



**So You Want A Farm in
Westlands Water District!**

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**Fresno County
University of California Coop. Extension**

SO, YOU WANT A FARM IN WESTLANDS WATER DISTRICT

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PURPOSE

So, You Want A Farm in Westlands Water District?

Then this leaflet is directed to you. It concerns questions frequently asked about costs and opportunities which may result from owning and operating a 320 acre farm located in the Westlands Water District.

HISTORICAL BACKGROUND

How and Why was Farming Developed in This Area?

The westside of the San Joaquin Valley between Mendota and Kettleman City is arid. Under native conditions much of the soil was excessively saline and/or alkaline. This is why agriculture production was limited to livestock grazing on native grasses. Land was inexpensive in the area at that time because of its undeveloped state and lack of surface water. Pioneering farmers purchased land and drilled water wells, many to depths of more than 1,500 feet, and developed irrigated crop land at a considerable expense in time, effort and capital.

Why Was "Federal" Water Brought In?

Removal of ground water for irrigation eventually caused an overdraft of the water supply contributing to subsidence of the land in some areas. The quality of water from some wells was also inadequate to grow many crops due to excessive sodium, chlorides, bicarbonates and boron. Recognizing that ground water supplies in the area were not adequate in quantity or quality to productively farm the available land, growers sought and gained federal assistance in bringing surface water to the area from northern California. This development is called the "San Luis Unit of the Central Valley Project", and consists of the San Luis Reservoir, San Luis Canal, and those water distribution facilities and drain water collection facilities within the Westlands Water District. Organization of the Westlands Water District in 1952 was accomplished by petition of the landowners in order to obtain unified support for action needed to help plan and construct the project facilities and to negotiate contracts.

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Why is The Land For Sale Now?

Federal Reclamation Law, which governs the construction and operations of the San Luis Project, made possible an interest-free loan for the construction of water storage, distribution, and drainage facilities with provision for a 40-year repayment period by water users. Provisions of the Federal Reclamation Law also include a 160 acre limitation on project water use by each individual (320 acres for man and wife). Land owned by one person above and beyond 160 acres is referred to as "excess" land. To receive project water on excess land, land-owners signed contracts requiring the sale of this excess land within 10 years at a price approved by the Bureau of Reclamation. That price cannot include increased land values resulting from the project water benefits. If land under recordable contract is not sold within the 10 year period then power of attorney to sell the land rests with the Secretary of Interior.

BUYING THE LAND

Who Should I Contact to Buy Land In The Project Water Service Area?

This land is all privately owned. The owner of the land should be your first contact. In some instances a realtor may have permission to make sale bid arrangements for a property owner. Owners of property in the area are recorded with the County tax assessor and the Bureau of Reclamation. Recordable contracts with excess land owners are on file with the Bureau of Reclamation and are available for public reference. The Bureau also has available information concerning previous sale prices of "excess" land in the area.

What Price Would I Need to Pay For "Excess" Land?

Selling price will vary with the value of improvements and the property itself. The difference between selling price of these properties and "non-excess" land sales is the exclusion of any increased value resulting from the project water benefits. Buyers and prices of excess land sales must be approved by the Bureau of Reclamation. Some excess land sales of very good agricultural soil have been approved recently at \$750 per acre. Future sales prices will reflect current land values, which are affected by crop prices and currency inflation.

What is Needed to Qualify For A Loan?

Farm lending agencies generally want prospective borrowers to be: trustworthy, sincere and responsible individuals; have adequate collateral and dependable alternate income to cover unexpected losses; and management experience and knowledge of farming in a situation similar to the one planned.

Production loan agencies will require a readily available secondary source of repayment to protect against crop failure. These lenders are also interested in spreading their risk over a few dependable crops rather than putting all of their eggs in one basket.

What Terms Could One Expect For Land-Purchase?

Terms will vary with the purpose of the loan. Land-purchase loans generally are written for 20 to 25 year periods. The interest rate and down payment percentages may vary depending upon the degree of risk by the lender. Interest rates change with the prevailing money market at the time of the loan.

What Will Be The Total Cost Of Purchasing 320 Acres of "Excess" Land In The Water Project Area?

A typical lending agency appraisal of 320 acres in the project water area may be \$1,000 per acre with a 65% loan limit. This results in a loan limit of \$650 per acre. If, for example, the Bureau of Reclamation approved sale price for the property is \$750 per acre the buyer would need a down payment of \$100 per acre, or a total of \$32,000, to obtain a \$208,000 loan for the balance of the sale price. Interest on this loan might be 9% with equal annual payments of the principal over a 25-year period, plus annual interest on the unpaid principal balance. In this example the total purchase price is \$240,000 and the first year actual costs would be as follows:

Example of	
<u>1st Year Ownership Costs for 320 Acres</u>	
Downpayment -----	\$32,000
9% Interest of \$208,000 loan	18,720
Annual Principal Payment-----	8,320
Taxes at \$12 per acre-----	3,840
	<hr/>
	\$62,880

Subsequent annual ownership expenses would not include the downpayment, and the interest payment would get smaller after each principal payment. If taxes and other assessment costs did not increase, second year ownership expenses would be about \$30,131, or \$94.16 per acre.

RESIDENCY AND IMPROVEMENTS

Is Residency Required Of A Landowner Receiving Project Water?

The Reclamation Act of 1902 did prescribe that landowner recipients of reclamation project water reside on or in the neighborhood of their land; interpreted to mean living within 50 miles of the land receiving project water. The Omnibus Adjustment Act of 1926 provided a new set of detailed rules for new Reclamation projects. This Act made no reference to the residency requirement of the Reclamation Act of 1902. Thus, the Bureau of Reclamation, since 1926, has assumed that residency requirements were no longer required of water users within a Federal Reclamation District. The residency issue is on appeal in the courts at this time. If residency is determined to be a requirement and the Reclamation Act is not amended by Congress to exclude residency, then it is likely that landowners who do not live on or nearby their property will be ineligible to receive project water for their property.

What Additional Land Ownership Costs Should Be Anticipated?

If residency on the property becomes an enforced requirement improved all-weather roads will be needed in addition to more schools, utility services, police and fire protection, solid waste disposal and sewerage treatment facilities, drinking water and health care. These developments will likely result in assessments paid by the property owner. Costs of on-farm subsurface drainage systems and improved roads are easier to estimate at this time than are the other improvements and services mentioned above.

On-farm subsurface drainage will be needed on about half of the land in the Westlands Water District and is the responsibility of the property owner. Due to the absence of subsurface drainage, perched water tables in some areas are already pushing salts upward to the surface few feet of soil. This condition seriously limits the choices of crops grown and their yields. If drains are installed after injurious salts have moved up into the root zone additional years of reclamation

will be required to return that soil to full crop productivity. The expense of installing subsurface drain facilities varies with soil texture, but a typical installation will cost about \$200 per acre.

Presently the improved road system in the Westlands Water District has an average road spacing of about five miles. Due to soil textures, unimproved roads are virtually impassable during inclement weather. Roads constructed to Fresno County's minimum standards cost \$100,000 per mile at this time for a paved, two lane road with four foot shoulders. If an improved road is built every two miles in one direction only this means a minimum cost of \$25,000 per 320 acres. This figure could be much greater if more than one-fourth mile of improved road is needed to reach the property.

If, for example, on-farm drainage is required for your 320 acres and one-fourth mile of improved road is constructed to meet the minimum standards required for Fresno County to accept a county road, then you can expect your cost of land ownership to increase by about \$89,000 for these two improvements. If on-farm owner residency is required in the future, a prospective landowner will need to determine if the costs of needed improvements and assessments for services will economically permit farming units of 320 acres in the area.

ORGANIZING A FARMING PROGRAM

How Much Water Will Be Available For 320 Acres?

It appears now that there will ultimately be between 2.67 and 2.85 acre feet of water per acre available within the project area assuming that 544,000 acres are eventually irrigated for crop production and additional water projects are not developed to bring more water to the area. This assumes approval of the proposed long-term contract between Westlands and the U.S. Government for annual delivery of 1,150,000 acre feet from the San Luis Unit, and annual pumping of groundwater in the amount of an additional 300,000 or 400,000 acre feet. Geologist reports indicate the annual recharge of groundwater from all sources in the area will be between these two amounts when San Luis Unit water is being delivered. If this water is available equally to all irrigable land in the District, we must assume an average of 2.85 acre feet to be the most optimistic long-term water availability per acre. This eliminates from any responsibly built long-term crop plan many acres of crops which use more than three acre feet of water annually.

How Much Water Is Required To Grow The Crops Suited To This Area?

Table #1 in the Appendix lists most crops grown in the area along with their water requirements. This information was developed in the Westlands Water District by district employees over a four-year period. For the most part, the crops which use less than 2.85 acre feet are economically low net-income crops and some very high risk short-season vegetable crops. Advanced planning is needed to assure adequate water supplies to meet the peak demands of the various crops you intend to plant.

Table #1 also lists suggested minimum acreage units of each crop for management and marketing practicality. Larger units have definite management advantages in labor and equipment utilization and in minimizing pesticide residue problems resulting from drift during application. At least ten acres out of each 320 usually are devoted to non-crop use, such as roads, ditches, turn areas, equipment yards and buildings. A prospective buyer will need to determine if there is enough water available to economically farm a 320 acre unit. The tables and work-sheets in this leaflet can be used as a guide in making this determination.

What Should I Expect To Pay For Irrigation Water?

The Westlands Water District water charges in 1976 are \$9.50 per acre foot. These charges will increase when the payments on the federal construction loan begin; expected to start in 1981. Water costs at that time are estimated to be between \$15 and \$19 per acre foot. The examples used for discussion in this leaflet are based upon an assumed \$17.50 charge per acre foot.

What Impact On Farm Prices Of Crops Is Expected From Changing Ownership Patterns In This Area?

To the extent that any long term crop plan for the area will change the historic supply of marketed crops there will be an opposite affect upon the market price. Market price is a reflection of buyer demand for the available supply of a crop. With the exception of cereal grain crops, a dramatic change in price would likely result from increased acres of crops grown in the area. This is particularly true of the vegetable and seed crops. Acreage of some crops, such as tomatoes, sugar beets and most seed crops are governed by contracts with processors. A new grower in the area may find it difficult to obtain a contract to grow one of these crops until there is additional need by the processor.

Could I Get A Production Loan For 320 Acres of Specialty Crops?

Lenders usually avoid high risk perishable and specialty crop production loans unless the borrower has a secondary source of operating capital equal to the production loan for collateral. This is frequently the largest single capital requirement faced by producers. Lenders are also interested in having the producer sell the crop by contract or on the futures market as soon as the price per unit will safely allow black ink in the operation. This makes it very difficult for a heavily financed grower to hold his crop in anticipation of a higher potential price when the supply of his crop appears short.

You should give serious consideration to the cash flow for the farm during the season. This is usually a major reason for diversifying crop production. If you plant a large portion of your acreage to one crop, you will need enough money available in a short period of time to meet those needs. Then, too, you will want to be sure of a marketing home for the crops before planting them.

What Is A Workable Crop Mix and Rotation In This Area?

Crop rotation has many benefits over a continuance single crop system. Rotation makes it possible to control some plant diseases and weeds and usually permits more efficient use of a permanent labor force, planting and tillage equipment, and water supplies. Inclusion of short-lived perennial crops in a diversified crop plan can help reduce the fluctuations in demand for some management resources.

Many crop rotation programs are possible in the project water service area. Supply and demand for annual crops dictate much of the crop land usage each year. One example of a possible crop rotation based upon % of total available acreage would be as follows: 25% tomatoes (1 yr. per location), 25% barley (1 yr. per location), 25% cotton (1 or 2 yrs. per location), and 25% alfalfa seed (3 yrs. per location). Soil type and water holding capacity will also help dictate the crops to be grown. Information concerning crop requirements on specific soils in the area is available from the Fresno County Office of the University of California Cooperative Extension, 1720 South Maple, Fresno, CA 93702.

What Equipment Do I Need To Farm 320 Acres?

The cost of owning or leasing equipment must be justified in comparison with hiring an experienced custom operator with specialized equipment. Equipment used for planting, tillage and irrigation operations will usually be needed frequently enough to justify ownership. Harvest equipment, in general, is too expensive for a 320 acre farm to justify when custom harvesters are available for hire. Licensed pest control applicators are plentiful in the area. Equipment used for deep tillage, land leveling and other special operations can also be arranged on a contract basis with custom operators.

What Crop Yields, Prices And Costs Are Typical In The Area?

Production costs and prices for each crop change rapidly, sometimes daily. For this reason any set of data used today will require modification as costs and prices change. Worksheet #1 shows sample net incomes per acre which could be earned by producing some major crops in this water service area, at the indicated yields, production costs, and typical land values. Water costs assumed in these samples are \$17.50 per acre foot.

OPERATING THE FARM

If Expert Services Are Available, Do I Need Anything Other Than A Checkbook And A Phone Book To Operate A Farm In The Area?

If you have a good "track record" in farming you probably have the technical skills and knowledge needed for growing crops in this area. Competent help can be hired if given proper incentive rewards. The timeliness of operations is critical in this farming area, as in others. Daily management observations and decisions are responsible for most production success stories or crop failures. Individuals who have had no experience in farming irrigated crops will find that entering such a venture will be difficult and risky.

Adequate financing will be needed in any farm operation in this area. Given the limited water supply discussed earlier, costs of potential improvements, land costs, and crop production costs; this is not an advisable business venture for the weak hearted or underfinanced individual. Farm operators need to be mentally and financially prepared to accept difficult decisions, long hours and perhaps reduced crop returns.

SAMPLE YIELDS, COSTS & PRICES

These worksheets show sample net incomes per acre which could be earned by producing crops in the San Luis Project water area, at the indicated yields, production costs, and land values that are typical of this area in 1976. Production costs and price per unit of yield for each crop are changing rapidly, sometimes daily. For this reason the data shown here should be used as a guide only. Modification will be needed as costs and prices change.

Costs are based on production practices, labor and materials costs, and land values that are typical of the area at the time this publication was prepared. Fixed and cash costs are all included in the representative examples. Water costs are figured at \$17.50 per acre foot.

Varying yields and incomes are used so that the table can be helpful in estimating net income for a wide range of yields and crop prices.

Crop	Sample Net Income Per Acre			Net Income Per Acre	My Projected Net Income Per Acre		
	Yield Per Acre (Lb. Lint)	Unit Production Cost (Lb. Lint)	Unit Price (Lb. Lint)		Unit Cost	Unit Price	Net Income Per Acre
<u>Cotton*</u>							
Based on a 1.7 to 1 seed wt. to lint wt. with seed valued @ \$110 per ton	600	\$.73	\$.45	\$-168.00			
			.55	-108.00			
			.65	- 48.00			
			.45	- 10.00			
	1,000	.46	.55	90.00			
			.65	190.00			
			.45	154.00			
	1,400	.34	.55	294.00			
			.65	434.00			
	(Tons)	(Ton)	(Ton)				
			60.00	- 92.10			
	6	75.35	70.00	- 32.10			
			80.00	27.90			
			60.00	- 7.36			
<u>Alfalfa Hay</u>	8	60.92	70.00	72.64			
			80.00	152.64			
			60.00	85.90			
	10	51.41	70.00	185.90			
			80.00	285.90			
	(Lb. Clean Seed)	(Lb.)	(Lb.)				
			.70	-190.00			
	500	1.08	.90	- 90.00			
			1.10	10.00			
			.70	- 63.00			
<u>Alfalfa Seed</u>	700	.79	.90	77.00			
			1.10	217.00			
			.70	120.00			
	1,000	.58	.90	320.00			
			1.10	520.00			

*Seed credit is applied to gross production costs to arrive at a cost for lint cotton.

Crop	Sample Net Income Per Acre			Net Income Per Acre	My Projected Net Income Per Acre		
	Yield	Unit	Unit		Unit	Unit	Unit
	Per Acre (Tons)	Production Cost (Ton)	Price (Ton)		Cost	Price	Income Per Acre
<u>Tomatoes for Processing</u>				\$ 40.00			\$-142.38
	18	\$ 47.91		50.00			37.62
				60.00			217.62
				40.00			- 17.52
	24	40.73		50.00			222.48
				60.00			462.48
<u>Sugar Beets</u>				40.00			108.60
	30	36.38		50.00			408.60
				60.00			708.60
				20.00			-194.40
	18	30.80		25.00			-104.40
				30.00			- 14.40
<u>Cantaloupes</u>				20.00			- 61.10
	26	22.35		25.00			68.90
				30.00			198.90
				20.00			72.08
	34	17.88		25.00			242.08
				30.00			412.08
<u>Barley</u>				3.00			-306.00
	300	4.02		4.00			- 6.00
				5.00			294.00
				3.00			-252.00
	400	3.63		4.00			148.00
				5.00			548.00
<u>Wheat</u>				3.00			-195.00
	500	3.39		4.00			305.00
				5.00			805.00
				100.00			- 49.55
	1½	133.03		115.00			- 27.05
				130.00			- 4.55
<u>Wheat</u>				100.00			- 2.46
	2	101.23		115.00			27.54
				130.00			57.54
				100.00			45.55
	2½	81.78		115.00			90.55
				130.00			135.55
<u>Wheat</u>				110.00			- 59.90
	1½	149.93		125.00			- 37.40
				140.00			- 14.90
				110.00			- 7.40
	2	113.70		125.00			22.60
				140.00			52.60
<u>Wheat</u>				110.00			45.00
	2½	92.00		125.00			80.00
				140.00			120.00

Sample Net Income Per Acre

My Projected Net Income Per Acre

Crop	Sample Net Income Per Acre		Unit Price (Ton)	Net Income Per Acre	My Projected Net Income Per Acre		
	Yield Per Acre (Lbs.)	Unit Production Cost (Ton)			Unit Cost	Unit Price	Net Income Per Acre
			\$150.00	\$-131.00			
	2,000	\$281.00	200.00	- 81.00			
			250.00	- 31.00			
			150.00	- 37.33			
<u>Safflower</u>	3,000	187.33	200.00	19.00			
			250.00	94.01			
			150.00	19.00			
	4,000	140.50	200.00	119.00			
			250.00	219.00			

TABLE #1

CROP INFORMATION

<u>Crop</u>	<u>Total Water* Required/Acre</u>	<u>Suggested Minimum Acreage</u>	<u>Special Concern</u>
Alfalfa Hay	4.5	40	
Safflower	3.7	40	
Pomegranates	3.6	20	
Peppers	3.5	20	Highly perishable
Cotton	3.4	40	
Alfalfa Seed	3.3	40	Usually contracted
Sugar Beets	3.3	40	Contracted
Olives	3.3	20	
G. Beans (Processing)	3.1	80	Highly perishable
Tomatoes (Processing)	3.0	80	Highly perishable; contracted
Cantaloupes	2.9	80	Highly perishable
Grapes (Sprinklers)**	2.8	40	Perishable
Let. Seed	2.8	20	Contracted
Corn	2.8	40	
Almond	2.7	40	
Milo	2.7	40	
Carrot Seed	2.7	20	Contracted
Asparagus	2.5	80	Highly perishable
Garlic	2.4	80	Perishable; contracted
Onion	2.3	80	
Potatoes	2.3	40	
Lettuce	2.1	80	Highly perishable
Dry Beans	2.0	40	
Wheat	2.0	40	
Barley	1.7	40	

*Developed by Westlands Water District over 4 year period.

**Will need more water in future to leach Boron deposits down.

MY PROJECTED CROP PLAN

Crop	Acres	Water Required	Estimated Yield/Acre	Probable Costs	Anticipated Price	Estimated Net Crop Income
Totals:						

SUMMARY OF MY FARM ECONOMIC PLAN
(for resident owner-operator)

Crop Income (from Worksheet #2 above)

Previous tables include land interest charges,
taxes, machinery & equipment costs

Estimated Net
Crop Income _____

Additional Costs

Housing _____
 Payment on Land (Principal) _____
 Operating Loan Costs _____
 Other Costs* _____

Total Additional Costs _____

NET FARM INCOME _____

*Costs of on-farm drains, roads, utility installations and other improvements and/or service district assessments need to be included where appropriate.

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