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# **1987 Sugarbeet Production Costs On Idaho and Eastern Oregon Farms**

R. V. Withers, Agricultural Economist

Sugarbeets have been grown on Idaho and eastern Oregon farms since 1903. The 1987 crop was harvested from 162,000 acres in Idaho and nearly 14,000 acres in Oregon for a total of 176,000 acres in the two states. Total production was 4.7 million tons with a farm value of about \$180 million. Processing added an estimated \$120 million of value to the beets for a total of \$300 million.

The sugarbeet crop produces high cash receipts per acre but also requires a large investment in fixed and variable costs. Farmers spend over \$500 an acre for labor, fertilizer, chemicals and other operating costs. Ownership costs add another \$300 to \$500. Millions of dollars are spent in areas where sugar factories are located for labor, power and other expenses associated with processing and marketing sugar and related products. Thus, the sugarbeet industry is of considerable economic importance to local communities where processing occurs, as well as to the farmers who produce sugarbeets.

Farm receipts from sugarbeets have recently ranked third among Idaho crops, following potatoes and wheat. Idaho ranks third among the states in sugarbeet production, exceeded only by Minnesota and California.

This publication reports average production costs for sugarbeets in southern Idaho and eastern Oregon. In fall 1987, the Department of Agricultural Economics and Rural Sociology at the University of Idaho conducted a cost of production study at the request of the Idaho and Oregon sugarbeet growers associations. They needed reliable cost data for various reasons including policy concerns and planning and management decisions. The Nyssa-Nampa Beet Growers' Association, the Idaho Sugarbeet Growers' Association and the Elwyhee Sugarbeet Growers provided funding for data collection and processing.

### Source of Data

From a grower's list provided by The Amalgamated Sugar Company, a sample was extracted by the Idaho Agricultural Statistics Service. The sample was stratified

y sugarbeet acreage so that all sizes of enterprise would represented. A higher percentage of larger acreages was drawn so that each acre had an equal chance of being included in the sample. The sugarbeet producing region of Idaho and Oregon was divided into two areas which were designated east and west. The eastern area included Idaho's Magic Valley and part of the upper Snake River Valley, and consisted of farmers whose beets were delivered to the Paul and Twin Falls sugar factories. The western area extended from the western boundaries of Gooding and Twin Falls counties in Idaho to and including Malheur County in Oregon. Fig. 1 shows the counties included in each district.

A sample of 201 farms was drawn from the 1,400 farms that were identified as producing sugarbeets in the two states. Table 1 gives the sample breakdown by size groups. Of the 201 farms drawn, usable records were obtained from 151 farm operators, or 75 percent of the sample. These were evenly distributed over the size groups. Of the remaining 50 operators, 36 declined to provide information and the rest were unable to provide enough information for analysis.

The two areas studied were similar in many respects but also had some noticeable differences. The western re-



Fig. 1. Counties producing sugarbeets, Idaho and Oregon.

gion had a somewhat longer growing season, resulting in higher yields per acre (Table 2). Price received per ton was about \$2 higher in the eastern area, reflecting a higher sugar content in the beets.

Sugarbeets in both areas were grown entirely on irrigated land and in rotation with other crops common to the region.

#### Cost of Producing Sugarbeets

Farm operators in the sample were interviewed to obtain data for estimating sugarbeet production costs. An enumerator contacted the operator, set up an appointment and conducted an interview in which information was provided from farm records and from memory. Farm records ranged from complete, detailed records of farm operations to a bare minimum kept only for tax purposes.

#### **Variable Costs**

Information on variable inputs such as seed, fertilizer, chemicals, hired labor, custom hiring and contract labor were fairly straightforward, and most farm operators had what appeared to be reliable information. Variation in types and quantities of seed, fertilizer and chemicals made quantification difficult, so most costs were aggregated by dollar amount rather than physical units of each input.

Fertilizer use was broken down by units of nitrogen, phosphorus and potassium. Average amounts of these nutrients used are summarized below:

	Pounds actual				
	Nitrogen	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O		
West	200	100	43		
East	130	87	8		

Many farmers also used one or more trace elements such as iron, boron and copper, and a few used sulfur. A wide variety of chemicals was used for weed, insect and disease control.

Hired labor costs were obtained from the operator. Hired labor included wages paid plus perquisites, Social Secu-

 
 Table 1. Number of farms in sample and completed questionnaires by sugarbeet acreage and by area, Idaho and Oregon, 1987 crop.

Size	Sample	Completed questionnaire	Percent Concepted		ompleted by area	
(acres)			(%)	(East)	(West)	
1 to 99	80	59	74	35	24	
100 to 299	80	57	71	36	21	
300 to 499	20	16	80	11	5	
500 or more	21	19	90	11	8	
Totals	201	151	75	93	58	

 
 Table 2. Comparison of production of sugarbeets and price per ton by area, 1987 (151 farms).

Item	Eastern area	Western area
Number of farms	93	58
Average acres of beets per farm	219	195
Average yield per acre (tons)	24.1	30.5
Average price received per ton	\$39.42	\$37.62
Average receipts per acre	\$950.00	\$1,147.00

rity and employment insurance paid by the employer. Contract labor was recorded separately and was paid primarily for hand thinning, hoe trimming and weeding beets. Irrigation labor was included in either hired labor or unpaid family labor, depending on how it was reported by the operator.

Estimating the amount and value of operator and unpaid family labor to allocate to sugarbeets was challenging. Hours worked on the farm were estimated, and then the proportion used for beets was extracted. Respondents were asked to put a price on operator and unpaid labor. Many were reluctant to do so, and the values that were given varied widely. For these reasons, unpaid labor was assigned a value of \$6 per hour, an amount assumed to be what the operator would have paid if hired labor had been used instead of unpaid labor.

Irrigation water was obtained from irrigation districts, wells and directly from streams. The irrigation cost figure includes payments to irrigation districts and pumping costs for obtaining water and pressurizing irrigation systems. The cost of ownership, maintenance and operation of sprinkler systems was included with machinery costs.

Typically, growers harvest beets and haul them to the factory or to the nearest beet station operated by the processor. Adjustments are made to allow for differences in farm location and the way the beets were hauled to the factory. The processor charges the grower extra if beets are hauled by the company for more than specified distances. On the other hand, if a grower hauls beets to the factory, the processor pays a hauling allowance to the grower. In this analysis, the freight charge was included as a cost while the haul allowance was identified as a negative cost or a reimbursement to the grower for extra hauling provided.

Interest on operating costs incurred by the grower was calculated. This was an 11 percent charge starting from when the expense was incurred and continuing until the first payment was received from the processor.

Miscellaneous charges were various items such as dues, utilities, vehicle license, accounting and office supplies, farm magazines and other items.

Machine costs and expenses were difficult to determine because of the many types of machines of various ages and conditions. Each machine was identified and the annual expenses were calculated. This expense was multiplied by the percentage that this machine was used on the sugarbeet enterprise. Machine expenses included depreciation, interest on the investment, taxes, insurance, shelter, fuel and lubrication and repairs.

#### **Fixed Cost**

Depreciation was estimated after adjusting machinery cost for inflation. A price index<sup>1</sup> was used to adjust the value to 1987. Straight line depreciation was calculated on the adjusted value. Interest was estimated using the average value of the asset and a 9 percent interest rate.

<sup>&</sup>lt;sup>1</sup>The index used was the USDA index of machinery and tractor prices reported in the Agricultural Prices, Annual Summary and adjusted to 1987 = 100.

Taxes and housing costs were calculated using the Idaho tax rate and, for housing, rates developed by the American Society of Agricultural Engineers.

Insurance expenses paid by the operator for the farming operation were obtained on the questionnaire. This included insurance on farm assets as well as liability insurance for the farm. The percentage allocated to sugarbeets was estimated by finding the proportion of total farm receipts attributed to beets. If the farm sold \$40,000 worth of sugarbeets and gross farm receipts for the year were \$100,000, then 40 percent of the gross receipts came from sugarbeets and 40 percent of insurance costs were charged to beets.

Real estate tax was the amount reported by the operator for land producing sugarbeets. This was an ad valorem tax which fluctuated with the land productivity and its income potential.

Net rent was used to represent the cost of the land input and was estimated by subtracting landlord expenses from total rent paid for the land. Both share and cash leases

Table	3.	Sugarbeet	budget:	Southcentral	and	Eastern	Idaho,	1987
		(per acre).						

	the second second second second second		
Value of crop: 24.1 tons @ \$39.42			\$950.02
Variable costs:			
Seed		25.73	
Fertilizer		63.55	
Chemicals		47.67	
Irrigation water		57.64	
Labor (hired)		64.15	
Perquisites	6.38		
Employee insurance	2.04		
Social Security tax	3.72		
Wages 5	2.01		
Labor (unpaid @ \$6 per hou	<b>Ir</b> )	55.80	
Labor (contract)		61.92	
Machine cost	7.07	131.98	
Fuel and repairs 9	0.07		
Custom	0.90		
Ereight charge1	5.90	E 07	
Haul allowapool		5.07	
Interest on operating cost (6	11 percent)	-1.00	
Miscellaneous	y in percenty	21.20	
Dues	3 14	22.00	
Utilities	5.22		
License	2.54		
Office supplies	0.47		
Accounting	1.98		
Other	9.45		
Total variable costs:			\$555.73
Fixed costs.			
Machine cost		139 48	
(Depreciation and interest)		103.40	
Insurance		9.39	
Real estate tax		8.05	
Net rent		112 78	
(Rent minus landlord expe	nse)	112.70	
Total fixed cost:	,		\$269.70
Total cost:			\$825.43
Return to risk and manageme	ent:		\$124.59
			and the second se

<sup>1</sup>This is the average freight charge by the processor for hauling beets to the factory. The haul allowance is an amount that the processor refunds to the grower who hauls beets to the factory, thus saving the processor handling expenses. were common with about an equal number of leases in each category. Landlord expenses for cash rent usually included water cost, real estate taxes and sometimes insurance or maintenance costs. With share leases, the landlord paid the expenses listed for cash leases plus a share of the operating expenses in most cases. Landlord expenses, plus net rent, were added to tenant expenses to get the total production cost figures on rented land.

Net rent was the contribution from land only and was used to represent the value of land on owner-operator land as well as leased land. This seemed to be valid as 59 percent of the land in farms studied was rented and only 41 percent was owned by the operator. Net rent averaged \$113 per acre in the east and \$143 per acre in the western area.

Production costs for producing sugarbeets are shown in Tables 3 and 4. All costs except a management charge and return to risk carried by the owner of the assets are included. Operator and unpaid labor and interest on the investment by the asset owners are included. Note that

 
 Table
 4. Sugarbeet budget: Western Idaho and Eastern Oregon, 1987 (per acre).

	\$1,147.41
30.74	
101.56	
67.47	
50.34	
72.70	
56.58	
/1.31	
147.55	
2.21	
-4 58	
24.02	
LT.UL	
35.44	
	\$656.34
99.39	
8.65	•
11.57	
142.67	
	\$262.28
	\$918.62
	\$228.79
	30.74 101.56 67.47 50.34 72.70 56.58 71.31 147.55 3.21 -4.58 24.02 35.44 99.39 8.65 11.57 142.67

<sup>1</sup>This is the average freight charge by the processor for hauling beets to the factory. The haul allowance is an amount that the processor refunds to the grower who hauls beets to the factory, thus saving the processor handling expenses.

expenses, production and returns are estimated for the 1987 sugarbeet crop. Changes in yield, prices or sugar extraction rates will change the net returns to the enterprise. A summary of sugarbeet acreages, production, prices and value is given in Table 5. These are averages for all sugarbeets grown in Idaho and do not represent any particular area. Oregon figures are not included in Table 5.

#### Acknowledgments

Thanks to the farm operators who provided information upon which this report is based. The author also acknowledges and expresses appreciation to The Amalgamated Sugar Company for a grower list and to Rich Turner, Gary Schneider, Ron Foster, Clark Seavert and Bob Smathers for assistance with the survey and analysis. The Idaho Agricultural Statistical Service helped with the sample, the questionnaire and data collection.

Table 5. Sugarbeets:	Acreage, yi	ield, p	production,	price and	value,	Idaho, 1	940-88.
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Year	Acres planted	Acres harvested	Yield per acre	Production	Season avg. price	Value of production
194076.071.016.11.1415.075.785194182.078.013.81.0767.047.575194349.042.015.56518.145.99194450.043.014.461810.306.365194558.053.015.38069.908.005194692.076.017.31.27411.8020.9561947116.0100.017.41.23310.3012.2700194997.080.017.61.06710.2010.883195263.465.518.61.05211.4011.689195263.465.518.61.05211.4012.824195382.475.213.41.45911.4017.887195493.469.117.61.69911.4017.887195493.469.117.61.69911.4017.887195579.676.618.71.43311.3016.193195681.374.720.81.55111.4022.568195992.067.621.91.30211.6022.266196097.684.918.31.74011.4022.5681961125.1117.919.32.27211.3025.674196519.716.6.718.02.81813.0036.634196419.714.5.622.13.217 <td></td> <td> (1,00</td> <td>00 acres)</td> <td>(tons)</td> <td>(1,000 tons)</td> <td>(\$ per ton)</td> <td>(\$1,000)</td>		(1,00	00 acres)	(tons)	(1,000 tons)	(\$ per ton)	(\$1,000)
1941         62.0         60.0         13.7         1823         6.57         5.407           1942         82.0         78.0         13.8         10.76         7.04         7.57           1943         49.0         42.0         15.5         651         8.14         5.299           1944         50.0         43.0         14.4         618         10.30         6.865           1945         58.0         53.0         15.3         809         9.90         8.009           1946         92.0         76.0         16.8         1.274         11.80         14.85           1947         116.0         102.0         17.3         1.067         10.20         10.883           1949         67.0         60.0         17.6         1.067         10.20         10.883           1950         97.0         87.0         17.3         1.508         10.60         16.286           1951         71.0         66.0         18.6         1.227         11.40         17.887           1954         93.4         595.5         18.6         1.052         12.00         12.624           1955         79.6         76.6         18.7         1.4	1940	75.0	71.0	16.1	1.141	5.07	5.785
1942         22.0         78.0         13.8         1.076         7.04         7.575           1943         49.0         42.0         15.5         651         8.14         5.986           1945         58.0         53.0         15.3         809         9.90         8.005           1947         18.0         17.0         15.4         1274         11.80         120.5           1947         18.0         17.0         16.4         1.233         10.30         12.200           1949         67.0         60.0         17.8         1.067         10.20         10.881           1952         63.4         65.5         18.6         1.227         11.40         13.282           1952         63.4         65.5         18.6         1.422         11.40         13.686           1951         71.0         66.0         18.6         1.227         11.40         17.887           1953         93.4         69.1         17.6         1.589         11.40         17.887           1954         93.4         69.1         17.6         1.589         11.40         17.887           1956         79.6         76.6         18.7	1041	62.0	60.0	13.7	823	6.57	5,407
15%         16.5         16.5         16.1         1.14         5.365           1944         50.0         43.0         14.4         618         10.30         65.365           1946         92.0         78.0         16.8         1.274         11.50         14.65           1947         116.0         102.0         17.3         1.761         11.90         20.956           1948         92.0         80.0         15.4         1.233         10.30         12.695           1948         92.0         80.0         15.4         1.233         10.30         12.695           1949         67.0         60.0         17.5         1.067         10.20         10.683           1952         63.4         56.5         18.6         1.652         12.00         12.624           1954         93.4         89.1         17.6         1.569         11.40         17.89           1956         81.3         74.7         20.8         1.551         11.40         17.89           1956         91.3         74.7         20.8         1.551         11.40         22.065           1956         91.3         74.7         10.83         2.1777	1042	92.0	78.0	13.8	1 076	7.04	7.575
1944         50.0         42.0         12.3         51.6         10.30         6.3885           1945         58.0         53.0         15.3         809         9.90         8.009           1946         92.0         76.0         16.8         1.274         11.50         14.4651           1947         116.0         102.0         17.3         1.761         11.90         20.966           1948         82.0         80.0         15.4         1.233         10.30         12.700           1949         67.0         60.0         17.8         1.067         10.20         12.824           1953         82.5         75.2         19.4         1.459         11.40         13.988           1954         93.6         89.1         17.6         1.599         11.40         17.887           1954         93.6         75.2         19.4         1.459         11.40         17.887           1955         79.6         76.6         18.7         1.433         11.30         16.938           1956         79.6         76.6         21.5         1.866         11.70         22.068           1956         91.6         22.5         1.867	1042	10.0	12.0	15.5	651	8 14	5,299
1345         53.0         15.3         809         9.90         8.00           1346         92.0         76.0         16.8         1.274         11.50         14,651           1347         116.0         02.0         17.3         1.761         11.90         20,955           1348         92.0         80.0         15.4         1.233         10.30         12,700           1349         67.0         60.0         17.3         1.606         10.80         16,883           1952         63.4         56.5         18.6         1.052         12,00         12,824           1953         82.5         75.2         19.4         1,459         11.30         16,487           1954         93.4         89.1         17.6         1.569         11.40         17,897           1955         79.6         76.6         18.7         1.433         11.30         16,193           1957         90.9         86.0         20.2         1.777         11.40         20,288           1958         90.0         87.6         21.5         1.896         11.70         22,086           1966         13.2         17.7         19.3         2,272	1943	50.0	43.0	14.4	618	10.30	6,365
Base         Base         Test         Test <thtest< th="">         Test         Test         <tht< td=""><td>1045</td><td>58.0</td><td>53.0</td><td>15.3</td><td>809</td><td>9.90</td><td>8.009</td></tht<></thtest<>	1045	58.0	53.0	15.3	809	9.90	8.009
1940         26.0         1000         17.3         17.61         11.80         20.856           1946         92.0         80.0         15.4         12.33         10.30         12.700           1949         67.0         80.0         17.8         1.067         10.20         10.883           1950         97.0         87.0         17.3         1.506         10.80         16.282           1951         17.0         66.0         18.6         1.227         11.40         13.989           1952         63.4         55.5         18.6         1.052         12.00         12.624           1954         93.4         89.1         17.6         1.569         11.40         17.847           1955         79.6         76.6         18.7         1.433         11.30         16.437           1955         79.6         76.6         19.7         1.400         17.887           1956         81.3         74.7         20.8         1.551         1.140         20.658           1957         9.0         85.0         20.2         17.77         11.40         20.658           1956         76.6         94.9         16.3         1.740	1945	02.0	76.0	16.8	1 274	11.50	14.651
1948         103         1023         10333         1033         1033 <th< td=""><td>1940</td><td>92.0</td><td>102.0</td><td>17.3</td><td>1 761</td><td>11.90</td><td>20,956</td></th<>	1940	92.0	102.0	17.3	1 761	11.90	20,956
1949         67.0         60.0         17.8         1.067         10.20         10.883           1950         97.0         87.0         17.3         1.067         10.20         12.80           1951         71.0         66.0         18.6         1.227         11.40         13.989           1952         63.4         56.5         18.6         1.052         12.00         12.624           1953         82.5         75.2         19.4         1.459         11.30         16.497           1954         93.4         69.1         17.6         1.659         11.40         17.887           1955         79.6         76.6         18.7         1.433         11.30         16.193           1956         90.9         88.0         20.2         1.777         11.40         22.063           1959         92.0         87.6         21.5         1.886         11.70         22.066           1960         97.6         94.9         18.3         1.740         11.40         19.826           1961         125.1         117.9         19.3         2.272         11.30         25.674           1962         131.0         127.1         19.1 <td>1947</td> <td>02.0</td> <td>80.0</td> <td>15.4</td> <td>1 233</td> <td>10.30</td> <td>12,700</td>	1947	02.0	80.0	15.4	1 233	10.30	12,700
1950         97.0         87.0         17.3         1,508         10.80         16,288           1951         71.0         66.0         18.6         1,227         11.40         13,984           1952         26.34         56.5         18.6         1,052         12.00         12,624           1953         82.5         75.2         19.4         1,459         11.30         16,487           1955         79.6         76.6         18.7         1,433         11.30         16,193           1956         91.3         74.7         20.8         1,551         11.40         22,058           1956         90.9         88.0         20.2         1,777         11.40         22,063           1959         92.0         87.6         21.5         1,886         11.70         22,066           1960         97.6         94.9         18.3         1,740         11.40         19,836           1961         125.1         117.9         19.3         2,272         11.30         25,674           1962         131.0         127.1         19.1         2,423         13.20         31,994           1963         149.3         14.97         145	1949	67.0	60.0	17.8	1,067	10.20	10,883
100         100         166         1227         11.40         1398           1352         63.4         56.5         16.6         1052         12.00         12.624           1353         82.5         75.2         19.4         1.459         11.30         16.467           1354         93.4         69.1         17.6         1.659         11.30         17.667           1355         79.6         76.6         18.7         1.433         11.30         16.193           1956         81.3         74.7         20.8         1.551         11.40         17.681           1957         90.9         88.0         20.2         1.777         11.40         12.066           1959         92.0         87.6         21.5         1.886         11.70         22.065           1960         97.6         94.9         16.3         1.740         11.40         19.836           1961         125.1         117.9         19.3         2.272         11.30         25.674           1962         131.0         127.1         19.1         2.423         13.20         31.984           1962         131.0         127.1         19.1         2.423	1950	97.0	87.0	17.3	1.508	10.80	16,286
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1950	71.0	66.0	18.6	1,227	11.40	13,988
1852         03.4         03.2         10.5         14.55         11.30         16.487           1954         93.4         89.1         17.6         1.569         11.40         17.867           1955         79.6         76.6         18.7         1.433         11.30         16.193           1955         79.6         76.6         18.7         1.433         11.40         17.68           1958         90.9         88.0         20.2         1.777         11.40         22.083           1959         92.0         87.6         21.5         1.886         11.70         22.063           1960         97.6         94.9         18.3         1.740         11.40         19.836           1961         125.1         117.9         19.3         2.272         11.30         25.674           1962         131.0         127.1         19.1         2.423         13.20         31.984           1963         14.97         145.6         22.1         3.217         11.80         37.902           1964         183.3         174.7         16.1         2.817         12.50         35.212           1965         159.7         156.7         1	1951	63.4	56.5	18.6	1 052	12 00	12,624
185318541854185417.61.56911.4017.867195579.676.618.71.43311.3016.193195681.374.720.81.55111.4017.681195790.988.020.21.77711.4020.281195890.087.021.91.90211.6022.063195992.067.621.51.88611.7022.066196097.694.918.31.74011.4019.8361961125.1117.919.32.27211.3025.6741962131.0127.119.12.42313.2031.9841963149.7146.622.13.21211.8037.9021964183.3174.716.12.81712.5035.2121965159.7156.718.02.81813.0036.6341966140.3118.518.92.91213.3036.7301964196.3182.316.03.28814.4047.347199920.7.5185.618.23.37314.5048.9091970175.1166.918.43.10415.8046.422197117.715.318.62.94224.9073.2561972184.3172.720.53.54316.7059.1681973154.9124.420.72.82037.6010.631197493.5	1952	92.5	75.2	19.4	1 459	11.30	16,487
1955         76.6         76.6         18.7         1.433         11.30         16,193           1956         81.3         74.7         20.8         1.551         11.40         17,681           1957         90.9         88.0         20.2         1,777         11.40         22,083           1958         90.0         87.0         21.9         1,902         11.60         22,063           1959         92.0         87.6         21.5         1,866         11.70         22,066           1960         97.6         94.9         18.3         1,740         11.40         19,838           1961         125.1         117.9         19.3         2,272         11.30         25,674           1962         131.0         127.1         19.1         2,423         13.20         31,984           1962         180.7         165.6         22.1         3,212         11.80         37,902           1964         183.3         174.7         16.1         2,817         12.50         35,212           1965         159.7         156.7         18.0         2,818         13.00         36,634           1966         140.3         1192.5         <	1953	93.4	89.1	17.6	1,569	11.40	17,887
1956       19.3       74.7       20.8       1,551       11.40       17,681         1957       90.9       88.0       20.2       1,777       11.40       22,083         1958       90.0       87.6       21.9       1,902       11.60       22,063         1960       97.6       94.9       18.3       1,740       11.40       19,836         1961       125.1       117.9       19.3       2,272       11.30       25,674         1962       131.0       127.1       19.1       2,423       13.20       31,984         1963       149.7       145.6       22.1       3,212       11.80       37,902         1964       183.3       174.7       16.1       2,817       12.50       35,212         1965       159.7       156.7       18.0       2,818       13.00       36,634         1966       140.3       119.5       18.9       2,912       13.30       36,730         1968       196.3       182.3       18.0       3,288       14.40       47,347         1969       20.7.5       185.6       18.2       3,373       14.50       48,909         1970       175.1       1	1055	79.6	76.6	18.7	1.433	11.30	16.193
18:00         0.1.3         17.7         20.3         17.7         11.40         20.258           1957         90.9         86.0         21.9         1.902         11.60         22.063           1959         92.0         87.6         21.5         1.886         11.70         22.063           1960         97.6         94.9         18.3         1.740         11.40         19.836           1961         125.1         117.9         19.3         2.272         11.30         25.674           1962         131.0         127.1         19.1         2.423         13.20         31.984           1963         149.7         145.6         22.1         3.212         11.80         37.902           1964         183.3         174.7         16.1         2.817         12.50         35.212           1965         159.7         156.7         18.0         2.818         13.00         36.634           1966         140.3         119.5         18.9         2.259         13.20         29.819           1967         157.8         146.9         19.8         2.912         13.30         38.730           1968         196.3         182.3	1955	91.2	74.7	20.8	1 551	11.40	17.681
1957         30.5         30.5         20.2         17.7         17.60         12.2683           1958         90.0         87.6         21.5         1,886         11.70         22,063           1960         97.6         94.9         18.3         1,740         11.40         19.836           1961         125.1         117.9         19.3         2,272         11.30         25,674           1962         131.0         127.1         19.1         2,423         13.20         31,984           1963         149.7         145.6         22.1         3,212         11.80         37,902           1964         183.3         174.7         16.1         2,818         13.00         36,634           1966         140.3         119.5         18.9         2,259         13.20         29,819           1967         157.8         146.9         19.8         2,912         13.30         38,730           1968         196.3         182.3         18.0         3,208         14.40         47,347           1969         207.5         185.6         18.2         3,373         14.50         48,909           1970         175.1         168.9	1950	01.0	99.0	20.2	1 777	11 40	20,258
1958         90.0         97.6         21.5         1,886         11.70         22,086           1960         97.6         94.9         18.3         1,740         11.40         19,836           1961         125.1         117.9         19.3         2,272         11.30         25,674           1962         131.0         127.1         19.1         2,423         13.20         31,984           1963         149.7         145.6         22.1         3,212         11.80         37,902           1964         183.3         174.7         16.1         2,818         13.00         36,634           1966         140.3         119.5         18.9         2,259         13.20         29,819           1966         140.3         119.5         18.9         2,259         13.20         29,819           1967         157.8         146.9         19.8         2,912         13.30         38,730           1968         196.3         182.3         18.0         3,288         14.40         47,347           1969         207.5         185.6         18.2         3,733         14.50         48,922           1971         171.7         163.8	1957	90.9	97.0	21.0	1 902	11.60	22 063
1980         97.6         94.9         18.3         1,740         11.40         19.836           1961         125.1         117.9         19.3         2,272         11.30         25.674           1962         131.0         127.1         19.1         2,423         13.20         31.984           1963         149.7         145.6         22.1         3,212         11.80         37.902           1964         183.3         174.7         16.1         2,818         13.00         36.634           1966         159.7         156.7         18.0         2,818         13.00         36.634           1966         140.3         119.5         18.9         2,259         13.20         29.819           1967         157.8         146.9         19.8         2,912         13.30         38.730           1968         196.3         182.3         18.0         3,288         14.40         47.347           1969         207.5         185.6         18.2         3,373         14.50         48.909           1970         175.1         168.9         18.4         3,104         15.60         48.422           1977         17.6         18.4	1958	90.0	87.6	21.5	1,886	11.70	22,066
1960         97.0         97.5         10.5         17.5         11.30         25.674           1962         131.0         127.1         19.1         2,423         13.20         31,984           1963         149.7         145.6         22.1         3,212         11.80         37,902           1964         183.3         174.7         16.1         2,817         12.50         35,212           1965         159.7         156.7         18.0         2,818         13.00         36,634           1966         140.3         119.5         18.9         2,259         13.20         29,819           1967         157.8         146.9         19.8         2,912         13.30         38,730           1968         196.3         182.3         18.0         3,288         14.40         47,347           1969         207.5         185.6         18.2         3,373         14.50         48,909           1970         175.1         168.9         18.4         3,104         15.60         48,422           1971         171.7         163.8         19.5         3,197         16.00         51,152           1972         184.3         172.7	1060	97.6	94.9	18.3	1 740	11.40	19.836
1960       125.1       117.9       13.0       124.2       11.00       31,984         1962       131.0       127.1       19.1       2,423       13.20       31,984         1963       149.7       145.6       22.1       3,212       11.80       37,902         1964       183.3       174.7       16.1       2,817       12.50       35,212         1965       159.7       156.7       18.0       2,818       13.00       36,634         1966       140.3       119.5       18.9       2,259       13.20       29,819         1967       157.8       146.9       19.8       2,912       13.30       36,730         1968       196.3       182.3       18.0       3,288       14.40       47,347         1969       207.5       185.6       18.2       3,373       14.50       48,909         1970       175.1       168.9       18.4       3,104       15.60       48,422         1971       171.7       163.8       19.5       3,197       16.00       51,152         1972       184.3       172.7       20.5       3,543       16.70       59,168         1973       154.9	1900	105.1	117.0	10.0	2 272	11.30	25,674
1962         1910         12.1.1         13.1.1         1.2.1.2         14.0.0         37,902           1964         183.3         174.7         16.1         2,817         12.50         35,212           1965         159.7         156.7         18.0         2,818         13.00         36,634           1966         140.3         119.5         18.9         2,259         13.20         29,819           1967         157.8         146.9         19.8         2,912         13.30         38,730           1968         196.3         182.3         18.0         3,288         14.40         47,347           1969         207.5         185.6         18.2         3,373         14.50         48,909           1970         175.1         168.9         18.4         3,104         15.60         48,422           1971         171.7         163.8         19.5         3,197         16.00         51,152           1972         184.3         172.7         20.5         3,543         16.70         59,168           1973         154.9         144.3         20.2         2,921         34.80         101,651           1976         168.7         158	1062	121.0	127.1	19.1	2 423	13.20	31,984
1963       189.7       143.0       12.1       02.11       02.11       12.10       02.11         1964       183.3       174.7       16.1       2.818       13.00       36.634         1966       140.3       119.5       18.9       2.259       13.20       29.819         1967       157.8       146.9       19.8       2.912       13.30       38.730         1968       196.3       182.3       18.0       3.288       14.40       47.347         1969       207.5       185.6       18.2       3.373       14.50       48.909         1970       175.1       168.9       18.4       3.104       15.60       48.422         1971       171.7       163.8       19.5       3.197       16.00       51.152         1972       184.3       172.7       20.5       3.543       16.70       59.168         1973       154.9       144.3       20.2       2.921       34.80       101.651         1974       93.5       90.8       20.3       1.845       44.10       81.385         1975       168.7       158.3       18.6       2.942       24.90       73.256         1976	1902	140.7	145.6	22.1	3 212	11.80	37,902
1965150.7166.718.02.81813.0036,6341966140.3119.518.92.25913.2029,8191967157.8146.919.82.91213.3038,7301968196.3182.318.03.28814.4047,3471969207.5185.618.23,37314.5048,9091970175.1168.918.43,10415.6048,4221971171.7163.819.53,19716.0051,1521972184.3172.720.53,54316.7059,1681973154.9144.320.22,92134.80101,651197493.590.820.31,84544.1081,3651975168.7156.318.62,94224.9073,2561976145.6139.420.72,87920.8059,8831977115.4107.419.52,09425.5053,3971978134.6132.320.92,76527.7076,5911980139.4137.923.93,29646.20152,2751982139.0136.023.43,18237.20118,3701983145.0144.023.03,31237.10122,8751985153.0152.023.03,49636.60127,9541986161.0160.025.74,11236.40149,6671986 <t< td=""><td>1964</td><td>183.3</td><td>174.7</td><td>16.1</td><td>2,817</td><td>12.50</td><td>35,212</td></t<>	1964	183.3	174.7	16.1	2,817	12.50	35,212
1966103.7	1065	150.7	156 7	18.0	2 818	13.00	36.634
1960       170.5       170.5       170.5       170.5       170.5       170.5       170.5       170.5       170.5       170.5       170.5       170.5       170.5       170.5       180.6       182.2       3,373       144.50       48,909         1969       207.5       186.6       18.2       3,373       14.50       48,909         1970       175.1       168.9       18.4       3,104       15.60       48,422         1971       171.7       163.8       19.5       3,197       16.00       51,152         1972       184.3       172.7       20.5       3,543       16.70       59,168         1973       154.9       144.3       20.2       2,921       34.80       101,651         1974       93.5       90.8       20.3       1,845       44.10       81.365         1976       145.6       139.4       20.7       2,879       20.80       59,883         1977       115.4       107.4       19.5       2,094       25.50       53,397         1978       134.6       132.3       20.9       2,765       27.70       76,591         1980       139.4       137.9       23.9       3,296 <td>1905</td> <td>140.3</td> <td>119.5</td> <td>18.9</td> <td>2 259</td> <td>13.20</td> <td>29,819</td>	1905	140.3	119.5	18.9	2 259	13.20	29,819
1967       13.3       140.3       15.3       2.012       14.40       47,347         1968       1963       182.3       18.0       3.288       14.40       47,347         1969       207.5       185.6       18.2       3.373       14.50       48,909         1970       175.1       168.9       18.4       3,104       15.60       48,422         1971       171.7       163.8       19.5       3,197       16.00       51,152         1973       154.9       144.3       20.2       2,921       34.80       101,651         1973       154.9       144.3       20.2       2,921       34.80       101,651         1974       93.5       90.8       20.3       1,845       44.10       81,365         1975       168.7       158.3       18.6       2,942       24.90       73,256         1976       145.6       139.4       20.7       2,679       20.80       59,883         1977       115.4       107.4       19.5       2,094       25.50       53,397         1978       134.6       132.3       20.9       2,765       27.70       76,591         1979       131.3	1900	140.0	146.9	19.8	2 912	13.30	38,730
19601963196319631964196519651965196519651965196519651965196519651970175.1168.918.43,10415.6048,4221971171.7163.819.53,19716.0051,1521972184.3172.720.53,54316.7059,1681973154.9144.320.22,92134.80101,165197493.590.820.31,84544.1081,3651975168.7158.318.62,94224.9073,2561976145.6139.420.72,87920.8059,8831977115.4107.419.52,09425.5053,3971978134.6132.320.92,76527.7076,5911979131.3125.922.42,82037.60106,0321980139.4137.923.93,29646.20152,2751981147.6144.426.03,75432.50122,0051982139.0136.024.43,48740.50141,2241984145.0143.024.43,48740.50141,2241985153.0152.023.03,31237.10122,8751986161.0160.025.74,11236.40149,6671987168.0166.024.54067NANA	1907	106.2	192.3	18.0	3 288	14.40	47 347
1970         175.1         168.9         18.4         3,104         15.60         48,422           1971         171.7         163.8         19.5         3,197         16.00         51,152           1972         184.3         172.7         20.5         3,543         16.70         59,168           1973         154.9         144.3         20.2         2,921         34.80         101,651           1974         93.5         90.8         20.3         1,845         44.10         81,365           1975         168.7         156.3         18.6         2,942         24.90         73,256           1976         145.6         139.4         20.7         2,879         20.80         59,883           1977         115.4         107.4         19.5         2,094         25.50         53,397           1978         134.6         132.3         20.9         2,765         27.70         76,591           1979         131.3         125.9         22.4         2,820         37.60         106,032           1980         139.4         137.9         23.9         3,296         46.20         152,275           1981         147.6         144.4 <td>1969</td> <td>207.5</td> <td>185.6</td> <td>18.2</td> <td>3,373</td> <td>14.50</td> <td>48,909</td>	1969	207.5	185.6	18.2	3,373	14.50	48,909
1970       171.7       163.8       19.5       3,197       16.00       51,152         1972       184.3       172.7       20.5       3,543       16.70       59,168         1973       154.9       144.3       20.2       2,921       34.80       101,651         1974       93.5       90.8       20.3       1,845       44.10       81,3655         1975       168.7       158.3       18.6       2,942       24.90       73,256         1976       145.6       139.4       20.7       2,879       20.80       59,883         1977       115.4       107.4       19.5       2,094       25.50       53,397         1978       134.6       132.3       20.9       2,765       27.70       76,591         1979       131.3       125.9       22.4       2,820       37.60       106,032         1980       139.4       137.9       23.9       3,296       46.20       152,275         1981       147.6       144.4       26.0       3,754       32.50       122,005         1982       139.0       136.0       23.4       3,182       37.10       122,875         1983       145.0	1970	175 1	168.9	18.4	3.104	15.60	48.422
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1071	171.7	163.8	19.5	3,197	16.00	51,152
1972         104.3         114.3         20.2         2.921         34.80         101.651           1973         154.9         144.3         20.2         2.921         34.80         101.651           1974         93.5         90.8         20.3         1,845         44.10         81,365           1975         168.7         158.3         18.6         2.942         24.90         73,256           1976         145.6         139.4         20.7         2.879         20.80         59,883           1977         115.4         107.4         19.5         2.094         25.50         53,397           1978         134.6         132.3         20.9         2.765         27.70         76,591           1979         131.3         125.9         22.4         2.820         37.60         106,032           1980         139.4         137.9         23.9         3.296         46.20         152,275           1981         147.6         144.4         26.0         3.754         32.50         122,005           1982         139.0         136.0         23.4         3.182         37.20         118,370           1983         145.0         144.0	1971	184 3	172 7	20.5	3.543	16.70	59,168
197493.590.820.31,84544.1081,3651975168.7158.318.62,94224.9073,2561976145.6139.420.72,87920.8059,8831977115.4107.419.52,09425.5053,3971978134.6132.320.92,76527.7076,5911979131.3125.922.42,82037.60106,0321980139.4137.923.93,29646.20152,2751981147.6144.426.03,75432.50122,0051982139.0136.023.43,18237.20118,3701983145.0144.023.03,31237.10122,8751985153.0152.023.03,49636.60127,9541986161.0160.025.74,11236.40149,6671987163.0162.026.14,27738.70165,5201988186.0166.024.54.067NANA	1073	154.9	144.3	20.2	2.921	34.80	101.651
1975168.7158.318.62,94224.9073,2561976145.6139.420.72,87920.8059,8831977115.4107.419.52,09425.5053,3971978134.6132.320.92,76527.7076,5911979131.3125.922.42,82037.60106,0321980139.4137.923.93,29646.20152,2751981147.6144.426.03,75432.50122,0051982139.0136.023.43,18237.20118,3701983145.0143.024.43,48740.50141,2241984145.0144.023.03,31237.10122,8751985153.0152.023.03,49636.60127,9541986161.0160.025.74,11236.40149,6671987163.0162.026.14,27738.70165,5201988168.0166.024.54.067NANA	1974	93.5	90.8	20.3	1,845	44.10	81,365
1976145.6139.420.72,87920.8059,8831977115.4107.419.52,09425.5053,3971978134.6132.320.92,76527.7076,5911979131.3125.922.42,82037.60106,0321980139.4137.923.93,29646.20152,2751981147.6144.426.03,75432.50122,0051982139.0136.023.43,18237.20118,3701983145.0143.024.43,48740.50141,2241984145.0144.023.03,31237.10122,8751985153.0152.023.03,49636.60127,9541986161.0160.025.74,11236.40149,6671987163.0162.026.14,27738.70165,5201988166.0166.024.54.067NANA	1975	168 7	158.3	18.6	2.942	24.90	73,256
1977       115.4       107.4       19.5       2,094       25.50       53,397         1978       134.6       132.3       20.9       2,765       27.70       76,591         1979       131.3       125.9       22.4       2,820       37.60       106,032         1980       139.4       137.9       23.9       3,296       46.20       152,275         1981       147.6       144.4       26.0       3,754       32.50       122,005         1982       139.0       136.0       23.4       3,182       37.20       118,370         1983       145.0       143.0       24.4       3,487       40.50       141,224         1984       145.0       144.0       23.0       3,312       37.10       122,875         1985       153.0       152.0       23.0       3,496       36.60       127,954         1986       161.0       160.0       25.7       4,112       36.40       149,667         1987       163.0       162.0       26.1       4,277       38.70       165,520         1988       168.0       166.0       24.5       4.067       NA       NA	1976	145.6	139.4	20.7	2.879	20.80	59.883
1978       134.6       132.3       20.9       2,765       27.70       76,591         1979       131.3       125.9       22.4       2,820       37.60       106,032         1980       139.4       137.9       23.9       3,296       46.20       152,275         1981       147.6       144.4       26.0       3,754       32.50       122,005         1982       139.0       136.0       23.4       3,182       37.20       118,370         1983       145.0       143.0       24.4       3,487       40.50       141,224         1984       145.0       144.0       23.0       3,312       37.10       122,875         1985       153.0       152.0       23.0       3,496       36.60       127,954         1986       161.0       160.0       25.7       4,112       36.40       149,667         1987       163.0       162.0       26.1       4,277       38.70       165,520         1988       168.0       166.0       24.5       4.067       NA       NA	1977	115.4	107.4	19.5	2.094	25.50	53.397
1979         131.3         125.9         22.4         2,820         37.60         106,032           1980         139.4         137.9         23.9         3,296         46.20         152,275           1981         147.6         144.4         26.0         3,754         32.50         122,005           1982         139.0         136.0         23.4         3,182         37.20         118,370           1983         145.0         143.0         24.4         3,487         40.50         141,224           1984         145.0         144.0         23.0         3,312         37.10         122,875           1985         153.0         152.0         23.0         3,496         36.60         127,954           1986         161.0         160.0         25.7         4,112         36.40         149,667           1987         163.0         162.0         26.1         4,277         38.70         165,520           1988         168.0         166.0         24.5         4.067         NA         NA	1978	134.6	132.3	20.9	2.765	27.70	76,591
1980139.4137.923.93,29646.20152,2751981147.6144.426.03,75432.50122,0051982139.0136.023.43,18237.20118,3701983145.0143.024.43,48740.50141,2241984145.0144.023.03,31237.10122,8751985153.0152.023.03,49636.60127,9541986161.0160.025.74,11236.40149,6671987163.0162.026.14,27738.70165,5201988168.0166.024.54.067NANA	1979	131.3	125.9	22.4	2,820	37.60	106,032
1981         147.6         144.4         26.0         3,754         32.50         122,005           1982         139.0         136.0         23.4         3,182         37.20         118,370           1983         145.0         143.0         24.4         3,487         40.50         141,224           1984         145.0         144.0         23.0         3,312         37.10         122,875           1985         153.0         152.0         23.0         3,496         36.60         127,954           1986         161.0         160.0         25.7         4,112         36.40         149,667           1987         163.0         162.0         26.1         4,277         38.70         165,520           1988         168.0         166.0         24.5         4.067         NA         NA	1980	139.4	137.9	23.9	3.296	46.20	152,275
1982         139.0         136.0         23.4         3,182         37.20         118,370           1983         145.0         143.0         24.4         3,487         40.50         141,224           1984         145.0         144.0         23.0         3,312         37.10         122,875           1985         153.0         152.0         23.0         3,496         36.60         127,954           1986         161.0         160.0         25.7         4,112         36.40         149,667           1987         163.0         162.0         26.1         4,277         38.70         165,520           1988         168.0         166.0         24.5         4.067         NA         NA	1981	147.6	144.4	26.0	3.754	32.50	122,005
1983         145.0         143.0         24.4         3,487         40.50         141,224           1984         145.0         144.0         23.0         3,312         37.10         122,875           1985         153.0         152.0         23.0         3,496         36.60         127,954           1986         161.0         160.0         25.7         4,112         36.40         149,667           1987         163.0         162.0         26.1         4,277         38.70         165,520           1988         168.0         166.0         24.5         4.067         NA         NA	1982	139.0	136.0	23.4	3,182	37.20	118.370
1984         145.0         144.0         23.0         3,312         37.10         122,875           1985         153.0         152.0         23.0         3,496         36.60         127,954           1986         161.0         160.0         25.7         4,112         36.40         149,667           1987         163.0         162.0         26.1         4,277         38.70         165,520           1988         168.0         166.0         24.5         4.067         NA         NA	1983	145.0	143.0	24.4	3.487	40.50	141,224
1985153.0152.023.03,49636.60127,9541986161.0160.025.74,11236.40149,6671987163.0162.026.14,27738.70165,5201988168.0166.024.54.067NANA	1984	145.0	144.0	23.0	3,312	37.10	122,875
1986         161.0         160.0         25.7         4,112         36.40         149,667           1987         163.0         162.0         26.1         4,277         38.70         165,520           1988         168.0         166.0         24.5         4.067         NA         NA	1985	153.0	152.0	23.0	3.496	36.60	127,954
1987 163.0 162.0 26.1 4,277 38.70 165,520 1988 168.0 166.0 24.5 4.067 NA NA	1986	161.0	160.0	25.7	4,112	36.40	149,667
1988 168.0 166.0 24.5 4.067 NA NA	1987	163.0	162.0	26.1	4 277	38.70	165.520
	1088	169.0	166.0	24.5	4 067	NA	NA

Idaho Agricultural Statistical Service, "Idaho Agricultural Statistics, 1988." Boise, Idaho. Fall 1988.

Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, LeRoy D. Luft, Director of Cooperative Extension System, University of Idaho, Moscow, Idaho 83843. We offer our programs and facilities to all people without regard to race, creed, color, sex or national origin.