

TABLE 6

Repayment Summary of Shamalan Farm

	<u>\$/Farm</u>	<u>\$/Hectare</u>	<u>\$/Acre</u>	<u>Total \$</u>
Gross farm returns	2,235	248.32	100.50	3,115,460
Farm costs	<u>1,194</u>	<u>132.69</u>	<u>53.70</u>	<u>1,686,130</u>
Net farm income	1,041	115.63	46.80	1,469,330
Family living allowance	515	57.28	23.18	727,865
Net disposable farm income	526	58.35	23.62	741,465
O & M cost	67	7.41	3.00	94,160
Principal portion of capital cost	<u>150</u>	<u>16.65</u>	<u>6.74</u>	<u>211,570</u>
Subtotal, repayment	217	24.06	9.74	305,730
Disposable income after repayment	<u>\$309</u>	<u>\$34.29</u>	<u>\$13.88</u>	<u>\$435,735</u>

Over the course of time, as the project develops and farms become more efficient, the amount of land operated per person will increase and many tenants will find themselves without agricultural employment. This has happened in many countries and has caused social problems everywhere. There is no easy solution to this problem except to point that as former rural residents are absorbed into industrial and service occupations, the problem eventually is alleviated. Creation of agricultural-based industry is a starting point, coinciding with the evolutionary displacement of tenants. Industries which process agricultural surpluses, such as the existent Bost dairy, cotton gin, and cottonseed oil mill are examples of this activity. Certainly the secondary benefit factors, which are based largely on processing agricultural goods, on agricultural businesses which supply farms with inputs, and on employment of craftsmen and artisans would be large future users of labor. Creation of employment hopefully will ameliorate social conditions caused by rural displacement without great unrest, particularly if the RGA plans and erects processing industries as agricultural surpluses become available.

This analysis indicates that the Shamalan Project is financially feasible, which in this context means that the project lands can provide an adequate living for the farm family and cover operations and maintenance and part of principal costs. This assumes that agriculture develops and the gross and net returns are achieved within the time projected. All previously stipulated conditions must be met, including adequate farm size, if the economic and financial analyses are to prove correct. Subject to these conditions the project is financially feasible.

### Alternative Analysis

Another method of developing the Shamalan Unit should be considered. Article 16 of Recommendation No. 1134, dated 15/9/1344 (December 5, 1965) of the Helmand Arghandab Valley Authority and Approval No. 1517, dated 20/9/1344 (December 9, 1965) of the Congress of Ministers and Part N of Article I of the duties of the Helmand Arghandab Valley Authority Project, in discussing possible future settlement of lands in the Helmand and Arghandab Valleys, states:

"..... this law is prepared. Chapter III, 'Privileges and Duties of Settlers,'....."

"43. For every family of settlers, after clearance and approval of the documents, 20 to 40 jiribs (3.9 to 7.7 hectares or 9.6 to 19.1 acres) will be given,....."

"44. Approval of the amount of land for settlers in the Helmand Arghandab Valley should be based on the following explanation and digits:

"A. If the land is first class, the price should be 1,500 afghanis per jirib (\$103.35 per hectare or \$41.85 per acre) and the share of one person should be 20 jiribs (3.9 hectares or 9.6 acres).

"B. If the land is second class.....the share of one person should be 25 jiribs (4.8 hectares or 12.0 acres).

"C. If the land is third class.....the share of one person should be 30 jiribs (5.8 hectares or 14.3 acres).

"D. If the land is fourth class....the share of one person should be 35 jiribs (6.8 hectares or 16.7 acres).

"Remark: If the land is a combination of two or more classes.....the amount of land to be given should be balanced."

These proposed land sales to settlers may be considered the basis of an alternative analysis for the Shamalan Unit, assuming that they were to apply to all Shamalan farmers. Assuming further that HAVA first, second, and third class lands correspond approximately to Bureau of Reclamation land classes 1, 2, and 3, and HAVA fourth class lands to Bureau land class 6, then 93.2% of arable land is class 1, 4.4% is class 2, and 2.4% is class 3. Nonarable land is 99.4% of the gross area. The weighted size farm under this system would be 20.6 jiribs (4.0 hectares, or 9.9 acres) of arable land, plus 20.5 jiribs (4.0 hectares, or 9.8 acres) of nonarable grazing lands with a net income close to zero. Using this farm size, and applying appropriate farming inputs and returns, the probable outcome can be suggested.

The first point is the effect of small farm size on crop yields and returns.

The small volume of business, the low borrowing capacity, and the lack of a cooperative movement would restrict access to commercial inputs which are high in initial cost, but which are necessary to create high yields and high gross income. This farmer lacks the business volume which would permit him to spread expensive inputs over a large volume of physical production, or economic base upon which to build high returns. His low gross income would cause difficulty in obtaining access to fertilizers, insecticides, disease control agents, superior livestock, and machinery. Although he might purchase improved seed, this factor alone could not produce consistently high yields. The necessity to devote much of his rotation to subsistence crops and oxen feed with little surplus for plowing under would retard the accumulation of satisfactory levels of organic matter in the soil. Therefore the future, as the present, would be based primarily upon the same factors of production... i.e., oxen, tenants, and subsistence inputs. The poorly prepared seedbed, the cloddy and lumpy field, the uncultivated crop and perennial weeds, broadcast seeding, low land utilization, lack of timeliness, heavy oxen feed requirements, and other negating factors would in effect make future conditions extensions of the present. If farmers in the Shamalan Area had a tradition of intensive labor, a movement toward cooperatives, or if a well developed market existed for high value horticultural crops, it would be reasonable to project higher returns through intensification of operations, by cooperative purchase and use of commercial inputs, or by projecting a high proportion of horticultural crops in the rotation. In view of the absence of these factors, it appears unlikely that modern farming can develop within the economic framework of project analysis to project significantly higher returns. The key to successful development of the Shamalan Area, after completion of project works, appears to require a farming base which supports extensive effort and field crop production.

An analysis based on a 4-hectare or 10-acre farm size does not appear financially feasible. Future farm size in the Shamalan Area should be no smaller than the average existing today, including the presently water-short area, after consolidating holdings. The policy of new settlement on marginal holdings, if it were applied to all project residents, could be the difference between success and failure. The probable result would be inability of project farmers to provide an adequate family living allowance, pay operation and maintenance charges, or repay project costs. Since the purpose of development is to raise the standard of living and to create a viable farm economy capable of producing surpluses for an expanding urban sector, rather than to introduce more people who will share the same low present living standard, the HAVA should bend its efforts towards this end.