

AGRICULTURE — Idaho's Economic Cornerstone

Joel R. Hamilton

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The Importance of Agriculture to Idaho — 1970

A. Sales of Farm Products

- Idaho had \$664 million in cash receipts from farming in 1970.
- 2. With these sales, Idaho ranked 4th among the 13 western states and 28th in the 50 states.
- 3. When the sales of farm products are converted to a per capita basis, Idaho receipts from farm products amounted to \$931.30 for each Idaho resident. This ranked Idaho 1st in the western states and 5th in the U.S. Only South Dakota, Iowa, Nebraska, and North Dakota have greater per capita receipts from the sale of farm products.

4. Idaho is:

- —No. 1 in the U.S. in cash receipts from potatoes.
- —No. 2 in the U.S. in cash receipts from sugar beets.
- -No. 2 in the U.S. in cash receipts from dry peas & beans.
- -No. 10 in the U.S. in cash receipts from wheat.
- —No. 21 in the U.S. in cash receipts from cattle & calves.
- —No. 5 in the U.S. in cash receipts from sheep & lambs.
- —No. 26 in the U.S. in cash receipts from dairy products.

B. Income from Farming

- 1. In Idaho, 12.03 percent of total personal income comes directly from farming. This percentage is the 2nd highest in the U.S., only exceeded by South Dakota. In Washington, for example, only 2.37 percent of the state personal income comes from farming.
- 2. If income is converted to a per capita basis, Idaho personal income from farming amounted to \$389.90 for each Idaho resident. This figure is 3rd highest in the U.S., exceeded only by South Dakota and Iowa.

C. Employment in Farming

- 15.33 percent of the Idaho civilian labor force was employed directly in farming in 1970. This compares to only 4.19 percent for the nation as a whole.
- This percentage has dropped by half from 30.29 percent in 1950.

D. Food Processing — A Vital Part of Idaho's Agriculture

- 1. Food processing accounted for 29.21 percent of all manufacturing value added for 1969 in Idaho. This percentage is the 6th largest in the U.S., exceeded only by Hawaii, Alaska, South Dakota, North Dakota, and Nebraska (compare to 9.76 percent in Washington). This 29.21 percent makes food processing the largest contributor to value added in Idaho manufacturing, with lumber and wood products second (25.98 percent), and the chemical products third (18.71 percent).
- 2. Food processing accounted for 34.44 percent of all manufacturing employment for 1969 in Idaho. This is the 5th largest percentage in the U.S. (compare to 10.08 percent for Washington). Food processing is the largest employer in the manufacturing sector of the Idaho economy; lumber and wood products is 2nd (30.61 percent) and chemical products is 3rd (8.67 percent).

E. Agriculture's contribution to gross state product

- 1. Lynch estimated that \$381.2 million of Idaho's gross state product depended directly on Idaho farming in 1969. About \$130 million more depends directly on Idaho food processing. Thus about \$510 million or one-fifth of Idaho's gross state product depends directly on farming and food processing.
- 2. If the income multiplier for agriculture is between 2 and 3, then between two-fifths and three-fifths of the total gross state product depends directly or indirectly on Idaho agriculture.

The Author

Dr. Joel R. Hamilton is Assistant Professor and Assistant Agricultural Economist in the Department of Agricultural Economics.



Preface

This publication is one of two reports dealing with the importance and development of the Idaho agricultural industry.

This publication analyzes the importance of the agricultural industry in Idaho relative to other states in the west and in the nation. It analyzes the economic contribution and national ranking of various agricultural commodities in Idaho and other states. The other publication in the series, Idaho Agricultural Experiment Station Bulletin No. 537, is primarily concerned with the development and efficiency of Idaho agriculture. It analyzes income, expenditures, and production trends of the agricultural industry in Idaho.

The first part of this bulletin looks at the sales of farm products in Idaho and compares these figures to corresponding sales figures in other states. Income and employment in farming is also examined and compared to that in other states. Since food processing is an important part of Idaho agriculture, its contribution to value added and employment is examined. Finally, some measures of Idaho's total (direct, indirect, and induced) dependence on agriculture are developed.

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AGRICULTURE:

Joel R. Hamilton

Residents of Idaho often think of their state in terms of its forest industry, its mining industry, its status as a recreation center, and increasingly in terms of its manufacturing industry. Even though Idaho is a rural state, it is easy to forget that agriculture is the cornerstone of the state's economy.

Sales of Farm Products

Idaho ranks 4th among the 13 western states in receipts from the sale of farm products (Table 1). California and Colorado have a commanding lead in total receipts, followed by Washington, Idaho, Arizona, Oregon and Montana. Except for California and Colorado, none of the western states fare well in an overall ranking of receipts from farm marketing. Idaho is far down the ranking — 28th out of the 50 states. It seems that the output of Idaho's farms is not a very significant portion of total U.S. agricultural output.

Table 1. Cash receipts from farm marketing in Western States — 1970.

Rank			Cash receipts
U.S.	West	State	for 1970 (\$ million)
1	1	California	4,456.1
14	2	Colorado	1,181.5
24	3	Washington	792.6
28	4	IDAHO	664.0
30	5	Arizona	647.3
32	6	Oregon	561.9
33	7	Montana	559.0
34	8	N. Mexico	460.6
39	9	Wyoming	235.1
40	10	Utah	225.4
41	11	Hawaii	211.5
47	12	Nevada	80.5
50	13	Alaska	4.3

Source:

U.S. Department of Agriculture, Economic Research Service (USDA-ERS). The Farm Income Situation. August 1971.

Note that most of the information reported in this bulletin is from the years 1969 and 1970. It is unfortunate, in this age of high speed computers, that it still takes two to three years before economic data is made available. Most of the 1969 data is from the last Census of Agriculture and from the last Census of Manufactures. Most of the 1970 information is from The Farm Income Situation which was published in August of 1971. Fortunately, however, economies do not change very fast. The picture of Idaho given by this 1969 and 1970 data is not very different from the overall picture one would get if 1972 data were available.

Idaho's Economic Cornerstone

The ranking in Table 1 doesn't really express the true importance of farming to the people of Idaho. When compared with those states having greater receipts from farm marketing, Idaho is a smaller state and has far fewer people. Table 2 gives a more revealing picture. When gross receipts are divided by each state's population, Idaho ranks 1st in per capita receipts among the western states. In fact, Idaho ranks 5th in per capita receipts among all 50 states, trailing only North and South Dakota, Iowa and Nebraska. Although there are some problems with using the receipts from farm marketing data in this way², the results

Table 2. Top states in per capita receipts from farm marketing — 1970.

Rank		2	Per
U.S.	West	State	capita receipts (dollars)
1		S. Dakota	1,519.4
2	,m)	Iowa	1,391.0
3	-	Nebraska	1,359.3
4	-	N. Dakota	1,102.4
5	1	IDAHO	931.3
6	2	Montana	805.5
7	-	Kansas	789.5
8	3	Wyoming	708.1
9	-	Arkansas	558.2
10	4	Colorado	535.3
11	-	Minnesota	529.8
12	5	N. Mexico	453.3
13	-	Oklahoma	413.6
14	-	Mississippi	411.3
15	-	Vermont	367.3
16	6	Arizona	365.5
17	98	Wisconsin	364.4
18	- 4	Missouri	333.6
19	1.00	N. Carolina	303.8
20		Indiana	298.9
21		Kentucky	286.4
22	-	Texas	280.2
23	7	Hawaii	275.0
24	-	Delaware	268.8
25	8	Oregon	268.7

Source: Appendix Table A1.

²Gross receipts from farm marketing is not really the net output from a state's farms. The figures actually involve some double counting. For example, the value of all feed grain sold is added to the value of the livestock fed on this feed grain — which seems to count the feed grain twice. The severity of this double counting depends on the kind of products produced in a state and on the organizational structure of the producing units. As a result, the use of total and percapita receipts from farm marketing as a measure of farming's importance to a state should be viewed with some suspicion. There is enough similarity among the kinds of farming found in the western states so that the ranking in Tables 1 and 2 should reflect approximate, if not actual, importance.

strongly suggest that Idaho is among those states whose people depend most heavily on farming for their livelihood.

What products contributed most to Idaho's receipts from farm marketing? Table 3 shows the breakdown for 1970. Crops — largely potatoes, wheat, and sugar beets — contribute over half of total cash receipts. Livestock receipts are dominated by sales of cattle and calves, with dairy products and sheep and lambs contributing a smaller portion.

Although Idaho ranks an unimpressive 28th among the 50 states in total cash receipts from farming, this state's production is very important for certain commodities. Outstanding examples are potatoes and sugar beets, where Idaho ranks 1st and 2nd in the U.S. It is not surprising that many outsiders think of Idaho in terms of "Famous Potatoes", and that many fall visitors in southern Idaho are impressed by the great piles of sugar beets awaiting shipment to processing plants.

Table 3. Idaho cash farm receipts by commodity — 1970.

	Receipts (\$ million
All Commodities	664.0
Livestock Products	304.3
Meat Animals Cattle & Calves Sheep & Lambs Hogs Dairy Products	217.6 187.3 21.7 8.6 69.6
Poultry and Eggs	10.8
Other Livestock Products	6.4
Crops	359.4
Food Grains Wheat Rye	51.4 51.2 .2
Feed Crops Hay Barley Other	51.0 25.8 21.3 3.8
Vegetables Potatoes Dry Beans & Peas Onions Other	170.4 134.8 22.4 6.4 6.8
Fruit and Nuts	7.3
Other Crops Sugar Beets Alfalfa Seed Other	79.6 46.0 6.7 26.9

Source: USDA-ERS. The Farm Income Situation. August 1971.

Table 4. Cash receipts from potatoes — 1970.

Rank			
U.S.	West	State	Receipts (\$ million)
1	1	IDAHO	134.8
2	2	California	82.4
2	-	Maine	67.1
4	3	Washington	46.2
5		New York	43.5
6	-	Wisconsin	29.2
7		N. Dakota	25.6
8	4	Oregon	25.1
9	_	Florida	24.6
10		Michigan	22.6

Source: USDA-ERS. The Farm Income Situation.
August 1971.

Table 5. Cash receipts from sugar beets — 1970.

Rank			
U.S.	West	- State	Receipts (\$ million)
1	1	California	117.1
2	2	IDAHO	46.0
2 3	3	Colorado	36.0
4		Michigan	28.2
5	-	Minnesota	26.9
6	:-	Nebraska	20.5
7	4	Washington	18.8
8		N. Dakota	15.9
9	5	Wyoming	14.2
10	6	Montana	13.7
Source:	USDA Augus	-ERS. The Farm st 1971.	Income Situation

Table 6. Cash receipts from dry peas and beans — 1970.

Rank			
U.S.	West	State	Receipts (\$ million)
1		Michigan	47.3
2	1	IDAHO	22.3*
3	2	Colorado	16.6
4	3	Washington	13.9*
5	-	Nebraska	10.2
6	385	New York	7.4
7	4	Wyoming	3.5

* Note that data for dry peas are reported only for Washington (\$9.2 million) and Idaho (\$8.3 million). Small quantities of dry peas may be raised in the other states — which would raise their receipts figures somewhat, but not enough to change the ranking.

Source: USDA-ERS. The Farm Income Situation. August 1971.

Dry peas and beans are grown on a smaller scale — and hence, are less visible. Yet Idaho dominates the West and is 2nd nationally in receipts from dry peas and beans. The claim of Moscow, Idaho, to be the "pea and lentil capital of the world" is not an empty claim.

Wheat production is visible in much of Idaho. However, the same is true over much of the western two-thirds of the U.S. Although wheat production is important to the economy of Idaho, the state ranks only 10th nationally and 4th in the West in wheat receipts. Considering Idaho's smaller size and population compared to the western leaders in wheat production, perhaps 4th is not a bad showing. Idaho, however, can lay no claims of dominance in wheat production.

The picture that emerges from Idaho's livestock sector is similar to that for wheat. Livestock production is extremely important to the state's agricultural economy, contributing nearly half of total receipts

Table 7. Cash receipts from wheat — 1970.

Rank			
U.S.	West	State	Receipts (\$ million)
1	(* 6)	Kansas	273.8
2	141	N. Dakota	234.2
1 2 3	1	Washington	122.6
4	2	Montana	115.5
5	250	Oklahoma	101.0
6	(*)	Nebraska	91.6
7	3	Colorado	64.6
8	-	Texas	63.8
9	-	S. Dakota	63.3
10	4	IDAHO	51.2
11	-0	Ohio	41.3
12		Illinois	40.4
13	-	Minnesota	36.7
14	5	Oregon	35.0
15		Indiana	33.0

Source: USDA-ERS. The Farm Income Situation. August 1971.

Table 8. Cash receipts from sheep and lambs — 1970.

Rank			
U.S.	West	State	Receipts (\$ million)
1	2	Texas	38.8
2	1	Colorado	37.1
3	2	California	26.6
4	-	Iowa	21.8
5	3	IDAHO	21.7
6	-	S. Dakota	19.7
7	4	Wyoming	19.2
8	5	Utah	15.9
9	-	Minnesota	13.5
10	6	Montana	12.7

Source: USDA-ERS. The Farm Income Situation. August 1971.

from farm marketing. Yet, Idaho ranks only 21st nationally and 6th in the West in terms of receipts from cattle and calves. The dominant states are larger, have more extensive rangeland or more fully developed feeding facilities.

Idaho is 5th in the U.S. and 3rd in the West in receipts from sheep and lambs. In fact, Idaho has over half as many sheep and lambs as the leading state (Texas) — which is not bad for a state the size of Idaho.

The situation for dairy products is a bit more interesting. With the exception of California, milk production is concentrated in the East and Midwest. Thus, Idaho ranks only 26th in receipts from dairy products. In the West, however, Idaho ranks 3rd, after California and Washington. In terms of the way milk is produced in the West, Idaho makes a very good showing.

Income and Employment in Farming

Cash receipts from farming may not be a particularly good way to measure the importance of farming to a state. Cash receipts figures have some problems of double counting (see footnote 2). And, in the end, the income of the people employed in farming is what matters.

Table 9. Cash receipts from cattle and calves - 1970.

Rank			
U.S.	West	State	Receipts (\$ million)
1	-	lowa	1,413.5
2	*	Texas	1,382.7
3	-	Nebraska	1,062.5
4	-	Kansas	952.5
5	1	California	835.3
6	2	Colorado	775.5
7	-	Oklahoma	678.4
8	=	S. Dakota	528.5
9	-	Missouri	513.1
10	-	Minnesota	492.2
11	- 1	Illinois	484.3
12	3	N. Mexico	326.1
13	4	Arizona	314.3
14	5	Montana	308.4
15	-	Kentucky	258.0
16	*	Wisconsin	230.0
17	-	Ohio	207.9
18	-	Mississippi	207.1
19	-	Indiana	195.1
20	-	Tennessee	187.7
21	6	IDAHO	187.3
22	-:	N. Dakota	182.8
23	7	Wyoming	163.4
24	-	Arkansas	161.0
25	3	Florida	150.8

Source: USDA-ERS. The Farm Income Situation.
August 1971.

Personal income from farming in Idaho totaled \$278 million in 1970 (see appendix Table A1). This ranked Idaho 28th among the 50 states and 4th among the Western States. Again, it is not fair to compare Idaho directly with the larger, more populous states. A far different picture emerges when we focus on the percent of total personal income that arises from farming (Table 11). Idaho's 12 percent places it 1st in the West and 2nd in the U.S. The picture is verified in Table 12 — which ranks states in per capita income arising from farming. In 1970, personal income from farming amounted to an average of \$390 for every Idaho resident. This was highest in the Western States and 3rd highest in the U.S.

A state-by-state breakdown of the number of people employed in farming is not readily available. For the U.S. as a whole, only 4.19 percent of the civilian labor force was employed in farming in 1970. For Idaho, the figure was 15.33 percent (see appendix Table A2), over three times as high as the proportion for the whole U.S.

Table 10. Cash receipts from dairy products — 1970.

Rank		- State	Receipts
U.S.	West	- State	(\$ million)
1		Wisconsin	906.9
2	*	New York	618.7
3	- 1	California	535.1
4	-	Pennsylvania	447.6
5		Minnesota	445.8
6	(#)	Michigan	259.3
7	-	Ohio	255.5
8	-	lowa	221.5
9	-	Texas	204.8
10	-	Missouri	155.5
11	-	Illinois	153.6
12	-	Indiana	133.2
13	-	Florida	126.9
14	-	Vermont	125.8
15	4	Kentucky	122.6
16	2	Washington	122.3
17	-	Tennessee	114.2
18	-	Virginia	106.8
19	-	Maryland	102.0
20	-	N. Carolina	95.9
21	-	Kansas	90.0
22	-	Georgia	81.2
23	2	Oklahoma	75.9
24	-	Nebraska	73.6
25	-	Louisiana	73.1
26	3	IDAHO	69.6
27		S. Dakota	67.3
28	_	Mississippi	60.6
29	4	Oregon	56.2
30	5	Colorado	55.8

Source: USDA-ERS. The Farm Income Situation.
August 1971.

Table 11. Top states in percent of total personal income which arises from farming — 1970.

Rank			Percent of
U.S.	West	State	personal income
1	-	S. Dakota	16.98
2	1	IDAHO	12.03
3	_	lowa	11.28
4	2	Montana	10.47
5	-	Nebraska	10.25
6	35	Mississippi	9.29
7		N. Dakota	9.20
8	-	Arkansas	8.67
9	-	Kansas	6.28
10	3	Wyoming	6.01
11	4	N. Mexico	5.24
12	-	N. Carolina	4.94
13	-	Minnesota	4.76
14	-	Kentucky	4.62
15	-	Texas	4.07

Source: Appendix Table A1.

The percentage employment in Idaho farming is declining. Migration data suggest that Idaho's people tend to move from farming areas to areas with potential nonfarm employment.³ Table 13 shows that the percent of the labor force employed in farming has dropped by almost half in 20 years. The percentage of personal income from farming tends to be much more erratic over time since production and prices of agricultural products are rather variable. However, Idaho farming's income percentage is not falling as fast as its employment percentage. Participants in Idaho farming are receiving a more equitable portion of total personal income than was true in the past.

One other indication of the role of Idaho agriculture is found in a study by University of Idaho economist Gary Lynch. Lynch estimated Idaho gross state product — a measure of the real output of a state economy similar to the gross national product (GNP) figure for the national economy. The direct contribution of the state's farming sector was 14.82 percent or \$381.2 million out of a gross state product of \$2.572 billion, according to Lynch's estimates. Note that this is the direct contribution of farming — it does not include any of the secondary or indirect effects, nor does it include any of the effects of agricultural processing. Appendix Table A2 reproduces some of Lynch's results, showing the direct contribution of various industry groupings to 1969 Idaho gross state product.

Table 12. Top states in per capita personal income from farming — 1970.

Rank			Per capita
U.S.	West	State	income (dollars)
1		S. Dakota	537.5
2	-	lowa	415.9
3	1	IDAHO	389.9
4	-	Nebraksa	385.0
5	2	Montana	354.5
6	-	N. Dakota	275.1
7	-	Arkansas	242.3
8		Kansas	240.3
9	-	Mississippi	239.1
10	3	Wyoming	213.9
11	-	Minnesota	182.4
12	4	N. Mexico	164.4
13		N. Carolina	158.8
14	5	Colorado	146.4
15	-	Texas	144.1

Source: Appendix Table A1.

These figures on receipts, income, employment, and gross state product give a picture of the role played by farming in Idaho. Idaho plays an important part in the U.S. output of a farm commodities, but only a few. More importantly, however, Idaho is among those states whose people depend most heavily on farming for their livelihood. While dependence on farming is likely to diminish as the state's economy matures (and develops more services and industry) farming will remain a cornerstone of the state's economy for many years.

Table 13. Idaho farming's portion of personal income and employment.

	(7	
Year	% of civilian labor force employed in farming	% of total personal income arising from farming
1950	30.29	***
1955	26.64	16.09
1960	23.41	
1961		11.73
1962		
1963	777	12.37
1964		
1965	18.72	15.06
1966	17.56	11.97
1967	17.20	12.00
1968	16.72	10.07
1969	16.01	12.74
1970	15.33	12.03

Source:

Nybroten, N. 1971. Idaho Statistical Abstract-1971. Univ. of Idaho, Bureau of Business and Economic Research.

U.S. Dept. of Agriculture. Agricultural Statistics (from various volumes 1957-1972).

³ Hamilton, Joel. 1971. Idaho Population: Changes, Density and Migration. Idaho Business and Economic Review. Univ. of Idaho Bureau of Business and Economic Research.

⁴ Lynch, Gary. 1971. Estimating Idaho and Regional Gross Product. Idaho Business and Economic Review. Univ. of Idaho Bureau of Business and Economic Research.

Food Processing — A Vital Part of Idaho's Agriculture

Agricultural production is important to Idaho — but it is only a part of the total picture. Little or no agricultural output is produced, or reaches the consumer, without some other agriculture-related businesses getting into the act. The production and food processing functions are so intimately related in Idaho that we are justified in taking production and processing together when we talk of Idaho agriculture.

Value addeds in the manufacture of food and kindred products totaled \$168.6 million for Idaho in 1969 (see appendix Table A4). Value added in all Idaho manufacturing was \$577.2 million for that year. The \$168.6 million value added in food processing ranked only 34th among the 50 states. However, there is not that much other manufacturing going on in Idaho either. Value added from food processing was 29.21 percent of all manufacturing value added. In Table 14, this percentage ranks Idaho 6th - high among states whose manufacturing depends most heavily on food processing. The importance of food manufacturing to Idaho is confirmed in Table 15. Here Idaho ranks 8th nationally and 2nd in the West in per capita value added from the manufacture of food and kindred products.6

Employment data also indicates the status of food processing. Over one-third of all Idaho manufacturing employment was in the food and kindred product sectors in 1969 (appendix Table A4). This high percentage placed Idaho 5th nationally in that respect. Appendix Table A2 shows that food processing accounted for about 5 percent of total civilian employment in 1969. Note that farming and food processing together accounted for 20.32 percent — over one-fifth of total Idaho civilian employment.

Lynch's work on estimating gross state product is not sufficiently detailed to separate the direct contribution of food processing from all other manufacturing. He does estimate that all manufacturing contributed \$442.5 million or 17.2 percent of gross state product in 1969 (appendix Table A3). Since 29.21 percent of

manufacturing value added came from food processing, then \$442.5 million times 29.21 percent — or \$129.2 million — is a "ballpark" estimate for the direct contribution of food processing to Idaho gross state product. If Idaho agriculture is thought of as the sum of farming and food processing, then the direct contribution of Idaho agriculture is \$381.2 million plus \$129.2 million or \$510.4 million. This amounts to 19.84 percent — one-fifth of Idaho gross state product coming directly from agriculture.

Table 14. Top states in percent of value added from manufacture of food and kindred products.

Rank		Charles	Percent of
U.S.	West	State	total value added
1	1	Hawaii	57.61
2	-	S. Dakota	54.99
3	-	N. Dakota	37.65
4	2	Alaska	36.25
5	-	Nebraska	35.48
6	3	IDAHO	29.21
7	_	lowa	24.43
8	4	Colorado	21.00
9	5	N. Mexico	20.56
10	-	Florida	17.31
11	6	Montana	16.76
12	-	Minnesota	16.40
13	-	Arkansas	16.01
14	-	Kentucky	15.17
15	~	Maryland	15.03

Source: Appendix Table A4.

Table 15. Top states in per capita value added from manufacture of food and kindred products.

Ra	ank		Per capita
U.S.	West	State	value added (dollars)
1		Nebraska	338.71
2	-	lowa	322.51
3	-	Delaware	298.72
4	1	Hawaii	262.94
5	-	Illinois	255.99
6	-	Ohio	254.55
7	_	Wisconsin	246.31
8	2	IDAHO	242.94
9	-	Minnesota	213.04
10		Kentucky	209.16
11	3.	Missouri	188.83
12	-	New Jersey	182.35
13	3	Colorado	178.89
14		S. Dakota	176.28
15	9	Arkansas	168.69

Source: Appendix Table A4.

⁵ Value added is the value of the output produced less the value of the inputs required in production. Value added is algebraically equivalent to the sum of wages, salaries, rents, profits, dividends and taxes in the sector — and is similar to the gross state product concept mentioned earlier.

Note that "manufacture of food and kindred products" is not identical with "agricultural processing" although they mean nearly the same for Idaho. Some states, notably in the southeast, have large tobacco and textile industries. These are agricultural processing activities but are not included in the above statistics on manufacture of food and kindred products. Alaska's food processing industry includes extensive seafood processing which is not legitimately included as agricultural processing. These aberrations cause some problems in interpreting the above statistics, but shouldn't affect the conclusion that Idaho is among those states which depend most heavily on food processing.

How does agriculture compare to some of the other industries for which Idaho is noted — for example, forestry and mining? Lynch estimated that mining contributed \$80.6 million or 3.13 percent of gross state product (appendix Table A3). Mining employed 1.15 percent of Idaho's civilian labor force in 1970 (appendix Table A2). Considering the reputation of the Idaho mining industry, it is rather surprising to find that Idaho per capita mineral production is only \$165.4 — placing Idaho 16th in the U.S. (appendix Table A7). Of course, data in this table includes petroleum and other fuel production. Idaho would rank higher in production of precious metals or phosphates — but the per capita production or income would still be quite small.

The role of forestry in Idaho is more impressive. Manufacture of lumber and wood products (logging camps and contractors and sawmills, etc.) accounted for \$150 million of value added in 1969 (appendix Tables A5 and A6). This is 25.99 percent — over one-quarter of total manufacturing value added. This is the second highest in the U.S., exceeded only by Montana's 29.35 percent. Although only 14th in total value added from lumber and wood products, Idaho is among those states who depend most heavily on this industry. The \$210.38 in per capita value added from this source is extremely important to the people of Idaho — yet less important than the impact of agriculture.

These statistics do confirm that Idaho is extremely dependent on natural resource-based industries. Idaho's economy depends on resources of soil, forests and minerals much more than do most other states — and from those, the production of Idaho's agricultural soil is clearly dominant.

Measuring the Total Dependence of Idaho on Agriculture

Direct measures of agriculture's importance are quite easy to find. The earlier statement that agricultural production and food processing account directly for one-fifth of Idaho gross state product is a measure of this type. Such measures, however, underestimate the full economic importance of agriculture to the state.

The various sectors of a regional economy are closely interrelated. Farmers and ranchers buy supplies and services such as fertilizer, chemicals, feed, insurance, and machinery from various other sectors of the economy. With the income they make, they buy consumer items such as food, clothing, automobiles, housing, and recreation. This first round of spending stimulates even further effects since the makers of fertilizer, feed, machinery, housing and recreation must also buy inputs to satisfy the farmers' demands. In his turn, the maker of fertilizer, machinery, or clothing also receives income which he spends on the purchase of consumer goods.

We might try to trace the impact of agriculture through the economy in this way. However, the web of interrelationships is very complex. It is a frustrating and confusing task to measure the third, fourth, and fifth effects of a dollar spent by an Idaho rancher.

Input-output multiplier analysis is a method for obtaining the same answers as one would get from the above method. There are proposals to undertake a comprehensive input-output program in Idaho. However, the completion of such a study remains in the indefinite future.

Most empirical input-output studies have concluded that productive activity yielding \$1 in agricultural income will in addition stimulate between \$1 and \$2 income in other industries. The input-output results for Idaho are likely to fall somewhere within this range — between \$2 and \$3 in total income depending on each dollar of farm income. So until an Idaho study gives better results, we can use 2 and 3 as lower and upper bounds for a multiplier for Idaho agriculture.

If \$510.4 million of gross state product comes directly from agriculture, a multiplier of 2 would mean that \$1,020.8 million or 39.69 percent of Idaho gross state product depends on agriculture. If the multiplier is 3, then \$1,531.2 million or 59.53 percent depends directly and indirectly on agriculture. Thus, an educated guess is that between two-fifths and three-fifths of the Idaho economy depends in some way on agriculture.

We can easily conclude that agriculture, because of its many interrelationships with other industries, is extremely important to the state's economy. Figures such as the above must be interpreted carefully, however. Saying that one industry is important does not imply that any other industry is unimportant. A comparison of Idaho's dependence on agriculture to the state's dependence on other industries must wait until a comprehensive input-output model for Idaho has been completed.

Hamilton, Joel R. 1971. An Idaho Input-Output Program. Univ. of Idaho, Dept. of Agri. Economics, Series No. 101.

Table Al: Measures of the Importance of Farming in the 50 States

	Cash Receipts from Farm Marketing-1970		of Farming Population		Per Capit	Farm	s Total Per Income		Personal from Far 1970	ming"	Percent of Personal Arising	Income from	Per Capita Income Farming	from
	\$ million	rank	thousand	rank	dollars	rank	\$ million	rank	\$ million	rank	Farming percent		dollars	rank
United States	49,231.2		203,212		242.3	-	798,949	-	18,631	-	2.29	=	91.7	8
New England Maine New Hampshire Vermont Massachusetts Rhode Island Connecticut	828.2 254.4 54.4 163.1 168.6 20.9 166.8	37 48 44 42 49 43	11,842 992 738 1444 5,689 947 3,032	38 41 48 10 39 24	69.9 256.5 73.7 367.3 29.6 22.1 55.0	26 43 15 48 49 46	50,788 3,235 2,660 1,545 24,851 3,711 14,786	39 41 48 10 36 18	314 95 14 59 67 7	388 444 443 449	2.93 .61 3.81 .26 .18	26 43 19 48 49	26.5 95.8 19.0 132.9 11.8 7.4 24.1	26 45 20 48 49 43
Mid Atlantic New York New Jersey Pennsylvania	2,407.2 1,117.3 249.8 1,040.1	16 38 19	37,199 18,237 7,168 11,794	2 8 3	64.7 61.3 34.8 88.2	45 47 42	166,525 87,111 33,085 46,329	284	876 397 95 384	18 39 19	.52 .45 .28 .82	46 47 42	23.5 21.8 13.3 32.6	144 147 142
E. N. Central Ohio Indiana Illinois Michigan Wisconsin	8,081.2 1,323.5 1,552.6 2,699.6 895.h 1,610.1	12 10 14 23 8	40,252 10,652 5,194 11,114 8,875 4,418	- 6 11 5 7	200.8 124.2 298.9 242.9 100.9 364.4	39 20 28 40	164,667 42,382 19,679 50,131 36,124 16,351	- 5 11 3 7 16	2,582 141 500 699 317 625	17 135 27	1.56 1.04 2.52 1.39 0.88 3.82	39 29 38 41	64.1 41.4 96.3 62.9 35.7 141.5	39 25 37 41
W.N. Central Minnesota Lowa Missouri N. Dakota S. Dakota Nebraska Kansas	12,988.8 2,015.8 3,929.7 1,560.2 681.3 1,011.9 2,015.9 1,773.9	6297057	16,319 3,805 2,825 4,677 618 666 1,483 2,247	19535458 1458	795.9 529.8 1,391.0 333.6 1,102.4 1,519.4 1,359.3 789.5	11 28 18 41 37	60,471 14,580 10,418 17,350 1,848 2,108 5,570 8,598	19 23 12 47 46 33 26	4,154 694 1,175 646 170 358 571 540	-6 3 7 34 20 10	6.87 4.76 11.28 3.72 9.20 16.98 10.25 6.28	13 20 7 15 9	254.5 182.4 415.9 138.1 275.1 537.5 340.3	11 22 188 66 11 148
S. Atlantic Deleware Maryland Virginia W. Virginia N. Carolina S. Carolina Georgia Plorida	5,646.6 147.3 393.6 596.5 111.1 1,543.9 442.0 1,144.6 1,267.6	45 36 31 46 11 35 13	30,671 548 3,922 4,648 1,744 5,082 2,591 4,590 6,789	46 18 14 34 12 26 15	184.1 268.8 100.4 128.3 63.7 303.8 170.6 249.4 186.7	-24 41 38 44 19 36 27 33	105,488 2,383 16,789 16,827 5,259 16,331 7,616 15,345 24,938	- 42 14 13 35 15 30 17	2,588 47 148 251 27 807 476 628	- 5699 47 42 42 48	2.45 1.97 .88 1.49 .51 4.94 2.68 3.10 2.52	- 33 40 36 44 12 27 23 30	81.14 85.8 37.7 51.5 158.8 78.7 103.7	34386 134339
E.S. Central Kentucky Tennessee Alabama Mississippi	3,282.0 921.8 706.8 741.6 911.8	21 26 25 22	12,803 3,219 3,924 3,444 2,217	23 17 21 30	256.3 286.4 180.1 215.3 411.3	21 34 31 14	37,567 9,901 12,128 9,832 5,706	24 21 25 32	1,642 457 318 337 530	16 26 21 12	4.37 4.62 2.62 3.43 9.29	14 28 21 6	128.3 142.0 81.0 97.9 239.1	16 33 24
W.S. Central Arkansas Louisiana Oklahoma Texas	5,917.3 1,073.4 648.6 1,058.4 3,136.9	17 29 18 3	19,321 1,923 3,641 2,559 11,197	32 20 27 4	306.3 558.2 178.1 413.6 280.2	9 35 13 22	64,665 5,376 11,130 8,488 39,671	34 22 27 6	2,754 466 337 337 1,614	15222	4.26 8.67 3.03 3.97 4.07	8 24 16 15	142.5 242.3 92.6 131.7 144.1	- 7 28 21 15
Mountain Montana IDAHO Wyoming Colorado N. Mexico Arizona Utah Nevada	4,053.4 559.0 664.1 1,181.5 460.6 647.3 225.4 80.5	33 38 39 34 34 34 47	8,282 694 713 332 2,207 1,016 1,771 1,059 489	43 449 449 37 336 47	489.4 805.5 931.3 708.1 535.3 453.3 365.5 212.8 164.6	6 58 10 12 16 32 37	29,594 2,319 2,310 1,181 8,468 3,185 6,418 3,416 2,267	-44408 44584 43385	1,392 2146 278 71 323 167 208 67 32	308 425 31 426	4.70 10.47 12.03 6.01 3.81 5.24 3.24 1.96	14 22 10 18 11 22 34 37	168.1 354.5 389.9 213.9 146.4 164.4 117.4 63.3	5 3 10 14 12 22 36 35
Pacific Washington Oregon California Alaska Hawaii	6,026.4 792.6 561.9 4,456.1 4.3 211.5	24 32 1 50 41	26,523 3,409 2,091 19,953 300 769	22 31 50 40	227.2 232.5 268.7 223.3 14.3 275.0	29500503	115,118 13,671 7,777 88,825 1,400 3,445	20 29 1 49 37	2,328 324 174 1,725 1	24 33 50 37	2.02 2.37 2.24 1.94 .07 3.02	31 32 35 50 25	87.8 95.0 83.2 86.5 3.3 135.2	27 32 30 50

Sources: U.S. Department of Agriculture, Economic Research Service, The Farm Income Situation, Aug. 1971.
U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States1971.
U.S. Department of Commerce, Office of Business Economics, Survey of Current Business, Aug. 1971.

"Net income of farm proprietors, farm wages and "other" labor income, less personal contributions under the old-age, survivors, disability and health insurance program.

Table A2. Labor Force and Average Employment in Idaho by Industry-1970

Sector	Employment in 1970 (thousand)	As percent of 1970 total	
Civilian labor force	304.6	100.00	
Unemployment	15.4	5.06	
Agriculture (farming)	46.7	15.33	
Non Ag. self employ. & domestic	34.7	11.39	
Lumber & wood prod. mfg.	12.8	4.20	
Stone, clay & glass prod. mfg.	1.1	0.36	
Primary metal mfg.	1.3	0.43	
Other durable goods mfg.	.9	0.30	
Food & kindred prod. mfg.	15.2	4.99	13.23
Paper & allied prod. mfg.	1.1	0.36	
Printing & publishing	1.7	0.56	
Chem. & allied prod. mfg.	1.5	0.49	
Other nondurable mfg.	. 5	0.16	
Mining	3.5	1.15	
Contract construction	10.9	3.58	
Interstate railroad	3.5	1.15	
Transp. exc. interstate railroad	4.8	1.58	
Communications	3.4	1.12	
Elec., gas, & sanitary service	2.6	0.85	55.06
Wholesale trade	9.9	3.25	
Retail trade	39.3	12.90	
Finance, insurance, & real estate	e 8.0	2.63	
Service & miscellaneous	32.4	10.64	
Federal government	10.0	3.28	
State & local govt. (incl. educ.)	39.1	12.84	

Table A3. Idaho Gross State Product for 1969

Cooter	Gross State Product				
Sector	(\$ million)	(percent)			
Mining	80.6	3.13			
Construction	134.5	5.23			
Manufacturing	442.5	17.20			
Trade	458.2	17.81			
Finance, insurance & real estate	262.6	10.21			
Transp., commun. & pub. util.	222.7	8.66			
Services & other	286.6	11.15			
Government	303.3	11.79			
Farming	381.2	14.82			
Idaho Gross State Product	2,572.4	100.00			

Source: Lynch, Gary A., "Estimating Idaho and Regional Gross Product."

Idaho Business and Economic Review, Moscow, June 1971.

	Value Added Manufactur		Value Added from Manufacture of Food and Kindred Products-1969	Percent of V in Manuf. Arises in and Kindred Sector	which the Food	Per Capita V from Manuf. Kindred Pro (1970 Prod	of Food and ducts-1969	Total Emplo	yment in ng-1969	Employment in Manufacture of Food and Kindred Products-1969	Employr Food at	Manufacturing ment in the nd Kindred mector-1969
T. J. J. O.	(\$ million)	rank	(\$ million) rank	(\$ million)	rank	(dollars)	rank	(thousand)	rank	(thousand) rank		
United States	305,907.9		30,120.4	9.85		148.22		20,029.7		1,656.2	8.27	
New England Maine Maine New Hampshire Vermont Massachusetts Rhode Island Connecticut	21,005.4 1,225.9 1,006.8 555.5 9,572.4 1,472.6 7,172.2	37 40 42 10 34 13	1,095.7 128.9 47.2 46 32.4 583.4 76.8 227.0 30	5.22 10.51 14.69 5.83 6.09 5.22 3.16	30 47 43 46 50	92.53 129.94 63.96 72.97 102.55 81.10 74.87	26 44 43 32 39 41	1,557.7 110.9 94.4 42.6 709.7 125.1 475.1	34 36 41 10 33	68.0 9.8 36 3.1 46 1.9 48 35.8 18 52.3 422	4.37 8.84 3.28 4.46 5.04 4.24 2.55	345 445 447 450
Mid Atlantic New York New Jersey Pennsylvania	64,882.5 28,384.0 14,362.1 22,136.5	1 7 5	5,221.4 2,179.6 4 1,307.1 7 1,734.7 5	8.05 7.68 9.10 7.84	39 35 38	140.36 119.51 182.35 147.08	30 12 21	4,402.7 1,939.7 890.0 1,573.0	1 7 3	274.6 107.8 4 58.2 7 108.7 3	6.24 5.56 6.54	41 38
E. N. Central Ohio Indiana Illinois Michigan Wisconsin	87,051.6 25,275.0 11,857.4 22,642.0 20,253.0 8,106.6	39462	7,307.3 2,711.5 3 810.8 12 2,845.1 2 1,079.0 9 1,088.2 8	8.39 10.73 6.84 12.57 5.33 13.42	28 41 21 45	181.54 254.55 156.10 255.59 211.58 246.31	6 20 5 29	5,313.6 1,468.9 743.8 1,408.0 1,169.0 523.9	1481562	350.2 79.8 42.1 15 119.4 22 50.8 9	6.91 6.54 6.54 6.54 6.43 8.43 4.43	37 42 40 33 46 23
W. N. Central Minnesota Lowa Missouri N. Dakota S. Dakota Nebraska Kansas	19,668.8 4,942.7 3,729.9 6,766.1 144.5 213.5 1,415.6 2,456.4	18 24 14 14 46 38	3,548.0 810.6 13 911.1 10 878.5 11 54.4 44 117.4 38 502.3 20 273.8 29	18.04 16.44 24.49 12.98 37.65 54.99 35.48	12 7 20 3 25 27	217.42 213.04 322.51 188.83 88.03 176.28 338.71	9 2 11 37 14 1 28	1,260.9 323.3 218.8 466.3 8.3 16.6 84.0	19 25 14 47 46 38	202.4 49.2 11 50.3 10 48.1 12 3.2 45 7.7 38 25.2 23	11.09 16.05 15.22 22.99 10.32 38.55 46.39 30.00	1475426
S. Atlantic Delaware Maryland Virginia W. Virginia N. Carolina S. Carolina Georgia Florida	34,470.1 1,151.6 4,188.9 4,816.2 2,288.9 8,186.1 3,672.1 5,413.4 4,398.5	38 23 19 29 11 25 16 21	3,409.7 163.7 35 629.4 17 445.2 24 89.4 41 475.8 23 154.2 36 641.5 16 753.6 14	9.98 14.22 15.03 9.24 3.91 5.81 4.20 11.85 17.31	177 15349 448 448 240	111.17 298.72 160.48 95.78 51.26 93.62 59.51 139.76	18 33 47 34 45 23 23	2,673.3 76.4 289.4 360.4 128.1 691.0 338.1 453.5	39 22 17 32 11 18 16 20	234.0 8.8 37 38.2 17 32.5 20 6.7 41 39.9 16 13.6 32 45.9 13	13.02 8.75 11.52 13.20 9.02 5.23 5.77 4.02 10.11 11.32	19 22 18 31 43 48 26
E. S. Central Kentucky Tennessee Alabama Mississippi	16,647.9 4,438.7 5,982.1 4,315.1 1,912.0	20 15 22 31	1,689.7 673.3 15 535.3 19 304.4 28 176.7 33	10.15 15.17 8.95 7.05 9.24	11 ₄ 36 40 33	131.98 209.16 136.42 88.39 79.70	10 24 36 40	1,185.1 244.0 456.3 309.8 174.9	24 15 21 26	95.6 23.2 25 32.8 19 23.9 24 15.8 30	8.07 9.51 7.19 7.71 9.03	29 36 314 30
W. S. Central Arkansas Louisiana Oklahoma Texas	19,794.4 2,025.9 3,250.3 1,595.4 12,922.0	30 26 33 8	2,360.5 32h.4 27 476.9 22 187.8 32 1,371.4 6	11.93 16.01 14.67 11.77 10.61	13 16 25 29	122.17 168.69 130.98 73.39 122.48	15 25 45 27	1,191.9 161.1 173.3 129.2 728.3	29 28 31	143.5 22.2 26 27.7 21 15.1 31 78.5 6	12.04 13.78 15.98 11.69	17 13 21 24
Mountain Montana IDAHO Wyoming Colorado N. Mexico Arizona Utah Nevada	5,614.1 359.1 577.2 98.7 1,880.4 207.2 1,275.1 1,054.6 161.8	43 41 50 22 53 45 33 47	902.1 60.2 43 168.6 31 13.7 50 391.8 25 42.6 47 105.1 39 98.1 10	16.07 16.76 29.21 13.88 21.00 20.56 8.24 9.33	11 6 18 9 37 32 26	108.92 86.74 242.94 41.27 178.89 41.93 59.35 92.92 38.04	389938650 4938650	345.2 22.1 39.2 5.9 110.6 18.4 91.2 50.0	4420535708 470535708	56.1 3.6 43 13.5 33 1.1 50 28 19.0 28 40 7.5 39	16.25 16.29 34.44 18.04 17.18 18.48 7.46 15.00	125000000000000000000000000000000000000
Pacific Washington Oregon California Alaska Hawaii	35,247.3 5,132.8 2,612.8 27,016.9 133.8 351.0	17 27 2 49 44	4,398.7 500.9 21 326.4 26 3,320.7 1 48.5 45 202.2 31	12.48 9.76 12.49 12.29 36.25 57.61	31 22 23	165.84 146.93 156.10 166.43 161.67 262.94	22 19 16 17	2,108.3 272.8 173.5 1,631.8 6.3 23.9	23 27 2 49 43	1.3 49 227.8 27.5 22 21.7 27 162.7 1 2.9 47 13.1 34	16.46 10.80 10.08 12.51 997 46.03 54.81	27 20 28 3

Table A5. Relative Size of Manufacturing Sectors in Idaho-1969

SIC Number	Sector Name	Employm sector		Value added in sector-1969		
	Dector name	(thousand)	(percent)	(\$ million)	(percent	
_	Idaho total	39.2	100.00	577.2	100.00	
20	Food & kindred products	13.5	34.44	168.6	29.21	
203	Canned, cured & frozen foods	8.0	20.41	90.5	15.68	
2037	Frozen fruits & vegetables	4.9	12.50	50.8	8.80	
24	Lumber & wood products	12.0	30.61	150.0	25.99	
2411	Logging camps & contractors	3.1	7.91	31.3	5.42	
242	Saw & planing mills	6.9	17.60	91.8	15.90	
27	Printing & publishing	2.1	5.36	22.6	3.92	
28	Chem. & allied products	3.4	8.67	108.0	18.71	
34	Fabricated metal products	0.8	2.04	11.1	1.92	
35	Machinery (exc. electrical)	1.0	2.55	8.1	1.40	
39	Misc. manufacturing	0.3	0.77	2.8	0.49	
-	Administrative units for above					
	sectors	1.2	3.06			

Source: U.S. Dept. of Commerce, Bureau of the Census, <u>Annual Survey of Manufacturers-1969</u>, 1971.

Table A6. Importance of Lumber and Wood Product Manufacture in Selected States-1969

	Value Adde	d in	Value Added	as a	Value Added Per Capita From Lumber and Wood Prod.		
	Mfg. of Lu	mber	Percent of	Total			
State	and Wood	Prod.	Mfg. Value	Added			
	\$ million	rank	percent	rank	dollars	rank	
Maine	111.4	22	9.08	7	112.29	4	
New Hampshire	42.7	31	4.24	12	57.85	10	
Vermont	26.4	35	4.75	10	59.45	9	
New York	176.6	7	0.62	40	9.68	40	
Pennsylvania	168.4	10	0.76	38	14.27	31	
Ohio	154.4	12	0.61	41	14.49	29	
Wisconsin	149.0	15	1.84	25	33.72	17	
Virginia	205.0	4	4.26	11	44.10	12	
N. Carolina	182.6	6	2.23	22	35.93	16	
S. Carolina	104.1	24	2.83	17	40.17	13	
Georgia	152.2	13	2.81	19	33.15	18	
Alabama	165.4	11	3.83	13	48.02	11	
Mississippi	227.1	3	11.88	4	102.43	5	
Arkansas	187.3	5	9.25	6	97.39	6	
Louisiana	142.0	16	4.37	9	39.00	14	
Texas	176.2	8	1.36	29	15.73	27	
Montana	105.4	23	29.35	1	151.87	3	
IDAHO	150.0	14	25.99	2	210.38	1	
Arizona	47.5	29	3.73	14	26.82	21	
Nevada	5.5	45	3.40	15	11.24	35	
Washington	558.2	2	10.88	5	163.74	2	
Oregon	174.7	9	6.69	8	83.54	7	
California	758.4	1	2.81	18	38.00	15	
Alaska	18.5	38	13.83	3	61.66	8	

Source: U.S. Dept. of Commerce, Bureau of the Census, <u>Annual Survey of Manufactures-1969</u>, 1971.

Table A7. Value of Mineral Production in Selected States-1969 (including petroleum and other fuel production)

State	Total Value Production-		Per Capita Value of Production-1969 (1970 population)			
	(\$ million)	rank	(dollars)	rank		
New York	302	20	16.5	44		
Pennsylvania	976	5	82.7	21		
Ohio	581	14	54.5	29		
Illinois	660	10	59.3	28		
Michigan	668	9	75.2	24		
Minnesota	636	12	167.1	14		
Missouri	367	18	78.4	23		
N. Dakota	91	33	147.2	17		
Kansas	578	15	257.2	12		
Virginia	318	19	68.4	26		
Virginia	948	6	543.5	5		
Kentucky	591	13	183.5	13		
Mississippi	243	25	109.6	18		
Arkansas	208	27	108.1	19		
Louisiana	4,685	2	1,286.7	2		
Oklahoma	1,091	4	426.3	9		
exas	5,770	1	515.3	6		
Montana	283	23	407.7	10		
DAHO	118	32	165.4	16		
Vyoming	647	11	1,948.7	1		
Colorado	368	17	166.7	15		
New Mexico	936	7	921.2	3		
rizona	859	8	485.0	8		
Jtah Tah	543	16	512.7	7		
levada	168	30	343.5	11		
California	1,851	3	92.7	20		
laska	258	24	860.0	4		

Source: U.S. Dept. of Commerce, Bureau of the Census, <u>Statistical Abstract of</u> the United States-1971.