ALTERNATIVE U.S. AGRICULTURAL POLICIES IMPLICATIONS FOR IDAHO AGRICULTURE

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In the late 1800's, Idaho's economy was devoted mostly to mining and livestock. Demand from the mines and the "free" forage on public lands encouraged large ranches and itinerant herds of cattle and sheep. Today, agriculture in Idaho has become one of the state's largest industries. It accounts for over 25 percent of Idaho's economic activity, directly and indirectly. At the turn of the century, agricultural production was devoted primarily to small grains, hay, cattle and sheep. Now, there are over 100 different crops grown in Idaho. Idaho's topography and climate varies considerably throughout the state allowing production of a variety of crops and livestock. As a result of different crops being grown, the degree of reliance on government programs and their importance to the agricultural and rural economy differs among counties.

Changes in agricultural policy are felt most noticeably in counties dependent on agriculture. Rowe (1988) identified 21 Idaho counties where farming and food processing account for 20 percent or more of total labor and proprietor income. In Idaho, as in most states, these counties tend to be the more remote rural areas, which do not have a diversified economic base or are regional trade centers with large ag processing/service sectors developed. The agriculturally dependent counties are shown by the shaded areas in Figure 1.

Improved information on agricultural issues and methods for analyzing impacts of policy changes for rural regions will improve the ability of decision makers to anticipate and deal with impacts of changes. The objectives of this paper are to assess the impacts of agricultural policy

alternatives on Idaho's agriculture and four substate regions.[1] A model of the Idaho agricultural sector was developed and linked with a national agricultural sector model maintained by the Food and Agricultural Policy Research Institute (FAPRI) at Iowa State University and the University of Missouri (Devados,1989). The data from the effort will also be used to present a descriptive profile of production agriculture in Idaho along with indicators of the relative reliance of Idaho on federal government programs.

Idaho Agriculture

A large portion of Idaho's 52.7 million acres, about 63 percent, is federal and state owned lands (Figure 2). Of the total land area, just over 17.3 million acres or 32.8 percent is privately owned land devoted to agricultural use. Actual private cropland harvested is 18 percent of the total state land base with the remaining 14.8 percent pasture and rangeland. Conservation reserve and agricultural set aside land are included in private crop land. Private land use in Idaho is 48% cropland, 8% woodland and 40% pasture and range land (Figure 3). Seventy three percent of the federal and state land in Idaho is used for grazing. Since cattle and calves are the single largest source of cash receipts from marketings, the use of public range and forest land is an integral part of Idaho's agriculture.

The climatic situation in Idaho lends itself to a diversity of agricultural production from one part of the state to another. Northern Idaho (Crop Reporting District 1 in Figure 4), that part of the state north of the Salmon River, is moderately influenced by the Pacific Ocean and receives upwards of 20 inches of annual precipitation in agricultural areas. This makes Northern Idaho very suitable for dryland farming. The most common crops are winter wheat, barley, peas, lentils, winter rape and some grass seed. Cattle production dominates the livestock sector. As shown in Figure 1, Northern Idaho has only one agriculturally dependent county.

Central Idaho is forested with part of the area classified as wilderness. There are few roads and little agriculture in this part of the state.

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[1]Prepared as part of a study for the National Center for Food and Agricultural Policy, Resources for the Future and Northwest Area Foundation.

The southern part of Idaho lies mostly on the Snake River Plain, running from Wyoming to Oregon. The climate in Southern Idaho is semi-arid with most areas receiving less than 10 inches of annual precipitation. Elevation for agricultural production varies from slightly over 2000 feet above sea level near Weiser in Washington County, to almost 6000 feet in the areas of Fremont County in eastern Idaho. Due to a favorable growing season, plentiful water for irrigation, and fertile soils, Southern Idaho has the majority of Idaho's agriculture. In fact, 20 of Idaho's 21 agriculturally dependent counties are located in Southern and Eastern Idaho.

In Eastern Idaho (Crop Reporting District 9), at the higher elevations, the main crops that are commercially produced are seed potatoes, barley and hay. At lower elevations a greater variety of crops such as wheat and potatoes can be produced because of longer growing seasons. At greater distances from the river and more variable terrain, the cost of moving water forces producers to rely more on natural rainfall. Consequently, agricultural production is more water intensive on the Snake River plain and less water intensive on the hills and steppes leading down to the plain.

In southcentral Idaho (Crop Reporting District 8) near Twin Falls, the growing season increases permitting dry beans, garden seeds, and vegetable crops to join the traditional wheat, barley, hay, potatoes and sugar beets.

In southwestern Idaho (Crop Reporting District 7), still lower elevations and a longer growing season permit even more crops to be produced. Crops produced include those previously mentioned plus numerous seed crops, grapes, mint, onions, and fruit crops. Wheat, barley and corn are grown as rotation crops with the higher valued crops such as dry beans and alfalfa seed, onions, potatoes and sugar beets.

Government Program Dependency

Idaho agriculture rank among the top ten states in the country for production of 13 commodities. Idaho is the number one producer of both potatoes and barley. Idaho ranks third in sugarbeet, mint and hops production, and eighth for wheat. Idaho also ranks high in sheep, dairy, and cattle production. Six commodities in Idaho individually account for 5 percent or more of cash receipts from agriculture. Combined, the six commodities account for nearly 80 percent

of all cash receipts from agricultural production. They include cattle & calves (27.8%), potatoes (15.7%), milk (13.3%), wheat (9.7%), sugarbeets (7.3%), and barley (5.6%) (see Figure 5) (Idaho Ag Stat. 1989). The commodities that benefit directly from federal agricultural programs, (milk, wheat, barley and sugar beets) comprise 35.9% of cash receipts from sales. Many other crops and livestock enterprises are also affected indirectly by provisions of the farm program because of effects on enterprise profitability, enterprise choice and feed costs for livestock.

The regional differences in crop production means varying degrees of dependence on farm program support. Changes in farm program legislation could profoundly affect Idaho's rural areas particularly those dependent on agriculture. The nature and diversity of agricultural production in these economies and the limited existence of non-agricultural industries determines the level of this dependency.

Wheat and barley production in Idaho is split approximately 45 % dryland and 55 % irrigated farming. Producers in irrigated areas generally produce wheat and barley as well as other crops for rotation reasons, and thus are less likely to participate in government programs. Idaho's primary dryland areas include the northern counties where virtually all wheat and barley production is on dryland and upland areas and southeastern Idaho areas that are more distant from the water sources. Northern Idaho includes some of the most productive dryland areas in the U.S. with most counties averaging over 80 bushels per acre of wheat in 1987. In contrast, much of the dryland areas of southeastern Idaho is marginal with wheat yields below 20 bushels per acre in a wheat-summer fallow rotation. Most wheat and barley grown on the Snake River plain and in the southcentral and southwestern part of the state is irrigated. Growers in irrigated areas grow a diversity of more profitable non-program crops along with wheat and barley.

In the short growing season regions of eastern Idaho, these grains are the most profitable crops producers can grow. At higher elevations barley may be the only crop they can grow besides hay. These include areas where participation in the CRP program is the greatest. Five southeast Idaho counties (Bannock, Caribou, Franklin, Oneida and Power) have 25% or more of their cropland acres enrolled in the Conservation Reserve Program (CRP).

In northern Idaho, dry peas, lentils, winter rape, Austrian winter peas and blue grass for seed are all commonly grown crops that do not have specific programs to support them. Participation in CRP is considerably lower because producers have other alternatives. See Table 1 for a summary of commodity program and CRP participation rates by county in Idaho.

In recent years many rural areas have seen their economic stability increasingly linked to government policy through target prices, deficiency payments and payments for acres placed in the long term CRP. Through the date of the ninth sign-up period (February 90) for the CRP, six percent (791,914 acres) of Idaho's agricultural land had been enrolled in the program. Acreage idled under CRP has reduced the amount of agricultural activity in many rural communities by offering producers a rental payment in exchange for taking land out of production. This has made it increasingly difficult for rural businesses to continue operating because of lower sales volumes for farm inputs.

The set of maps illustrating base acres (Figures 6 and 7) and CRP participation rates (Figures 8 and 9) for Idaho's two major program crops (wheat and barley) for 1987, provide a good indication of regional participation in government programs. As indicated by the darker shaded areas on the maps, Idaho is very dependent on commodity programs for wheat and barley. Established 1990 base in Idaho's agriculturally dependent counties ranged from 6,319 acres in Butte County to over 183,678 acres in Power County.

Policy Alternatives For The 1990 Food And Agricultural Legislation

In this paper, three scenarios for 1990 farm legislation are considered. The first scenario, the baseline, continues the provisions of the current 1985 Farm Bill, and two policy options, which include provision for increased farmer flexibility on planting decisions are considered. The first option, full flexibility, is based on an early Administration proposal to allow farmers to plant other program or oilseed crops without losing program base history. The second option is the 25% flexibility/no-pay plan that allows a more limited 25% of base acres to be planted to other crops without loss of base history. This option includes a $5.50 per bushel marketing loan program for soybeans. (See Meyers 1990 for more details on these options and the FAPRI modeling system--Summarized in Table 2).

Impacts of Program Alternatives

Considerable pressure is mounting on Congress to make changes in farm legislation for the next legislative period. The federal deficit, the environment and human health and safety are the primary concerns driving this pressure. The three farm program scenarios summarized above are attempts to address these concerns.

The question is "how will each of these scenarios affect the profitability of agriculture in Idaho?" To answer this question, FAPRI has modeled the Idaho Agricultural sector and used this model to make simulations under each program alternative. The important thing to remember when analyzing projections is that nothing is "etched in stone." The importance of using these projections is to compare the relative impact of these three program scenarios on Idaho agriculture.

A useful concept to analyze producer well being is net farm income. Under the baseline legislation, the simulation suggests that net farm income for Idaho agriculture will decline from a projected $684 million in 1990-91 to $435 million in 1994-95. Simulations for the flexibility and flexibility/no-pay options project net farm income to decline from $653 million in 1990-91 to $543 and $535 million, respectively, in 1994-95 (Table 1). The model also projects that net cash income under the two flexibility scenarios would be lower than under the baseline in the early years of the legislation, but in the later years net cash income is projected to be higher under both alternatives (Figures 10 and 11). Note that under all scenarios, net farm income and net cash income declines over the legislative period. A key question is: "Are these projected changes in net farm income and net cash income between 1990 and 1995 resulting from the farm legislation or are they at least partially the result of other factors affecting the agricultural economy such as exchange rates, interest rates, cost of farm inputs/or subsidy programs of our competitors?"

The baseline simulation projects that gross receipts to Idaho agriculture will increase only slightly from $2.7 billion to $2.8 billion during the 1991-95 legislative period. Under both the flexibility and flexibility/no-pay options, gross receipts are projected to increase slightly more than the baseline from $2.7 to $2.9 billion over the period. Total cash receipts for the flexibility

options were projected to be less than 2% below the baseline in 1991 and over 4% above the baseline in 1994/95. In the last year of the legislation (1995/96), the simulation shows cash receipts 2 % higher than the baseline (Figure 12). In reality, we would expect more variation in revenue than this due to weather and crop conditions.

Note that Government program payments would be less than present levels under all three program options in Idaho (Table 2 and Figure 13). Also the three alternatives would result in similar outlay levels for government payments.

Implications of the 1990 Farm Bill Options

Wheat and Barley

Wheat and barley are the only crops where agricultural policy directly effects the price of the commodities and direct payments are made to producers as deficiency payments. As a result, these prices are very sensitive to legislation. The baseline projection is a freeze of 1990/91 support levels and target prices through 1995. The impacts of this option will be more severe on dryland producers because they are most dependent on wheat and barley programs. Production and acreage will likely remain stable because wheat, and in some cases barley, would still be the most profitable crops.

The flexibility option calls for a two year freeze on income and price supports through 1992, followed by a 2% annual reduction in target prices for the remainder of the legislative period. Although projected net farm income would be less than in the baseline scenario in the initial years of the legislation, it is projected to be near the present levels by the end of the program. This is explained by the reduction in target prices and later price improvements because of reduced supplies and continued demand growth.

The flexibility/no-pay option calls for a 3% annual reduction in target prices starting in 1991. As a result, net farm income under this option is projected to be lower than either the baseline or full flexibility scenarios in the second and third years. By the fourth and fifth year, however, net farm income under this option is projected to exceed that under the baseline option due to price strengthening in the market for similar reasons to the previous scenerio.

The impacts of the flexibility/no pay options would be most pronounced in the dryland regions of Idaho. Continued reduction in support levels coupled with increases in input costs would lower net farm incomes in regions where few alternatives to wheat and barley exist.

The economies of those areas will feel the effects of lower farm income, especially through the effects on agribusiness firms. Continued erosion of farm income will force growers to apply fewer production inputs and delay major capitol investment. This has implications for local agribusinesses which have already been plagued because of CRP enrollment.

Sugar Beets

Sugarbeets are one of Idaho's consistently profitable crops. They are grown in Southwestern and Southcentral Idaho and Bingham and Power counties of Southeastern Idaho and comprise 7.3% of cash receipts for agriculture.

The U.S. sugar program supports prices indirectly through quotas on sugar imports. This makes it a comparatively low cost program to the federal government but increases consumer prices for sugar and products made from sugar.

If U.S. sugar quotas are increased, then larger quantities of imports could result in declining prices and enterprise profitability. This could result in some land being shifted to potatoes and other crops. However, potato prices are also very sensitive to domestic supplies so actual adjustments would be difficult to estimate.

Dairy Products

Milk comprised 13.3% of producer cash receipts in 1987. Because dairy product prices are supported through government purchases to remove dry milk, cheese and butter from the market and strong controls exist to prevent imports undercutting the domestic dairy industry, it is difficult to estimate the exact impact of the dairy support program on dairy product prices.

A reduction in milk prices will reduce gross receipts and net income to dairymen. Declines in milk prices will result in continuation of regional shifts currently occurring. Federal commodity programs which reduce the cost of feed could counteract some reduction in milk price and prevent liquidation of a large number of dairy cows. There are no differences among the three scenarios for the dairy industry.

Conservation Reserve Program (CRP)

The CRP program is part of the 1985 Food and Agricultural Legislation designed to take highly erodible land out of production. Under the program, farmers agree to withdraw land from production for 10 years in exchange for an annual rental payment. Starting in 1986, bids were submitted by eligible farmers indicating the amount they would accept in annual payment to take their highly erodible croplands out of production. During the initial stages of CRP enrollment, areas of Idaho with marginal lands quickly moved to be included in the CRP. As figure 9 shows, several southeast Idaho counties have over 25% of their total cropland acreage enrolled in the CRP.

Impacts of the CRP have been particularly felt in Bannock, Caribou, Franklin, Oneida and Power counties of Southeastern Idaho because of the number of acres enrolled. Franklin, Oneida and Power counties are ag-dependent counties with over 25 % of the base acreage for commodity programs enrolled.

The positive impacts of the CRP, in Idaho as with many states, have accrued mostly to the recipients of the annual rental payments. From a broader perspective, taxpayers nationwide have also benefitted from the CRP through reduced farm program payments, water quality improvements, additional wildlife habitat and reduced supplies of surplus crops. The negative externalities have accrued to small farming communities in high CRP enrollment areas that are agriculturally dependent (Martin et. al.). The impacts of the CRP have been felt mostly by agricultural input suppliers and local businesses in these small communities.

It is unlikely that much additional land in Idaho would be moved into the CRP through future signups. However, if new categories are added making more land eligible, then expansion of CRP would be likely. The implications of this would be further drains on some Idaho community economies. Other counties in the state where CRP enrollment is high could also see adverse economic consequences depending on the nature and diversity of their economies. Table 1 gives a breakdown of all Idaho counties and their respective participation in CRP and farm commodity programs.

Summary

Idaho commodities covered directly by federal farm programs provide 37.4% of cash receipts from farm marketings. The most important of these products -- wheat, barley, sugarbeets, and milk provide 35.7 % of cash receipts. Other major sources of income to Idaho's farmers such as potatoes and cattle are not directly affected by commodity programs. As a result, the effects on farm income of various program alternatives is considerably less than might occur in other parts of the country. Program changes can have severe effects on individuals who are very dependent on a particular commodity program, such as wheat or barley growers. Fifty-seven percent of the wheat and barley acres are enrolled as base acres. However, in the dryland areas participation approaches 90 percent. These rates in the dryland areas will likely remain the same because there are few alternative crops to grow in those areas. Sugar and dairy are unaffected by the program simulations considered here.

A second important point for Idaho is that under all scenarios net farm income declines. The impact of the decline is expected to be most severe for those producers of crops that receive direct payments. For Idaho that means wheat, and feed grains. The end result would be continued financial pressure on Idaho's agricultural producers.

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Table 1: Enrollment in Wheat and Feed Grain Programs and CRP* in Idaho, 1990.

County Name	Wheat and Feed Grains % Total Farms	Wheat and Feed Grains % Total Cropland Acres	CRP % Total Farms	CRP % Total Cropland Acres
Ada	7.40	-	2.60	-
Adams	1.90	5.80	9.10	6.90
Bannock	28.00	48.00	35.00	26.00
Bearlake	33.00	32.00	42.00	20.00
Benewah	47.00	96.00	32.00	9.00
Bingham	22.00	-	4.00	-
Blaine	31.00	44.00	7.00	6.00
Boise	<1.00	<1.00	0.00	0.00
Bonner	<1.00	<1.00	5.20	5.60
Bonneville	21.40	45.20	19.50	15.40
Boundary	15.80	48.90	6.30	2.80
Butte	25.50	29.40	1.50	2.80
Camas	50.50	57.10	38.60	7.00
Canyon	10.10	21.50	<1.00	<1.00
Caribou	35.80	53.00	66.30	30.00
Cassia	21.70	41.00	20.00	14.00
Clark	13.80	-	40.00	-
Clearwater	40.00	56.00	12.10	5.40
Custer	3.70	4.40	2.80	1.70
Elmore	24.20	-	27.90	-
Franklin	26.00	52.30	46.00	24.70
Fremont	18.70	28.70	27.90	11.50
Gem	10.50	20.00	1.20	<1.00
Gooding	5.40	23.80	1.20	<1.00
Idaho	47.30	59.60	16.90	5.50
Jefferson	15.60	36.20	2.00	3.30
Jerome	14.30	33.70	<1.00	<1.00
Kootenai	14.80	59.50	11.90	6.30
Latah	74.00	84.00	44.00	9.70
Lemhi	0.00	0.00	<1.00	<1.00
Lewis	100.00	97.50	21.00	2.80
Lincoln	27.10	34.00	3.40	3.80
Madison	19.80	32.00	72.10	8.70
Minidoka	18.30	49.40	2.10	1.70
Nez Perce	84.80	88.60	15.50	2.10
Oneida	60.10	71.40	70.70	34.30
Owyhee	10.10	21.60	12.80	17.30
Payette	19.10	43.40	3.70	7.10
Power	61.20	97.30	70.10	34.30
Teton	18.70	36.80	26.00	13.20
Twin Falls	14.40	25.10	6.30	7.90
Valley	0.00	0.00	3.80	1.40
Washington	21.70	39.40	25.80	18.90

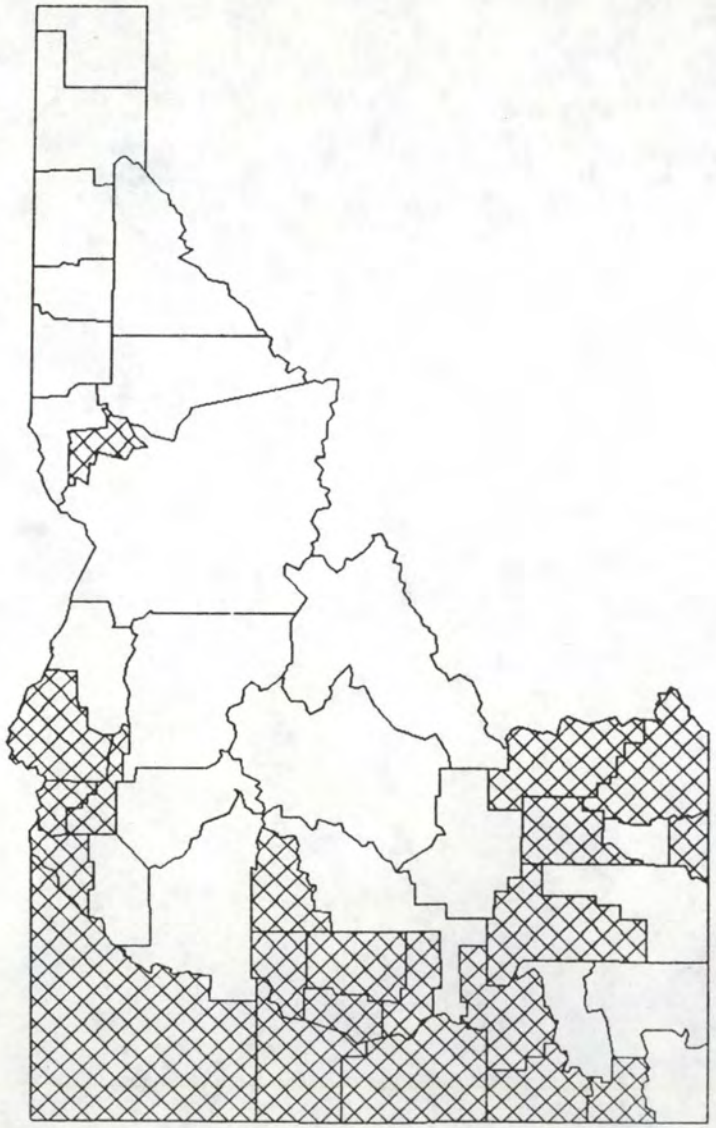
*Signups1-9

Table 2. Economic Effects of Baseline, Full Flexibility and Flexibility, No Pay Options for Idaho

Baseline	90/91	91/92	92/93	93/94	94/95
	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)
Gov't payments	52	76	80	72	74
Gross returns	2,717	2,704	2,727	2,716	2,787
Total prod. exp.	2,069	2,133	2,195	2,255	2,352
Net farm income	684	570	532	461	435
Full Flexibility					
Gov't payments	52	76	85	77	76
Gross returns	2,723	2,666	2,694	2,733	2,895
Total prod. exp.	2,069	2,133	2,195	2,255	2,352
Net farm income	653	532	500	478	543
25 % Flexibility, No Pay					
Gov't payments	52	76	79	75	73
Gross returns	2,723	2,678	2,690	2,728	2,887
Total prod. exp.	2,069	2,133	2,195	2,255	2,352
Net farm income	653	544	495	473	535

Figure 1. 1984 Agriculture Dependent Counties

20% Labor and Proprietor Income From Farming, Food Processing and Agricultural Services

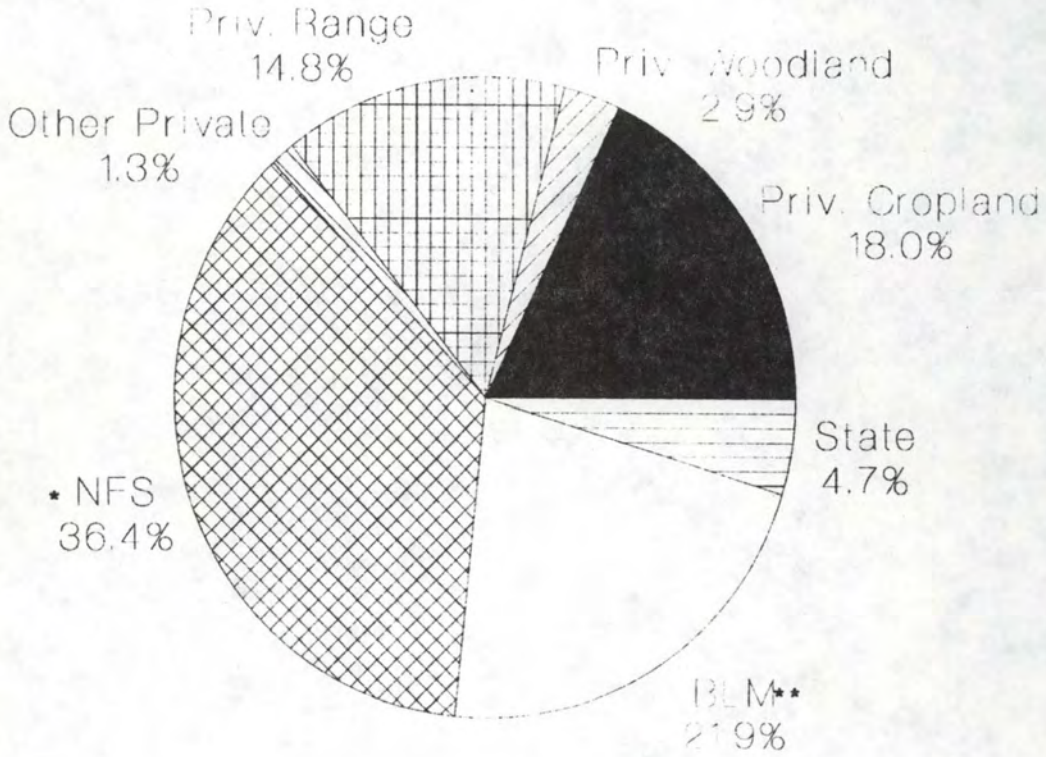


Legend

Other

Agricultural Dependent

Figure 2. Total Land Use In Idaho, 1987

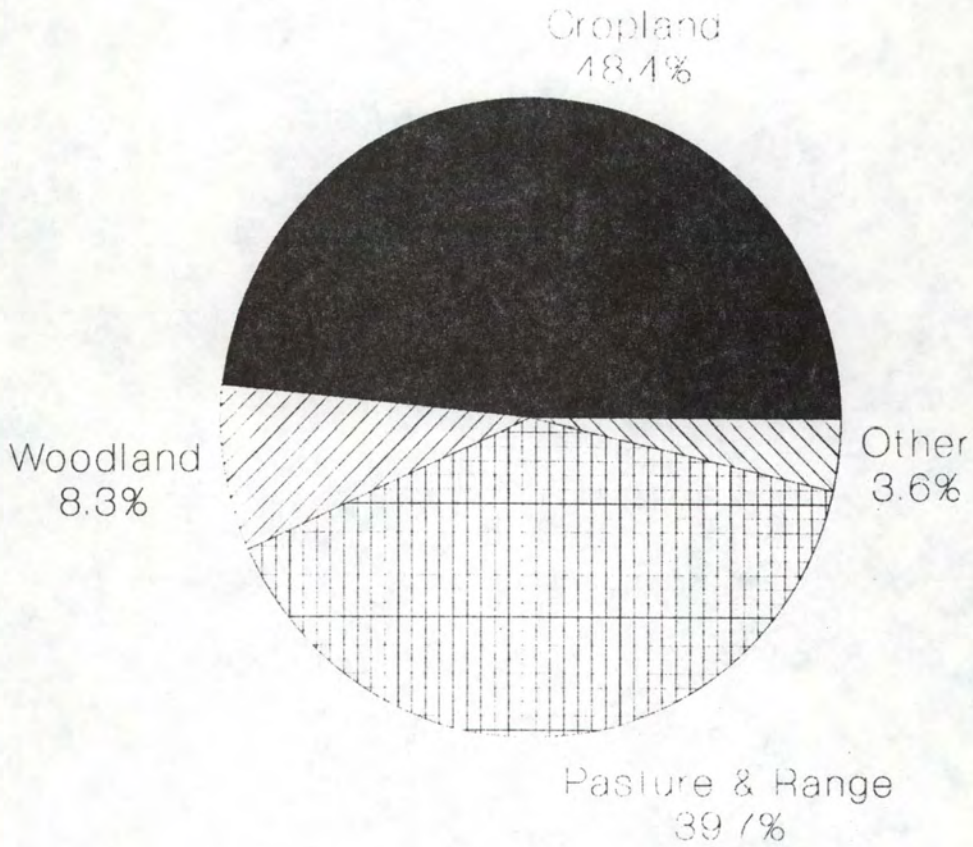


* National Forest Service

** Bureau of Land Management

Source: Agricultural Census

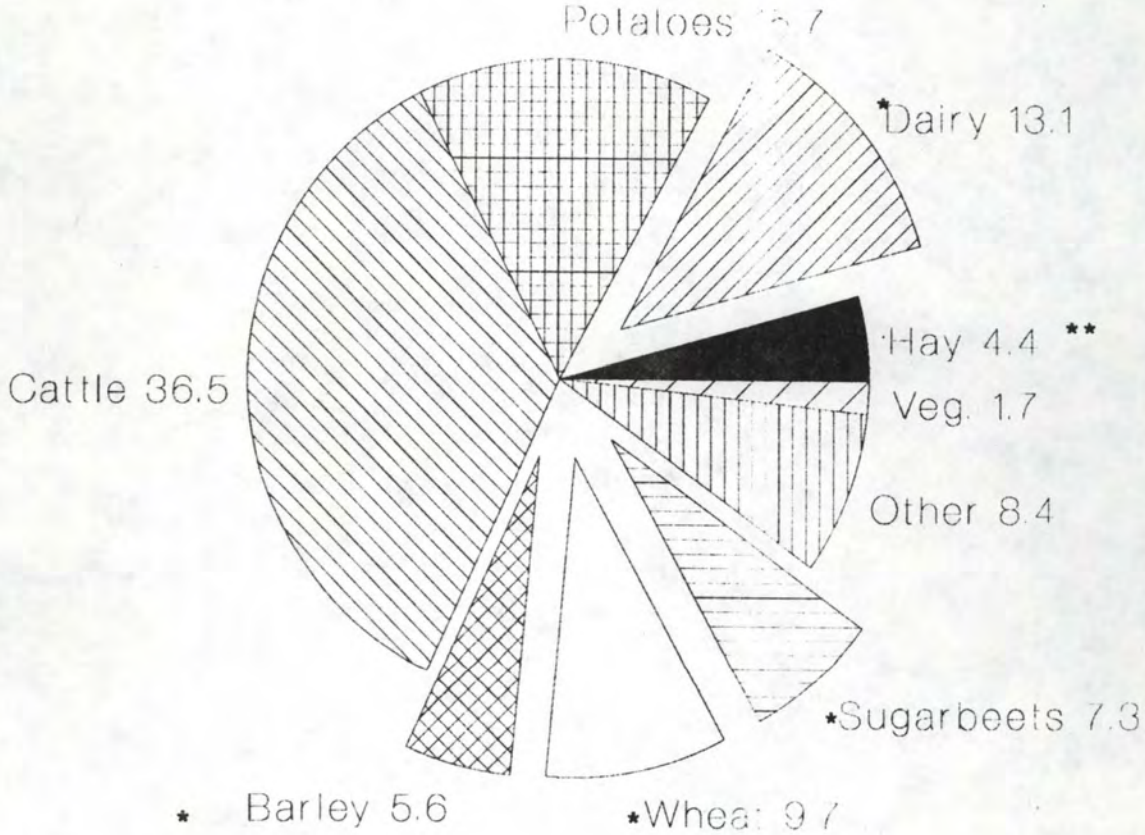
Figure 3. Private Land Use - Idaho, 1987



Source: 1987 Agricultural Census

Figure 4. Idaho Agricultural Statistics Districts

Figure 5. Cash Receipts From Selected Commodities As a % of Total in Idaho



* Govt. program commodities

** Also includes value of field seeds

Source: 1989 Idaho Agricultural Stat.

Figure 6. Wheat Base Established in Idaho Counties

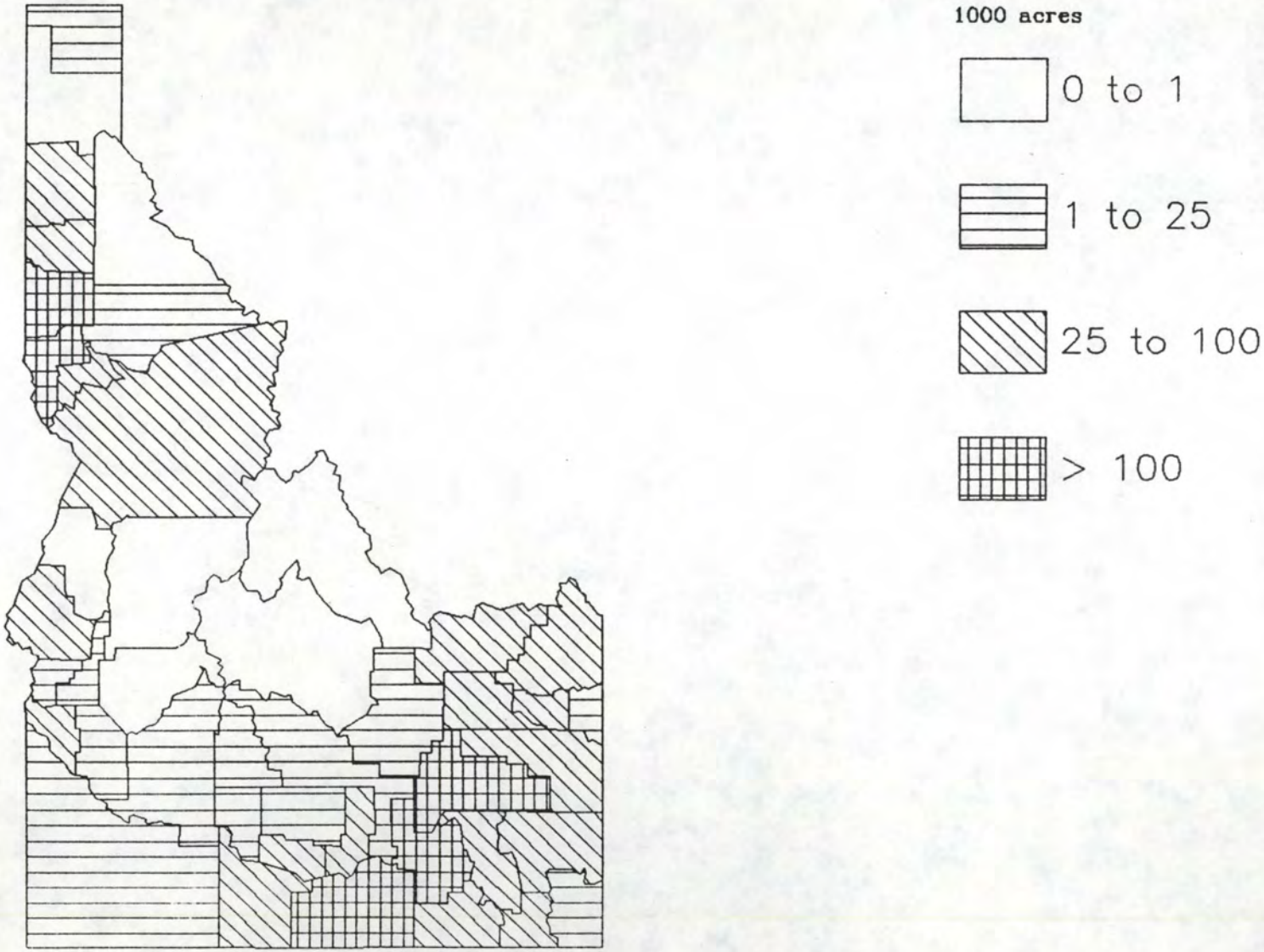


Figure 7. Barley Base Established in Idaho Counties

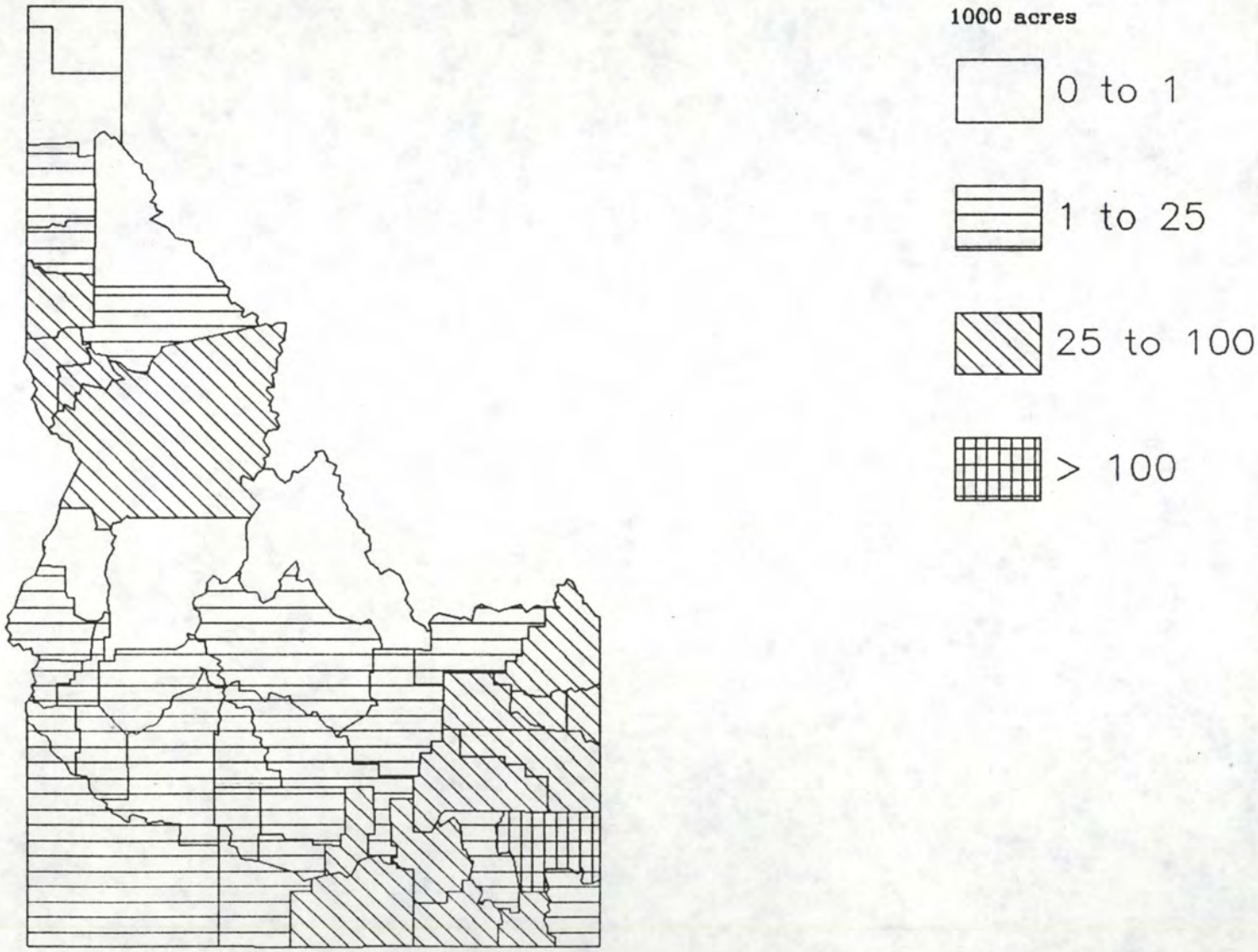


Figure 8. CRP Enrollment in Idaho Counties

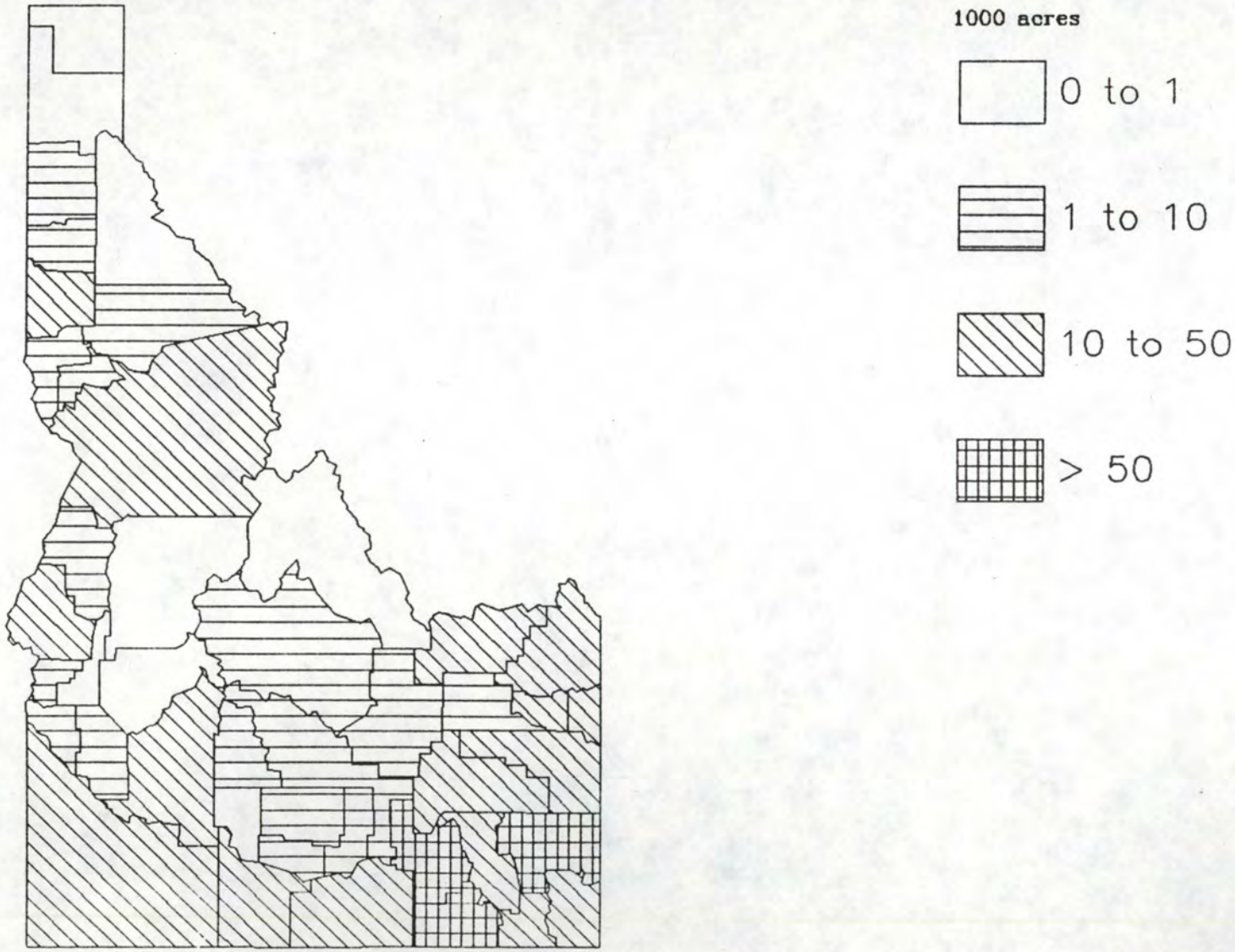


Figure 9. CRP Enrollment as a Percent of Total Cropland

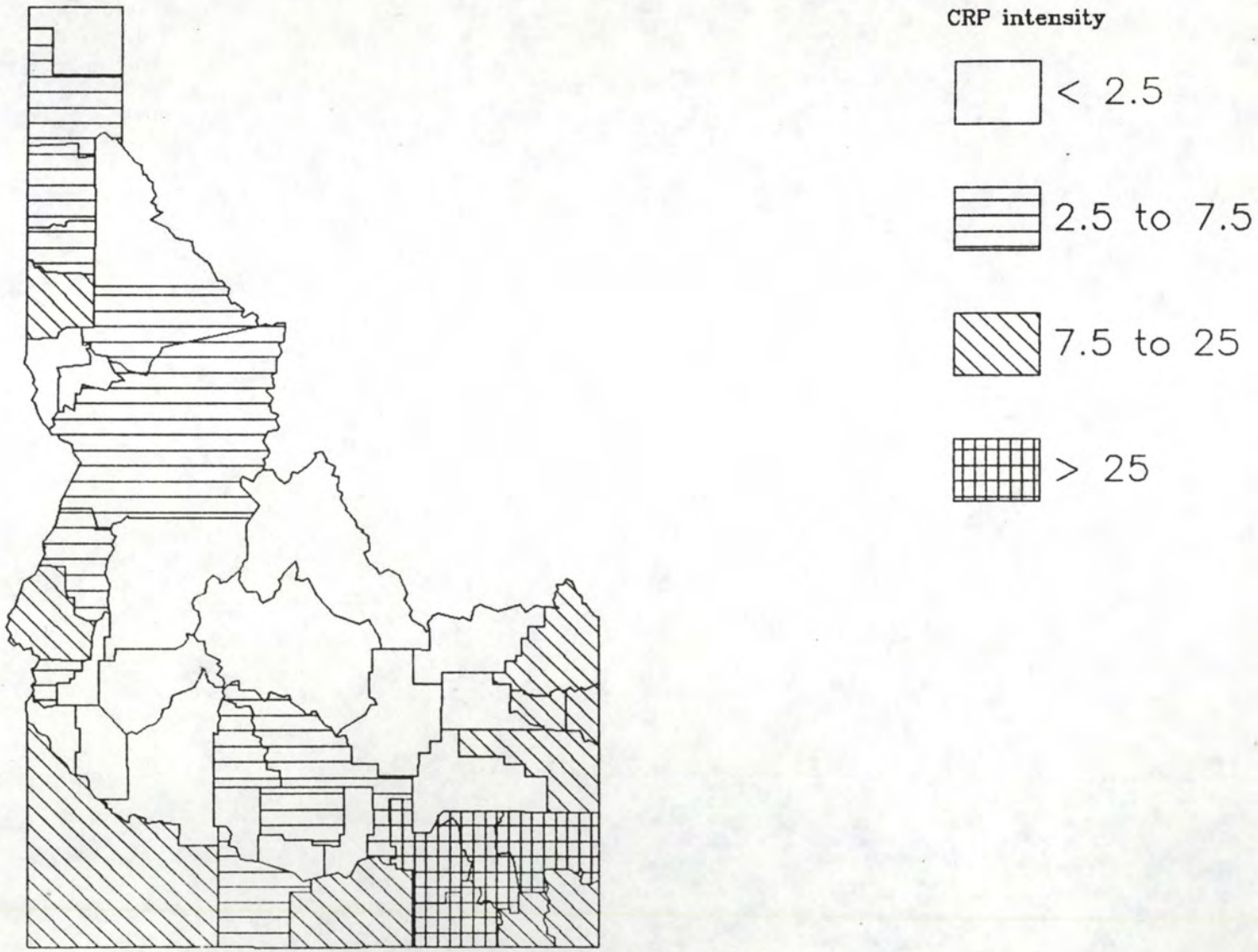


Figure 10. Net Cash Income, Idaho

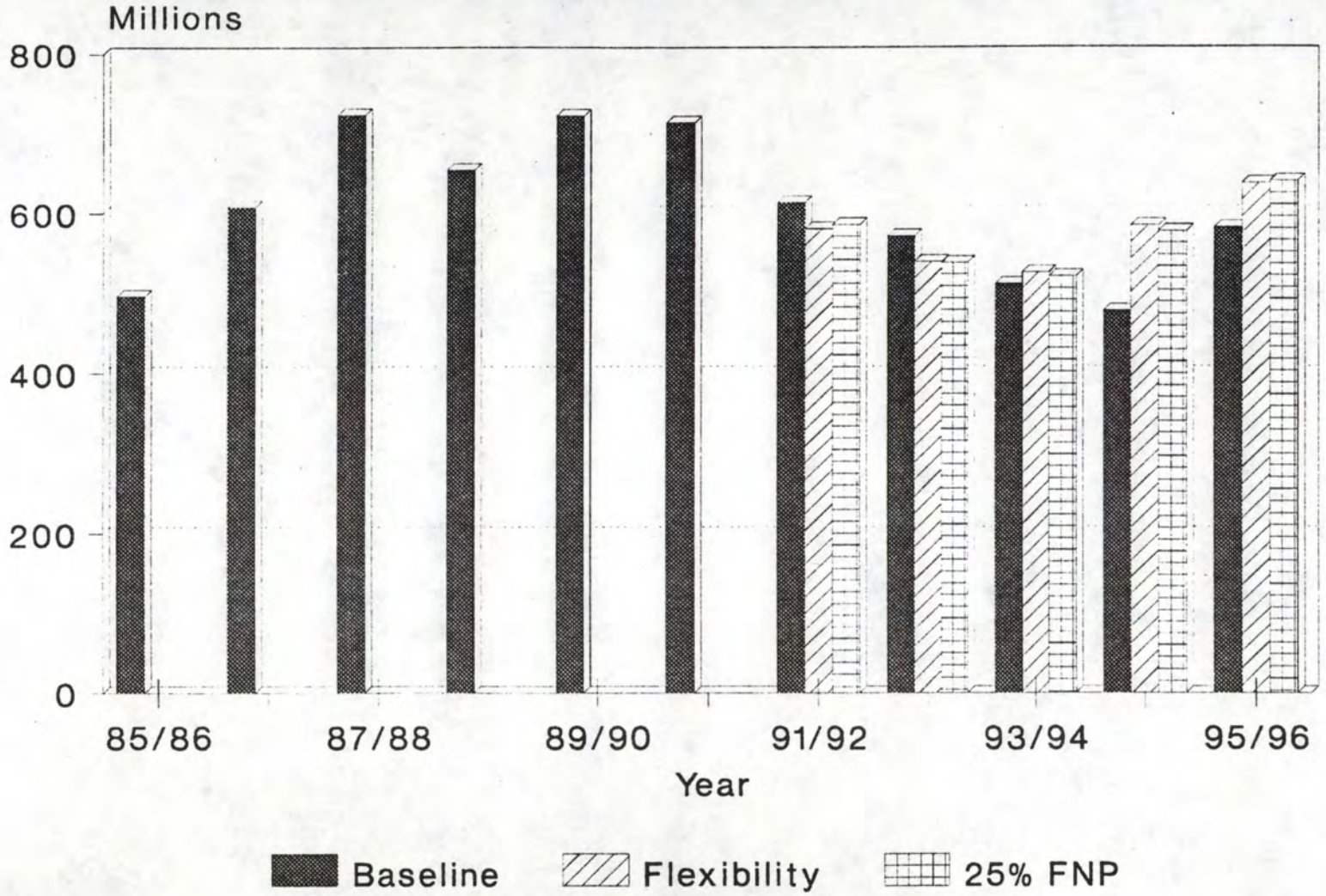


Figure 11. Net Cash Income, Idaho

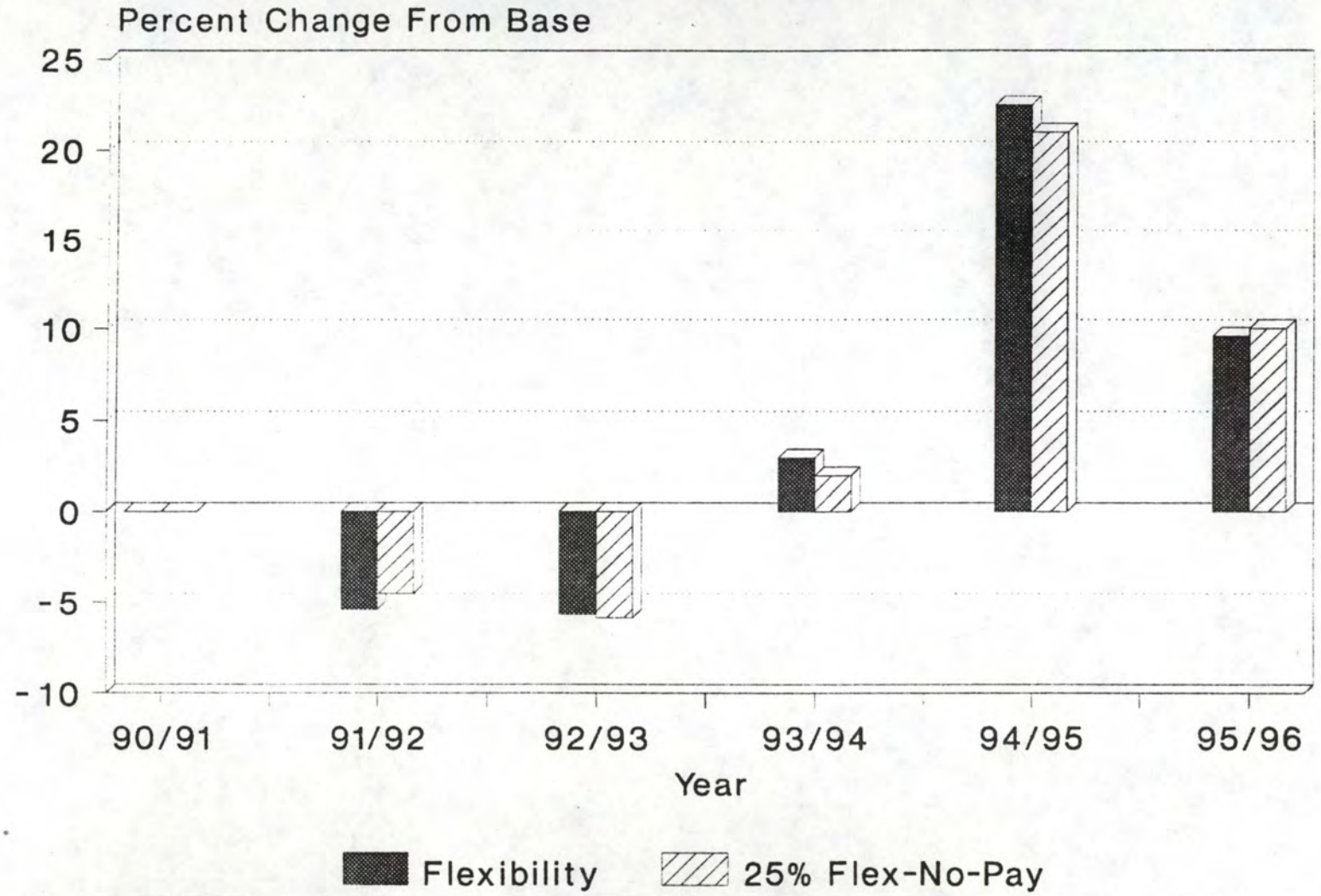


Figure 12. Total Cash Receipts, Idaho

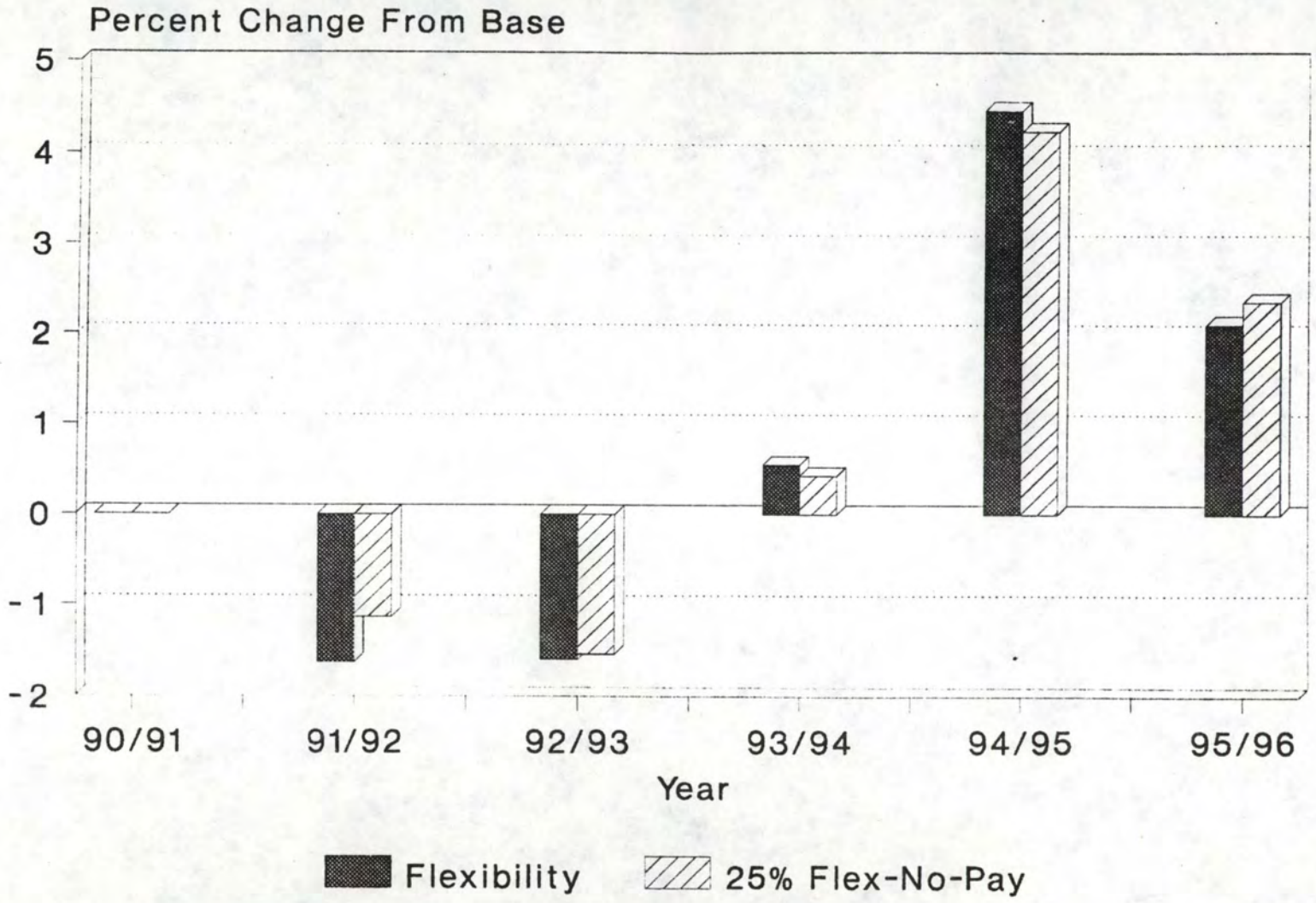


Figure 13. Government Payments, Idaho