.00 |
| 1965 | 2.40 | 3.10 | 2.50 | 24.20 |
| 1966 | 2.56 | 2.65 | 2.40 | 26.50 |
| 1967 | 2.25 | 2.32 | 2.20 | 24.00 |
| 1968 | 2.35 | 2.27 | 2.15 | 23.00 |

## THE AGRICULTURAL STABILIZATION AND CONSERVATION PROGRAM

The government acreage control program presently compensates those growers who cut back on production of wheat and feed grains. Decreases in wheat acreage allotment by 30 per cent and reducing the feed grain base by 20 per cent are requirements of participation. The grower receives no compensation for these reductions in acreage. The grower may further reduce his wheat acreage and feed grain acreage by as much as 50 per cent and receive compensation for this reduction.

The government loan program offers an opportunity for the grower to hold his barley or wheat for a rise in the market price or to transfer to the government at support price. The loan rate for wheat is $1.34 per bushel; for barley the loan rate is 96 cents per bushel.

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# CEREAL HAY IN SAN LUIS OBISPO COUNTY - 1970

## Cost Analysis Worksheet

Wilfred E. Cawelti, Farm Advisor
Edward A. Yeary, Farm Advisor State-wide

Based on 300 acres in hay each year and a two ton per acre yield

| | Labor | | Tractor | Truck | Cost per acre | |
|---|---|---|---|---|---|---|
| | Hours | Cost | Hours | Hours | Sample | Yours |
| PRE-HARVEST CASH COSTS: | | | | | | |
| Disc or chisel & harrow 2 times | .50 | 1.10 | .50 | .20 | 3.00 | |
| Drill and fertilize | .30 | .66 | .30 | .10 | 1.76 | |
| Seed: 80 to 100 lbs. per acre | | | | | 6.00 | |
| Fertilizer: 40 lbs. N or (N&P) | | | | | 4.80 | |
| Spray for weeds: Contract | | | | | 1.00 | |
| Spray materials | | | | | 1.00 | |
| Misc. lost time: re-seed | | | | | 1.00 | |
| County taxes | | | | | 4.20 | |
| Repairs (except tractors & truck) | | | | | 3.00 | |
| Office, car, business expense, etc. | | | | | 2.25 | |
| Total pre-harvest cash costs | .80 | 1.76 | .80 | .30 | $28.01 | |
| HARVESTING COSTS | | | | | | |
| Mowing | .30 | .66 | .30 | | 1.05 | |
| Raking | .25 | .55 | .25 | | .88 | |
| Baling contract, 3.50/ton | | | | | 7.00 | |
| Haul & stack | 1.40 | 3.08 | | .70 | 4.48 | |
| Total Harvest Costs | 1.95 | 4.29 | .55 | .70 | $13.41 | |
| Total Cash and Labor Costs | 2.75 | 6.05 | 1.35 | 1.00 | $41.42 | |

| Investment based on 300 acres in hay. Average value is one-half original cost 34% charged to hay enterprise. | Original Cost | Av. Value | 7% Int. | Depreciation | | |
|---|---|---|---|---|---|---|
| | Dollars per acre | | | | | |
| Shop and Equipment shed (34%) | 1,836 | 3.06 | .21 | .10 | | |
| Tractor, truck, & pickup (34%) | 9,792 | 16.32 | 1.14 | 1.63 | | |
| Tillage & seeding equipment (1/2) | 4,000 | 6.67 | .47 | .44 | | |
| Hay Equipment | 5,800 | 9.67 | .68 | .97 | | |
| Hay storage | 2,000 | 3.33 | .23 | .11 | | |
| Land: $240 | 72,000 | 240.00 | 16.80 | | | |
| Total Investment | $95.428 | $279.05 | $19.53 | $3.25 | | |
| Total Depreciation | | | | | $.3.25 | |
| Total Cash and Depreciation | | | | | $44.67 | |
| Interest on Investment | | | | | $19.53 | |
| TOTAL ALL COSTS (except value of operators' management) | | | | | $64.20 | |

Tractor and trucks are charged 34% to hay, balance on sudan pasture, barley and cattle operation. The same for shop and equipment shed. Tillage and seeding equipment is charged to farm land only. Special hay equipment and storage is charged 100% to hay.

Labor is charged at $2.20 per hour; crawler tractor $3.00 per hour; wheal tractor $1.30 per hour; truck $2.00 per hour; pickup $1.60 per hour. Building depreciated at 30 years; seeding and tillage equipment 15 years; tractors and trucks, 10 years.

*Cost figures for the various operations are relative to size of operation, terrain, assessed land value and tax rate. Figures shown are average. Few individual farms will hit these figures. Larger acreages and flat land areas will be less and smaller acreages higher. In some areas a $6 tax rate is high, some is low. Important value of these cost sheets are items covered and cost column for individual farmers figures.

The Agricultural Stabilization and Conservation Program is definitely a part of the economics of the cereal grain industry in San Luis Obispo County.

Agricultural Stabilization and Conservation Cereal Grain Program
Payments to Growers

| | Acreage Reserve | Soil Bank | Wheat Certificates | Feed Grain |
|---|---|---|---|---|
| 1957 | 780,300 | | | |
| 1958 | 112,700 | | | |
| 1959 | 406,700 | | | |
| 1960 | | 465,500 | | |
| 1961 | | 455,700 | | |
| 1962 | | 443,900 | | |
| 1963 | | 552,700 | | |
| 1964 | | 305,300 | 422,900 | 357,500 |
| 1965 | | 216,000 | 496,000 | 336,000 |
| 1966 | | 217,000 | 669,000 | 263,000 |
| 1967 | | 195,000 | 609,000 | 6,000 |
| 1968 | | 187,000 | 600,000 | 16,500 |

Agricultural Extension Service, University of California

# WHEAT AND BARLEY PRODUCTION IN SAN LUIS OBISPO COUNTY - 1969

Cost Analysis Worksheet

Wilfred E. Cawelti, Farm Advisor
Edward A. Yeary, Farm Management Advisor

| | Labor | | Tractor | Truck | Cost per Acre | |
|---|---|---|---|---|---|---|
| | Hours | Cost | Hours | Hours | Sample | Yours |
| PRE-HARVEST CASH COSTS: | | | | | | |
| Disc or plow 2 times | .33 | .73 | .33 | .22 | 2.16 | |
| Cultivate fallow, 2 times | .12 | .26 | .12 | .08 | .79 | |
| Pre-plant tillage | .16 | .35 | .16 | .11 | 1.05 | |
| Fertilize | .10 | .22 | .10 | .04 | .60 | |
| Plant: seeder with cultivator | .10 | .22 | .10 | .05 | .62 | |
| Spray for weeds: contract | | | | | 1.00 | |
| Misc. lost time: re-seed | | | | | .30 | |
| Fertilizer: 30# N, 5# P | | | | | 4.20 | |
| Seed: 40# @ $4 cwt. | | | | | 1.60 | |
| Weed spray material | | | | | .90 | |
| Repairs (except truck & tractor) | | | | | 1.50 | |
| County taxes | | | | | | |
| Land - 2 year basis $25 val x 7% x 2 yr. | | | | | 3.50 | |
| Equipment | | | | | .50 | |
| Office, car, insurance, business costs | | | | | 2.25 | |
| Total pre-harvest cash costs | .81 | 1.78 | .81 | .50 | $20.97 | |
| HARVEST COSTS: | | | (combine) | | | |
| Combining: operator $2.75 | .30 | .83 | .30 | | 2.25 | |
| Haul to storage | .30 | .66 | | .30 | 1.26 | |
| Total harvest costs | .60 | 1.49 | .30 | .80 | $ 3.51 | |
| Total cash and labor costs | 1.41 | 3.27 | | .80 | $24.48 | |

| Investment based on 900 crop acres. Equipment average value is 1/2 original cost | Original Cost | Av. Value | 7% Int. | Depreciation | | |
|---|---|---|---|---|---|---|
| | | Dollars per acre | | | | |
| Shop and equipment shed | 5,400 | 3.00 | .21 | .20 | | |
| Tractor, truck & pickup | 28,800 | 16.00 | 1.12 | 2.37 | | |
| Tillage & seeding equipment | 8,000 | 4.44 | .31 | .89 | | |
| Combining | 15,000 | 8.33 | .58 | 1.66 | | |
| Bulk storage | 5,000 | 2.78 | .19 | .18 | | |
| Land, 2A @ $160 x 2 | 288,000 | 320.00 | 22.40 | -- | | |
| Total investment | $350,200 | 354.55 | | | | |
| Total depreciation | | | | 5.30 | 5.30 | |
| Total cash & dep. costs | | | | | 29.78 | |
| Interest on investment | | | 24.81 | | 24.81 | |
| Total all costs except management | | | | | 54.59 | |
| Less value at stubble pasture | | | | | 1.00 | |
| NET COST OF WHEAT PER ACRE | | | | | $53.59 | |

Schedule is based on average cereal operation of 900 acres in crop and 900 acres in fallow, a 2-year cycle. Man labor @ $2.20/hour; 70 h.p. tractor; cash costs of $3/hour; truck cash costs $2/hour; pickup cash cost $1.60/hour; combine cash cost $4.50/hour.

Cost figures for the various operations are relative to size of operation, terrain, assessed land value and tax rate. Figures shown are average. Few individual farms will hit these figures. Larger acreages and flat land areas will be less and smaller acreages higher. In some areas a $6 tax rate is high, some it is low. Important value of these cost sheets are items covered and cost column for individual farmer's figures.