REPORT TO THE SUBCOMMITTEE ON INDIAN AFFAIRS COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

Land Leases On The Fort Hall Indian Reservation In Idaho

B-114868

Bureau of Indian Affairs
Department of the Interior

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-114868

The Honorable James Abourezk, Chairman
Subcommittee on Indian Affairs
Committee on Interior and Insular Affairs
United States Senate

Dear Mr. Chairman:

In accordance with your request of September 24, 1973, we are reporting on lease income from Indian agricultural and grazing lands on the Fort Hall Reservation in Idaho. We also looked into the reasons why tribal members have not entered the farming business to the extent they have entered the ranching business. The information you requested concerning the National Tribal Chairmen's Association was provided to the Subcommittee in a report dated January 18, 1974 (B-114868).

As you requested, we have not obtained formal written comments from the Federal agencies and other parties associated with the matters discussed in the report. We have, however, obtained comments on the facts in the report from the Bureau of Indian Affairs, Department of the Interior; the Economic Development Administration, Department of Commerce; and Economics Research Associates, a professional consulting firm which made an economic study of the reservation. Their comments are included where appropriate.

We do not plan to distribute this report further unless you agree or publicly announce its contents.

Sincerely yours,

Acting Comptroller General
of the United States

Contents

ABBREVIATIONS

AUM	animal unit month
BIA	Bureau of Indian Affairs
ERA	Economics Research Associates
GAO	General Accounting Office

COMPTROLLER GENERAL'S REPORT TO THE SUBCOMMITTEE ON INDIAN AFFAIRS COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

LAND LEASES ON THE FORT HALL INDIAN RESERVATION IN IDAHO

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DIGEST

WHY THE REVIEW WAS MADE

The Chairman of the Subcommittee told GAO that, according to a 1973 economic study of the Fort Hall Indian Reservation in Idaho--made by Economics Research Associates for the Economic Development Administration, Department of Commerce--the Bureau of Indian Affairs had approved leases for Indian agricultural and grazing lands. These leases provided for substantially lower income than did leases for similar non-Indian land in the same geographic area.

The Chairman requested GAO to

--review the income provisions of leases for Indian agricultural and grazing lands on the Fort Hall Reservation and compare these provisions with the provisions of leases for similar non-Indian land in the same geographic area and

--determine the reasons why tribal members had not entered the farming business to the extent they had entered the ranching business.

FINDINGS AND CONCLUSIONS

There are about 539,000 acres of Indian, Government, and privately owned land on the Fort Hall Reservation. (See p. 4.) About 105,000 acres are under agricultural leases. (See p. 8.) Tribal members have leased about 7 percent of the land, mainly nonirrigated land; non-Indians have leased about 93 percent, mainly irrigated land. (See app. I.)

The Economics Research Associates' report concluded that:

--Fort Hall Indians failed to get an equitable income for all agricultural land leased to non-Indian tenants because typical nonreservation leases in the Fort Hall area averaged 35 percent of gross crop value, whereas Fort Hall leases are equivalent to about 2.3 percent of gross crop value.

--Indian farmers seemed to concentrate on such low-dollar-yield crops as alfalfa and other hay, which probably was a result of the lack of access to required capital and technology rather than a result of Indian preference. (See p. 5.)

GAO believes that the Associates' conclusion about the Indians' difficulties in obtaining capital is valid. (See pp. 16 to 18.)

GAO does not agree with the Associates' conclusion about the disparity between lease incomes for reservation and nonreservation lands. The Associates did not make a valid comparison of reservation lease income with nonreservation lease income when it compared net income on reservation leases with gross income on nonreservation leases.

Furthermore, Associates compared income data on only high-value potato crops on nonreservation land with income data for potatoes and low-value grain crops on reservation land. Associates did not consider that high- and low-value crops were rotated periodically both on and off the reservation.

GAO believes that the conclusion that Indians do not have access to technical assistance is not valid. (See pp. 16 to 18.)

The average net income per acre for irrigated reservation cropland leased to non-Indians was about $60 less than it was for similar nonreservation land. Several tangible and intangible factors impact on reservation land and reduce the income which the Indians can expect to receive for this land. (See p. 11.)

Tangible factors associated with reservation land include high costs for irrigation systems, power, and water. (See pp. 11 and 12.) Intangible factors include

--the sandy soil conditions and wind erosion problems on about 35 percent of the irrigated reservation land, which make it difficult to grow grain crops;

--the tribal council bans on using aerial crop spraying, moss-controlling chemicals in irrigation waters, and weed-controlling chemicals on canal banks;

--the time and expense required of reservation lessees to obtain the signatures of numerous reservation land heirs; and

--the risk inherent in crop-sharing leases, which is typical of nonreservation leases. Because reservation land is generally leased on a cash basis rather than on a crop-sharing basis, the Indian landowner is subject to less risk than the nonreservation crop-sharing landowner. (See pp. 12 to 15.)

Because of intangible factors, non-Indians who lease reservation land assume high risks. The value of the intangible factors cannot be readily measured. Consequently GAO could not determine how much impact they had on reducing irrigated reservation land income.

The average net income per acre for nonirrigated reservation cropland leased to non-Indians is about the same as that for similar nonreservation cropland, even though the tribal council bans on the use of chemicals and aerial spraying, heirship problems, and the absence of risk to the Indian landowners also impact on income from this land.

The average net income for reservation pastureland is greater than that for Federal land and for some private land. (See p. 11.)

There are many reasons why tribal members do not engage in high-dollar-yield farming activities. The major reason is the members' difficulties in obtaining credit; however, other reasons include

--lack of knowledge of farming technology,

--farming is too expensive,

--farming is too competitive, and

--a preference for activities other than farming.

Technical assistance is available to tribal members, but few have requested it. (See pp. 16 to 18.)

CHAPTER 1

INTRODUCTION

Pursuant to a request of September 24, 1973, from the Chairman of the Subcommittee on Indian Affairs, Senate Committee on Interior and Insular Affairs, we reviewed the income provisions of the leases for Indian agricultural and grazing lands on the Fort Hall Reservation. We compared these provisions with the income provisions of leases for similar non-Indian land in the same geographic area. We also looked into the reasons tribal members had not entered the farming business to the extent they had entered the ranching business.

We reviewed pertinent records and documents and interviewed representatives and officials of the Department of the Interior's Bureau of Indian Affairs (BIA) area office in Portland, Oregon; the Fort Hall agency office in Fort Hall, Idaho; and the Shoshone-Bannock Tribes which live on the reservation. We also interviewed officials of Economics Research Associates (ERA), a consulting firm which made an economic study of the reservation, and other Federal, State, and local government agencies. We also obtained information from local financial institutions; an appraisal firm; a power company; agricultural equipment and supply dealers; irrigation companies; and reservation and nonreservation landowners, farmers, and ranchers.

FORT HALL INDIAN RESERVATION

An Executive order dated June 14, 1867, established the Fort Hall Reservation in Bannock, Bingham, Caribou, and Power Counties in southeastern Idaho for various Shoshone groups in southern Idaho. On July 3, 1868, the Fort Bridger Treaty between various Shoshone and Bannock bands of Indians and the United States was concluded, and an Executive order dated July 30, 1869, established a reservation for the Bannock Indians within the limits of the tract reserved for the various Shoshone groups.

The Executive order of June 14, 1867, established a reservation of 1.8 million acres, but the original reservation was reduced by two major cessions of land by the tribes to the United States in 1889 and 1898. As of November 1973, the ownership status of the reservation land was as follows:

	Acres
Indian land--allotted by the tribes to individual Indians	248,868
Tribal land--title held by the Government in trust for the tribes	232,484
	481,352
Other land:	
Submarginal, Government-owned	4,842
Other, Government-owned	32,632
Privately owned (fee title)	19,955
	57,429
Total	538,781

SHOSHONE-BANNOCK TRIBES

The tribes were organized under the Indian Reorganization Act of June 18, 1934 (48 Stat. 984). Their constitution and bylaws were ratified on March 31, 1936, and the Secretary of the Interior approved them on April 30, 1936. The tribes' Federal corporate charter was ratified on April 17, 1937. The tribal governing body is a business council of seven members elected from those tribal members living on the reservation. As of March 1973, 2,125 Indians lived on the Fort Hall Reservation and an additional 657 lived in areas adjacent to the reservation. The tribal membership was 2,876 as of November 1973.

CHAPTER 2

ECONOMICS RESEARCH ASSOCIATES STUDY

In June 1972, at the request of the tribal council, the Economic Development Administration, Department of Commerce, contracted with ERA for a feasibility study of the economic potential of resources on the Fort Hall Reservation.

In April 1973 ERA published a report presenting the study's findings and concluding, among other things, that (1) Fort Hall Indians had failed to get an equitable income for all agricultural land leased to non-Indians and (2) Indian farmers seemed to concentrate on such low-dollar-yield crops as alfalfa and other hay, which probably was a result of the lack of access to required capital and technology rather than a result of Indian preference.

We believe that ERA's conclusion about the Indians' difficulties in obtaining capital is valid. We do not, however, agree with ERA's conclusion about the disparity between the lease incomes for reservation and nonreservation lands. ERA did not make a valid comparison of reservation lease income with nonreservation lease income when it compared net income for reservation leases with gross income for nonreservation leases. Furthermore, ERA compared income data on only high-value potato crops on nonreservation land with income data for potatoes and low-value grain crops on reservation land. ERA did not consider that high- and low-value crops were rotated periodically both on and off the reservation. We also believe that ERA's conclusion that Indians do not have access to technical assistance is not valid.

INEQUITABLE LEASE INCOME

ERA's report stated that typical leases in Bannock County averaged 35 percent of gross crop value, whereas Fort Hall leases are equivalent to about 2.3 percent of gross crop value.

According to the ERA official responsible for the agricultural section of the report, ERA's conclusion was based on a comparison of reservation lease income with nonreservation lease income. ERA obtained the lease income data for nonreservation land in Bannock County from the Cooperative Extension Service of the University of Idaho and substantiated it through contacts with the Bannock County Extension Agricultural Agent and local real estate brokers. The reservation lease income data was computed using data in a 1970 BIA reservation agricultural statistics report which ERA did not verify or discuss with BIA.

Although our comparison of reservation and nonreservation lease incomes (see ch. 3) showed that reservation income for irrigated cropland was lower than nonreservation income for similar land, we believe that ERA did not make a valid comparison because it compared net income on reservation leases with gross income on nonreservation leases and did not consider the effect of crop rotation on nonreservation lease income.

Gross-versus-net income

The 2.3 percent of gross crop value for reservation land represents the net income to the Indian landowners, whereas the 35 percent of gross crop value for nonreservation leases represents the gross income to the landowners. A comparison of net income with gross income is not valid because it does not consider costs incurred by the nonreservation landowners.

Nonreservation landowners incur costs for irrigation systems, water, power, fertilizers, herbicides, and pesticides, which must be deducted from gross income. Indian landowners, however, provide only the land and do not incur costs for any of these other items.

Crop rotation

Crop rotation is an accepted farming practice both on and off the reservation. Generally, high-value crops, such as potatoes and sugar beets, are rotated with low-value grain crops on irrigated farming lands. Lease income data for reservation land reflects the impact of crop rotation and shows the average annual income over the crop rotation cycle. The nonreservation lease income data used by ERA, however, did not reflect crop rotation and was based only on the gross income to the landowners for irrigated potato crops.

INDIAN LACK OF ACCESS TO CAPITAL AND TECHNOLOGY

ERA's report said that Fort Hall tribal members were engaged primarily in ranching rather than farming and in raising low-dollar-yield hay crops instead of high-dollar-yield crops, which probably is a result of the lack of access to required capital and technology rather than a result of Indian preference.

The ERA official responsible for the agricultural section of the report told us that his conclusion regarding the lack of access to required capital and technology was general and referred to all Indians and was based on his personal knowledge of the general Indian population. He stated that it was apparent to him that, if Fort Hall Indians had access to the required capital or technology, more of them would farm high-yield crops.

The official told us he had not asked local bankers; BIA; or the Farmers Home Administration, Department of Agriculture, about agricultural credit policies for Indians. However, he received the impression, based on his discussions with local bankers regarding credit for nonagricultural projects, that it would be much more difficult for Indians to obtain credit locally than it would be for non-Indians. During his limited discussions with tribal council members and employees and BIA agency personnel, he was told that the Indians generally preferred to ranch rather than farm because those engaged in farming obtained only minimal yields.

Although Indians generally have difficulty obtaining capital, we believe other factors also influence their decisions not to engage in high-dollar-yield farming activities. (See ch. 4.)

ERA AND AGENCY COMMENTS

We discussed the lack of detailed support for ERA's conclusions with the ERA official responsible for the agricultural section of the report. He said that he had not researched the nonreservation leasing situation in detail. He acknowledged that crop rotation, as well as nonreservation landowner irrigation, water, power, fertilizer, herbicide, and pesticide costs, should have been considered in comparing lease income.

The ERA official explained that the scope of the study with respect to lease income was limited and that the fieldwork for the entire agriculture section of the study consisted of only 4 days of information gathering in the Fort Hall area. He further explained that, because ERA didn't have the funds for an extensive study of reservation lease income, it chose to devote more time to other reservation economic problems.

The official said that ERA had met its objective of pointing out that the leasing situation needed to be examined in detail. He also said that, although the scope of the study was limited, he believed that the conclusions reached were generally valid.

We also discussed our findings concerning ERA's study with BIA and Economic Development Administration officials. They agreed that ERA's lease income comparison was not valid and that there were factors other than the lack of capital which influenced the Indians' decisions not to engage in high-dollar-yield farming activities.

CHAPTER 3

COMPARISON OF LEASE INCOMES ON RESERVATION AND NONRESERVATION LAND

The average net income per acre for irrigated reservation cropland leased to non-Indians is less than the average net income per acre for similar nonreservation land in the same geographic area. However, certain tangible and intangible factors associated with the reservation land reduce the income which the Indians can expect to receive for this land. Because of the intangible factors, we believe that non-Indians who lease reservation land assume high risks. The value of the intangible factors cannot be readily measured. Consequently, we could not determine how much impact they had on reducing irrigated reservation land income.

The average net income per acre for reservation leases to non-Indians for nonirrigated cropland is about the same as the average net income per acre for similar nonreservation land even though the reservation land is apparently less valuable than the nonreservation land. Also the average net income for reservation pastureland is greater than the average net income for Federal pastureland and some private land.

RESERVATION LAND

As of June 30, 1973, there were 561 agricultural leases in effect covering 105,015 acres of reservation land. Annual net income from these leases totaled about $979,000, as follows:

Type of land	Number of leases	Acres	Annual net income	Average net income per acre
Irrigated:				
Cropland	316	39,575	$596,792	$15.08
Pastureland	39	1,460	7,934	5.43
Nonirrigated:				
Cropland	19	1,578 [a]	11,968	7.73
Pastureland	57	6,981	13,735	1.97
Combination (note b)	130	55,421	348,159	6.28
Total	561	105,015	$978,588	$ 9.32

a/ Includes a 30-acre 1973 crop-share lease on which income has not yet been received.

b/ More than one type of land. The income per acre for the different types of land generally was not specified.

Of the 105,015 acres of reservation land under lease (see app. I), tribal members leased 7,587 acres (7 percent) under 129 leases. These leases ranged from 2.5 to 481 acres and averaged about 59 acres. Non-Indians leased 97,428 acres (93 percent) under 432 leases. Non-Indian leases ranged from 1 to 6,200 acres and averaged about 226 acres. The majority of Indian leases covered nonirrigated land, whereas the majority of non-Indian leases covered irrigated land.

Combination leases accounted for 55,421 of the 105,015 acres under lease. Because specific income per acre for different land types generally was not specified in these leases, we excluded combination leases from our comparison of net incomes for reservation and nonreservation leases.

Of the remaining 49,594 acres (see app. II), 43,634 acres were covered by 321 non-Indian leases and 5,960 acres by 110 Indian leases. The average net income per acre for land leased to non-Indians is as follows:

Type of land	Net income per acre	
	Average	Range
Irrigated land:		
Cropland	$15.36	$1.50 to $41.07
Pastureland	7.33	3.00 to 12.50
Nonirrigated land:		
Cropland	9.84	2.99 to 21.43
Pastureland	2.03	.50 to 10.00

NONRESERVATION LAND

Private farmland in the same geographic area as the reservation is normally leased under crop-sharing arrangements, whereas reservation lands normally are leased on a flat cash-price-per-acre basis because Indians prefer to receive rental income in advance and not assume the risk inherent in crop-sharing leases. Also the owners of nonreservation land incur costs for irrigation systems, water, power, fertilizers, herbicides, and pesticides. Indian landowners, however, provide only the land, and lessees assume the other costs.

In determining the average net income obtained from nonreservation leases, we considered typical nonreservation crop-sharing provisions, estimated the costs incurred by the lessors, and obtained and considered typical crop-rotation and crop-yield data and average crop prices. (See app. III.)

For pastureland, we converted reservation lease income from a flat cash-fee-per-acre basis to a net-income-per-animal-unit-month 1/ basis, as generally set forth in nonreservation pasture land leases, and compared the income to nonreservation net income per animal unit month.

1/An animal unit month is defined as one cow or five sheep grazing on an area of land for 1 month.

The factors considered in computing net income from nonreservation leases are discussed below.

Irrigated cropland

Generally potatoes, sugar beets, and small grains, such as wheat and barley, are rotated on irrigated cropland and lease income provisions are expressed in crop-sharing terms. On the basis of discussions with landowners in the Fort Hall area and farm records of the Agricultural Stabilization and Conservation Service, Department of Agriculture, we developed an average crop-sharing arrangement for the crops grown on nonreservation land.

We converted crop-sharing arrangements to gross income per acre using 1972 average crop-yield data for Bannock, Bingham, and Power Counties and 1972 price data for Idaho. Data for Caribou County was not included in the net income computations because the county contained only about 7 percent of the reservation land, most of which was dry pastureland. We obtained the yield and price data from statistics published by the Statistical Reporting Service, Department of Agriculture; from Agricultural Stabilization and Conservation Service reports; and from a sugar beet processor.

Average landowner costs for irrigation systems, water, and power provided to lessees and other costs shared with lessees, such as fertilizer and pesticide costs, were obtained from farm equipment and supply dealers, irrigation companies, and a power company in the Fort Hall area. We compared the data from these authoritative sources with similar data obtained from 29 landowners in the Fort Hall area who leased their land. The comparison indicated that generally the data obtained from the authoritative sources was valid. Average landowner costs were then developed from the information obtained and deducted from the landowners' average gross income per acre to get the average annual net income per acre.

Nonirrigated cropland

Wheat and barley are generally grown on dry cropland; however, wheat is the predominant crop because of its higher cash value. Usually, dry cropland lies fallow every other year.

We obtained information on crop-sharing arrangements, crop yields, price data, and landowner costs from the same sources as the data on irrigated cropland. Annual net income per acre was also developed in the same manner as for irrigated cropland.

Pastureland

Lease income on nonreservation land is normally expressed as dollars per AUM, whereas reservation lease income is expressed as dollars per acre. Also pastureland has a wide variety of grazing capacities and therefore a variety of lease incomes in terms of dollars per acre.

Private grazing land in the vicinity of the Fort Hall Reservation is limited. Land under the jurisdiction of Federal agencies is the major source of grazing land. We obtained information on AUM rates for Federal land from officials of the Forest Service, Department of Agriculture; the Bureau of Land Management, Department of the Interior; and a local cattlemen's association. We also obtained information on private-land AUM income from a local cattle company representative.

Reservation lease income was converted to income per AUM on the basis of information provided by BIA agency officials on the grazing capacity for each reservation pasture lease. The annual income was divided by the total number of AUMs available to arrive at an average income per AUM.

COMPARISON OF NET INCOME

The following table compares the net income from leases of the various types of reservation land leased to non-Indians with net income from similar nonreservation land in the vicinity of the reservation.

Type of land	Average reservation net income	Average nonreservation net income	
		Private	Federal
Irrigated cropland	$15.36 per acre	$75.41 per acre	(a)
Nonirrigated cropland	9.84 per acre	9.73 per acre	(a)
Pastureland	1.74 per AUM	1.00 to 4.50 per AUM	$0.78 to $0.90 per AUM

a/Not leased for cropland.

Net income per acre for nonirrigated cropland reservation leases is about the same as that for nonirrigated nonreservation cropland leases. Also the average net income per AUM for reservation land is greater than the net income per AUM for Federal land and some private land.

The average net income per acre for irrigated reservation cropland leased to non-Indians was about $60 less than the average net income per acre for similar nonreservation land. Several tangible and intangible factors impact on reservation land and reduce the disparity between the income received from reservation and nonreservation irrigated cropland. Some intangible factors also impact on nonirrigated reservation land and reduce the value of this land.

Tangible factors

Irrigation equipment and power costs for about 35 percent of the reservation land and water costs for about 80 percent of the

reservation land are higher than such costs on most nonreservation land. These factors reduce the disparity between the average net income per acre for irrigated reservation land and similar nonreservation land by $16 an acre, or from $60 to $44.

Irrigation equipment and power costs

Most of the nonreservation land under lease in the Fort Hall area is irrigated by gravity-flood methods. About 35 percent of the irrigated reservation land, however, is in an extremely sandy area requiring sprinkler systems for irrigation. Based on information obtained from authoritative sources, sprinkler irrigation equipment and power costs were about $31.50 an acre. Generally there are no equipment or power costs associated with gravity irrigation. Therefore the disparity between the net income per acre for about 35 percent of the irrigated reservation land and most of the irrigated nonreservation land is reduced by $31.50 an acre, or an average $11 an acre for all irrigated reservation land.

Water costs

The water for irrigating about 80 percent of the irrigated reservation land comes from two reservation irrigation projects. Water costs for land in these projects average $10 an acre, whereas water costs for most irrigated nonreservation land average $4 an acre. Therefore the higher water costs for about 80 percent of the irrigated reservation land reduce the disparity by $6 an acre on such land, or an average $5 an acre for all irrigated reservation land.

The BIA irrigation manager said that water costs for irrigating reservation land were higher than for nonreservation land because (1) the tribal council had banned the use of moss- and weed-controlling chemicals on irrigation canal banks and the banks had to be cleaned manually and (2) pressurized water, which was more expensive to supply than ditchwater, was provided to users on one irrigation project. The irrigation manager stated that it cost about a $1.25 an acre more to clean irrigation ditches manually than chemically. He could not, however, provide us with information on the additional cost attributable to supplying pressurized water.

Intangible factors

Several intangible factors also impact on the income received for reservation land leases and further reduce the disparity between the reservation and nonreservation net incomes.

Sandy soil and high winds

The soil on about 35 percent of the irrigated reservation land is extremely sandy. Also high winds are prevalent in the Fort Hall area. BIA agency and tribal officials and reservation land lessees

said that the combination of sandy soil and high winds made it extremely difficult to grow a grain crop on this land. Reservation leases require that grain crops be rotated with potatoes in the sandy soil area.

BIA officials and reservation land lessees said that the yield from grain crops on this land is usually not sufficient to cover operating costs. For example, BIA officials said that in 1972 a reservation lessee seeded wheat on 640 acres in the sandy soil area, only to have the seed blown away. They also said that the lessee did not grow a wheat crop on his leased land that year. Based on 1972 average crop yield and price data published by the Department of Agriculture, the value of the lessee's lost crop would have been about $95,000, or $150 an acre. In addition, the lessee incurred unrecovered costs for renting, planting, and seeding the land.

In another case, a reservation lessee said that in 1973 he seeded grain on his leased land in the sandy soil area three times, but each time most of the seed was blown away. He further said that the revenue he received from the grain harvested covered his irrigation equipment power costs but did not cover his seed, planting, and harvesting costs. BIA officials told us also that 12 to 14 reservation lessees had found it difficult to grow grain crops in the sandy soil area.

Tribal ban on the use of chemicals and aerial spraying

The tribal council has banned the use of moss-controlling chemicals in reservation irrigation waters and weed-controlling chemicals on canal banks. The council has also banned the aerial application of chemicals to control crop diseases, insects, and noxious weeds. According to tribal ordinances, these bans were imposed because chemicals in the waters killed fish and wildlife and aerial spraying made the Indians ill. Reservation lessees told us that these council actions had caused serious problems with respect to adequate crop water supplies and crop yields.

Reservation lessees said the lack of moss control in irrigation waters had resulted in sprinkler systems becoming clogged with moss, which, in turn, caused crops to receive inadequate water. Mechanical moss-control methods required the lowering of water levels in canals and ditches, which also resulted in inadequate crop water supplies. The lessees also stated that filtering systems to prevent moss from entering sprinklers required frequent filter changes, sometimes as often as every 3 or 4 hours. Regarding the ban on chemical weed control in or near irrigation waters, BIA officials said that seeds from weeds growing on irrigation canal banks entered the water and were distributed to crop fields in the water. The weeds then germinated and competed with the crop's being grown and thus reduced the crop yield.

In July 1973, 11 reservation lessees petitioned the Fort Hall agency superintendent to rescind the ban on the use of moss-controlling chemicals. In their petition the lessees said that other irrigation districts had used chemicals successfully and that they were confident that the chemicals would have no detrimental effects.

Aerial application of chemicals is a common farming practice in the Fort Hall area. A reservation lessee stated that, because of the tribes' ban on this practice, chemicals had to be applied using ground equipment when the fields were dry. He stated that, if a crop blight occured when the fields were wet, an entire crop could conceivably be destroyed before the fields dried sufficiently to allow using ground equipment. He also pointed out that using ground equipment to control diseases, insects, and weeds required that irrigation activities be suspended, which reduced crop yields.

Two reservation lessees advised us that, because of the restrictions on using chemicals and aerial spraying, they were considering not renewing their leases when they expired. One reservation lessee stated that, during the preceding 3 years, the council's ban on using chemicals in or near water supplies and on aerial spraying had reduced his income by $50,000 through decreased yields.

We believe the probability of crop losses from diseases and insects is much greater on reservation lands than on nonreservation lands because of the tribal council's ban on using chemicals and aerial spraying. A reservation lessee could conceivably lose, on the basis of 1972 Department of Agriculture average yield and price data, crops valued at as much as $537 an acre on potato land, not including planting, seed, water, power, and land-rental costs, if disease or insects were to destroy an entire crop.

Reservation heirship problems

Over 61,000 acres of reservation land which were allotted to tribal members were leased as of June 30, 1973. BIA information showed that about 3,500 individuals had heirship interests in this land.

Lessees of reservation land are required to obtain the written approval of each tribal member having an interest in land to be leased. BIA officials stated that in some cases many individuals had to be contacted and that locating them was often difficult, time consuming, and expensive. For example, one reservation lessee told us that it had taken him about 4 months to locate about 50 individuals to obtain approvals on his leases.

Risk

Reservation land is generally leased on a cash basis with the annual rentals being paid in advance. The lessor therefore does not assume any of the risk inherent in a crop-sharing lease typical of nonreservation land, and he is assured of a given annual income for his land, regardless of the success of the farming operation. Also, because the lessor receives the rental in advance, he has the use of his income about a year earlier than he would under a crop-sharing lease.

CONCLUSIONS

The average net income per acre for Fort Hall irrigated reservation cropland leased to non-Indians is less than that for nonreservation land in the same geographic area, but certain factors associated with the reservation land reduce the amount of income which the Indians can expect to receive for this land. Tangible factors--higher costs for irrigation equipment and water--reduce the disparity between the net income per acre for irrigated reservation and nonreservation cropland an average $16 an acre, or from $60 to $44. Intangible factors--sandy soil and high winds, bans on using chemicals and aerial spraying, heirship problems, and the absence of risk to the Indian landowners--further reduce the disparity.

We believe that, because of these intangible factors, high risks are assumed by non-Indians who lease reservation land. The value of the intangible factors cannot be readily measured. Consequently we could not determine how much impact they had on reducing irrigated reservation land income.

The average net income per acre for nonirrigated reservation cropland leased to non-Indians is about the same as that for similar nonreservation cropland, even though the tribal council bans on the use of chemicals and aerial spraying, heirship problems, and the absence of risk to the Indian landowners also impact on income from this land.

Furthermore, the average net income per AUM for reservation pastureland is greater than that for Federal land and for some private land.

CHAPTER 4

INDIAN FARMING ACTIVITIES

There are many reasons why tribal members do not engage in high-dollar-yield farming activities. The major reason is the members' difficulties in obtaining credit. Technical assistance is available to tribal members, but few have requested such assistance. Other reasons for tribal members not engaging in high-dollar-yield farming include

--lack of knowledge of farming technology,

--farming is too expensive,

--farming is too competitive, and

--a preference for activities other than farming.

REASONS TRIBAL MEMBERS DO NOT ENGAGE IN HIGH-DOLLAR-YIELD FARMING

During 1972, 12 tribal members were engaged in full-time farming on irrigated land and 155 tribal members were engaged in ranching and part-time farming activities on irrigated land. Only three tribal members were engaged in high-dollar-yield farming. The largest Indian high-yield farming operation involved about 90 acres.

We interviewed 20 tribal members and asked them why they were not engaged in high-dollar-yield farming activities. These 20 members included 16 ranchers, 2 members not engaged in farming or ranching, 1 member who was once engaged in farming, and 1 member who raised grain and hay.

BIA officials gave us the names of five tribal members who had considered farming as an occupation but who were discouraged by the obstacles involved in farming. The remaining 15 members interviewed were the largest Indian operators of irrigated land on the reservation and were selected on the basis of their availability for interview.

The reasons given by the tribal members for not engaging in high-dollar-yield farming activities were as follows:

Reason	Number of tribal members citing reason (note a)
Could not obtain financing	10
Lacked knowledge of farming technology	8
Farming too expensive	7
Preferred not to farm	3
Farming too competitive	3
Ranching gave more security	2
Sufficient water not available	1

a/ 11 members cited more than 1 reason.

Availability of financing and technical assistance

To determine whether financing was available for Indians interested in high-dollar-yield farming, we contacted representatives of four financial institutions in the Fort Hall area--the tribal credit union, the Farmers Home Administration, a farmers' cooperative credit association, and a commercial bank. Representatives of these institutions told us that an Indian would need collateral and a satisfactory credit rating before a loan would be granted. They pointed out, however, that heirship arrangements on allotted Indian land often diminished the value of the land as collateral for a loan. Representatives of three institutions also said that they were reluctant to make loans to Indians and accept Indian land as collateral because of the trust status of the land.

Representatives of the financial institutions also said that they had few requests from Indians for farm loans, which they attributed to a lack of interest in farming. One official said that the large investment required for a successful farming operation, often as much as $50,000--not including the land--also discouraged Indian farming.

BIA has contracted with the University of Idaho to provide an agricultural extension service at the reservation to assist tribal members in acquiring the knowledge necessary to enter farming. An extension service official said that he had the resources to assist Indians with any farming or ranching problem that might arise and that his services were well publicized through newsletters and by the tribal council. He further said that most of his time was devoted to ranching assistance and that he had few requests for farming assistance. He attributed the lack of Indian interest in high-dollar-yield farming to the high risk involved and the large investment required. The BIA Fort Hall Agency Natural Resources Office is also available to help tribal members form farm plans and to give them information on soils and soil conservation methods.

CONCLUSIONS

Tribal members do not engage in high-dollar-yield farming activities for various reasons. The primary reason is the members' difficulties in obtaining credit. Other reasons for not engaging in high-dollar-yield farming are (1) lack of knowledge of farming technology, (2) farming is too expensive, (3) farming is too competitive, and (4) a preference for activities other than farming. Technical assistance is available to tribal members, but few have requested it.

ACRES UNDER LEASE ON THE
FORT HALL INDIAN RESERVATION
AS OF JUNE 30, 1973

	Single-purpose leases			Combination leases			Total		
	Non-Indian	Indian	Total	Non-Indian	Indian	Total	Non-Indian	Indian	Total
Irrigated land:									
Cropland	37,839	1,736	39,575	15,166	295	15,461	53,005	2,031	55,036
Pastureland	830	630	1,460	812	43	855	1,642	673	2,315
	38,669	2,366	41,035	15,978	338	16,316	54,647	2,704	57,351
Non-irrigated land:									
Cropland	1,123	455	1,578	24,819	653	25,472	25,942	1,108	27,050
Pastureland	3,842	3,139	6,981	12,997	636	13,633	16,839	3,775	20,614
	4,965	3,594	8,559	37,816	1,289	39,105	42,781	4,883	47,664
Total	43,634	5,960	49,594	53,794	1,627	55,421	97,428	7,587	105,015
Percent	88	12	100	97	3	100	93	7	100

LEASES OF AGRICULTURAL LAND ON THE FORT HALL

INDIAN RESERVATION, EXCLUDING COMBINATION LEASES

	Irrigated land			Nonirrigated land			
	Cropland	Pasture	Total	Cropland	Pasture	Total	Total
Leased to non-Indians:							
Number of leases	270	19	289	10	22	32	321
Total acres	37,839	830	38,669	1,123	3,842	4,965	43,634
Annual rental	$581,259	$6,084	$587,343	$11,048	$7,813	$18,861	$606,204
Average income per acre	$15.36	$7.33	$15.19	$9.84	$2.03	$3.80	$13.89
Leased to Indians:							
Number of leases	46	20	66	9	35	44	110
Total acres	1,736	630	2,366	[a]455	3,139	[a]3,594	[a]5,960
Annual rental	$ 15,533	$1,850	$ 17,383	$ 920	$5,922	$ 6,842	$ 24,225
Average income per acre	$8.95	$2.94	$7.35	$2.16	$1.89	$1.92	$4.09
Total leases							
Number of leases	316	39	355	19	57	76	431
Total acres	39,575	1,460	41,035	[a]1,578	6,981	[a]8,559	[a]49,594
Annual rental	$596,792	$7,934	$604,726	$11,968	$13,735	$25,703	$630,429
Average income per acre	$15.08	$5.43	$14.74	$7.73	$1.97	$3.01	$12.72

[a]Includes a 30-acre 1973 crop-share lease on which rent has not yet been received.

NONRESERVATION LAND--NET INCOME COMPUTATIONS

IRRIGATED CROPLAND

	Potatoes	Sugar beets	Wheat	Barley
Yield:				
Yield per acre	252 cwt	16.2 tons	62 bu	68 bu
Price, including Government payments (when applicable)	$ 2.13	$ 20.78	$ 2.39	$ 1.34
Gross yield per acre	$536.76	$336.64	$148.18	$91.12
Share to landowner	[a]19/64	1/4	1/3	1/3
Gross yield to landowner	$159.35	$ 84.16	$ 49.39	$30.37
Cost to landowner:				
Irrigation	$ 9.75	$ 9.75	$ 9.75	$ 9.75
Fertilizer	$ 16.21	$ 6.86	$ 3.33	$ 3.33
Other chemicals	$ 1.00	$ .50	-	-
Total cost to landowner	$ 26.96	$ 17.11	$ 13.08	$13.08
Net yield to landowner	$132.39	$ 67.05	$ 36.31	$17.29
Percent of time crop is grown (to reflect crop rotation)	33-1/3	33-1/3	16-2/3	16-2/3
Total net yield per acre per year	$ 44.13	$ 22.35	$ 6.05	$ 2.88
Average net income to landowner per acre		$75.41		

NONIRRIGATED CROPLAND

	Wheat	Barley
Yield per acre	28 bu	31 bu
Price, including Government payment	$ 2.39	$ 1.34
Gross yield	$ 66.92	$ 41.54
Share to landowner	1/3	1/3
Gross yield to landowner	$ 22.31	$ 13.85
Cost for fertilizer	$ 1.33	$ 1.33
Net yield to landowner	$ 20.98	$ 12.52
Percent of time crop is grown (50% for both crops) (note b)	41	9
Total net yield per acre per year	$ 8.60	$ 1.13
Average net income to landowner per acre	$ 9.73	

[a]Average landowner share for 16 leases to potato growers, 9 of which were 1/3 share and 7 of which were 1/4 share.

[b]Based on acres of dry wheat and barley grown in three counties bounding reservation and on "summer fallow" every other year.