



**Value of Irrigation Water with Alternative Input Prices,
Product Prices and Yield Levels: Texas Coastal Bend,
Cross Timbers, Deep East, Edwards Aquifer, El Paso,
Gulf Coast, Lower South Central, Rolling Plains, Trans
Pecos and Winter Garden Regions**

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Table of Contents

Introduction -----	1
Procedure -----	2
Total Returns -----	3
Water Management Charge -----	3
Variable Costs of Production -----	3
Land Charges -----	4
Total Costs -----	4
Returns to Irrigation Water -----	4
Interpretation of the Results: Some Cautions -----	5
Results -----	12
Coastal Bend Region -----	13
Cross Timbers Region -----	30
Deep East Texas Region -----	35
Edwards Aquifer Region -----	40
El Paso Region -----	77
Lower Gulf Coast Region -----	102
Upper Gulf Coast Region -----	107
Lower South Central Region -----	112
Rolling Plains I Region -----	129
Rolling Plains II Region -----	138
Trans-Pecos Region -----	175
Winter Garden Region -----	208

Introduction

Agriculture is a major income generating sector of the Texas economy. Irrigated agriculture is an important part of Texas agriculture and an "adequate" water supply is important in maintaining a viable agriculture. Irrigation water is important both as a means of increasing the overall production of agricultural commodities and to stabilize farm income from commodities because of the high (year to year) variability of rainfall in most agricultural areas of Texas.

Current interest in the value of irrigation water in agricultural production stems in part from rapid change in prices paid for farm inputs and prices received for farm products. The past two years have been a period of abrupt and large increases in prices. Prices of some farm products have risen to record levels; because of the energy crisis and the rapid rate of inflation, prices of fertilizer and fuel have at least doubled, and the price of other farm inputs have risen substantially. These price changes, in absolute and relative terms, make past studies of the value of irrigation water no longer meaningful or applicable. This study was undertaken to determine the value of irrigation water under 1974 price levels and relationships, and for prices that might be reasonably expected in the future.

In this report, estimates are presented of the value of irrigation water at irrigation levels typically used on major crops (one percent or more of cropped land area based on 1969 TWDB inventory¹) produced in the

¹Texas Water Development Board, "Inventories of Irrigation in Texas, 1958, 1964 and 1969," Texas Water Development Board Report No. 127.

Coastal Bend, Cross Timbers, Deep East Texas, Edwards Aquifer, El Paso, Lower and Upper Gulf Coast, Lower South Central, Rolling Plains I and II, Trans-Pecos and Winter Garden regions.

The original contract (TWB 14-40034) did not specify several of the regions included in this report; e.g., Cross Timbers, Deep East Texas, El Paso and Rolling Plains. However, the data were available and insignificant additional costs of both time and funds were required to make the report comprehensive. Combining this report with the materials in Texas Water Resources Institute Technical Report Number 58, submitted August of 1974 yields analyses of all irrigated crops in all producing regions of Texas.

Estimates of the value of irrigation water under alternative product prices, production costs, and yield levels are presented. This allows the reader to observe the "sensitivity" of the "ability-to-pay" for irrigation water to changing economic conditions (i.e., changing input and output prices).

Procedure

To estimate the value of irrigation water, a good data base is needed. For this study, reliable 1974 crop enterprise budgets were available. These crop budgets were developed by the area economists of the Texas Agricultural Extension Service using the enterprise budget generator, adapted to the IBM 360 computer. Stored in the model are machinery complements, prices, yields, machinery practices and inputs, by major agricultural regions in Texas; any or all of these may be modified to update existing budgets. This enterprise budget generation capability was

developed partially in response to an earlier Texas Water Development Board project with the Texas Agricultural Extension Service.

The 1974 crop enterprise budgets provided data needed to determine returns to irrigation water. The procedure involves accounting for all cost items in the budget with any residual considered as returns to irrigation water. Value of irrigation water was estimated by crop and region based on (1) 5 alternative crop yields, (2) 5 product prices, and (3) 3 alternative input price levels.

Total Returns: Total returns per acre were calculated as yield times price of the product. This means there is a total return value for each of the alternative yields at each of the price levels used. For combination products, such as lint and seed for cotton, the secondary-product (seed) price was held constant, but its value was included in net returns for every alternative. However, seed output in cotton was changed directly in proportion to lint yield in considering different yield levels, i.e., 1.6 pounds of seed per pound of lint. Forage value (grazing returns) for crops such as winter wheat were typically held constant; i.e., alternative yield and product price levels were not considered.

Management Charge: A management charge of 5 percent of total returns was calculated; this charge was included as a cost and deducted from total returns.

Variable Costs of Production: Variable costs are the traditional "out-of-pocket" costs involved in planting, growing and harvesting. Harvesting costs were based on yield level, hence, would change for each yield level.

Also included in these costs were pumping costs for areas using ground water, or cost of water from a water district. To consider the economic feasibility of importing water into a region it would be appropriate to add these costs back into returns to water (ability-to-pay) since the pumping or water cost presently borne by irrigators would not be incurred for imported water.

Land Charge: Return to the land component for a crop was established as (1) rent from dryland production of that crop if a dryland alternative was feasible, (2) rent to the predominant dryland (or irrigated where no dryland crops are produced) crop in the region if the crop being considered was not grown as a dryland crop, or, (3) a rate of return on investment, usually seven percent against current land value in the region. The land charge or basis for calculating the land charge is presented in a footnote for each crop in the results section of this report.

Total Costs: Total costs per acre were obtained by summing the management charge, land charge, variable costs and fixed costs, for each yield level and product price level. These cost estimates were based on 1974 costs figures. To provide implications of cost changes on value of irrigation water, the results were replicated by increasing the 1974 costs by 10 percent and by 20 percent.

Returns to Irrigation Water: Per acre returns to irrigation water for each crop were obtained by subtracting total cost from total returns for each assumed price and yield level. Returns to water were converted to an acre foot basis by dividing the total by the quantity of water applied to the crop.

Interpretation of the Results: Some Cautions

Proper interpretation of the results reported herein involves two important considerations. First, the quantities of irrigation water reported are for water applied to the plant and do not take into account water loss in distribution systems. To estimate water pumped or otherwise supplied (as opposed to water applied), it would be necessary to modify water quantities presented in the report to adjust for water loss in distribution systems.

A second consideration has to do with proper accounting procedures involving pumping costs and/or charge for purchased water (as previously noted - see Variable Costs of Production subsection). If the user(s) of these data wishes to know the ability-to-pay for water assuming current (existing) technologies and sources, the water value estimates are immediately interpretable as such (no adjustment if required). On the other hand, if the user wishes to determine the value (ability-to-pay) of water supplied from alternative sources (e.g., imported water) and/or via different technologies, then the value of irrigation water estimates should be increased by the amount of the current pumping costs and/or water charge if these costs would no longer be incurred given the proposed alternative were adopted. One exception to this would be the option of recharging an aquifer. In evaluating the economic feasibility of this option, pumping costs continue under this type of water augmentation technology; therefore, the value of irrigation water estimates should not be adjusted.

So that the user can make these kinds of adjustments of the water value estimates in this report, water cost (cost to deliver irrigation

water to the farm distribution system) per acre foot for appropriate crops in the regions included in this report were budgeted as follows:

Crop and Irrigation Technique	Quantity of Irrigation Water Used --Acre Feet--	Cost of Irrigation		Total Irrigation
		Per Acre Foot Pumping	Delivery	Cost Per Acre
		-----Dollars-----		---Dollars---

Texas Coastal Bend

Cabbage	1.25	12.51	4.17	20.85
Coastal Bermudagrass	.75	12.51	4.17	12.51
Grain Sorghum	.33	12.51	4.17	5.50
Onions	1.67	12.51	4.17	27.86

(Note: Furrow irrigation on all but Coastal which is flooded using same delivery system. Distribution system represents 25 percent costs. e.g., HP II)

Texas Cross Timbers

Peanuts	1.25	20.40	29.40	62.25
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(Note: Sprinkler irrigation system, cost allocation from TAES MP-1027)

Deep East Texas

Peanuts	.42	8.64	12.96	9.06
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(Note: Sprinkler irrigation system, portable pump, cost allocation from TAES MP-1027)

Crop and Irrigation Technique	Quantity of Irrigation Water Used --Acre Feet--	Cost of Irrigation		Total Irrigation
		Per Acre Foot Pumping	Delivery	Cost Per Acre ---Dollars----
		-----Dollars-----		

Edwards Aquifer

Cabbage	2.5	12.96	1.44	36.00
Carrots	2.5	12.96	1.44	36.00
Coastal Hay	3.0	12.96	1.44	43.20
Corn	2.0	12.96	1.44	28.80
Corn Silage	2.0	12.96	1.44	28.80
Cotton	1.5	12.96	1.44	21.60
Grain Sorghum	1.5	12.96	1.44	21.60
Sudan Hay	1.5	12.96	1.44	21.60
Mexican Wheat	1.5	12.96	1.44	21.60

(Note: Furrow irrigation except Coastal and Sudan Hay where same distribution is used for flood irrigation. Cost allocations from TAES MP-1027)

El Paso

Alfalfa	3.1	14.16	2.10	50.41
Barley	2.05	15.31	2.10	35.69
Corn Silage	2.1	11.90	2.10	29.40
Cotton, Pima	2.1	11.90	2.10	29.40
Cotton, Upland	2.1	11.90	2.10	29.40
Grain Sorghum	2.1	11.90	2.10	29.40

(Note: Furrow irrigation except on alfalfa where same distribution system is used. Late fall and early spring irrigations on Alfalfa and Barley from wells. Cost allocation from TAES MP-1027)

Crop and Irrigation Technique	Quantity of Irrigation Water Used --Acre Feet--	Cost of Irrigation		Total Irrigation
		Per Acre Foot Pumping	Foot Delivery	Cost Per Acre ---Dollars----
		-----Dollars-----		

Gulf Coast

Rice (Lower)	3.59	5.57	1.04	23.72
Rice (Upper)	3.59	6.96	1.21	29.32

(Note: Flood system with water delivered to field at \$20/acre in Lower Gulf Coast and \$25/acre in Upper Gulf Coast region, from TAES MP-1027)

Lower South Central

Grain Sorghum	1.5	33.93	11.31	67.86
Peanuts	2.0	33.93	11.31	90.48
Strawberries	2.16	15.80	5.27	45.50
Watermelon	1.0	33.93	11.31	45.24

(Note: Side roll sprinkler system, substantially larger system on sorghum and peanuts, from TAES MP-1027)

Rolling Plains I

Alfalfa	3.0	13.20	13.20	79.20
Coastal Hay	1.92	13.20	13.20	50.60

(Note: Sprinkler system, small units from TAES MP-1027)

Crop and Irrigation Technique	Quantity of Irrigation Water Used --Acres Feet--	Cost of Irrigation		Total Irrigation Cost Per Acre ----Dollars----
		Per Acre Foot Pumping	Delivery	
		-----Dollars-----		
<u>Rolling Plains II</u>				
Alfalfa	1.33	6.49	3.49	13.28
Coastal Hay	1.33	6.49	3.49	13.28
Cotton	1.17	6.49	3.49	11.68
Grain Sorghum	1.17	6.49	3.49	11.68
Guar	.83	6.49	3.49	8.28
Hybrid Forage Hay	1.17	6.49	3.49	11.68
Irish Potatoes	2.83	6.49	3.49	28.24
Sorghum Silage	1.17	6.49	3.49	11.68
Wheat	1.17	6.49	3.49	11.68

(Note: Flood irrigation, small systems, from TAES MP-1027)

<u>Trans-Pecos</u>				
Alfalfa	4.0	19.26	6.42	102.72
Barley	3.17	19.26	6.42	81.41
Cantaloupes	2.0	19.26	6.42	51.36
Cotton, Pima	3.67	19.26	6.42	94.25
Cotton, Upland	3.67	19.26	6.42	94.25
Forage Sorghum Silage	2.33	19.26	6.42	59.83
Grain Sorghum	2.33	19.26	6.42	59.83
Wheat	2.0	19.26	6.42	51.36

(Note: Furrow irrigation system, from TAES MP-1027)

Crop and Irrigation Technique	Quantity of Irrigation Water Used --Acre Feet--	Cost of Irrigation		Total Irrigation Cost Per Acre ----Dollars----
		Per Acre Foot Pumping	Delivery	
		-----Dollars-----		
<u>Winter Garden</u>				
Cabbage	2.0	13.23	4.41	35.28
Cantaloupes	1.67	13.23	4.41	29.46
Carrots	1.67	13.23	4.41	29.46
Corn	1.67	13.23	4.41	29.46
Corn Silage	1.67	13.23	4.41	29.46
Cotton	1.67	13.23	4.41	29.46
Cucumbers	1.67	13.23	4.41	29.46
Forage Sorghum Hay	1.0	13.23	4.41	17.64
Grain Sorghum	1.25	13.23	4.41	22.05
Lettuce	1.88	13.23	4.41	33.16
Onions	2.50	13.23	4.41	44.10
Spinach, Fresh	1.67	13.23	4.41	29.46
Spinach, Processed	2.33	13.23	4.41	41.10
Wheat	.83	13.23	4.41	14.64

(Note: Furrow irrigation system, large systems, from TAES MP-1027)

Results

This report presents estimated value per acre foot of irrigation water for the following regions of Texas; Texas Coastal Bend, Cross Timbers, Deep East, Edwards Aquifer, El Paso, Gulf Coast, Lower South Central, Rolling Plains, Trans-Pecos, and Winter Garden. This value for each region is given in tabular form, by crop and in some cases irrigation level as well as distribution system used, for 5 yields, 5 product prices and 3 cost levels. The data included in each table are then presented in three separate graphs immediately following the table. There is one graph each for 1974 costs, 1974 costs inflated 10 percent and 1974 costs inflated 20 percent. This provides for maximum flexibility in identifying estimated value of irrigation water for whatever yield, price and cost assumptions the user selects.

Texas Coastal Bend

This area comprises Bee, Nueces, Refugio and San Patricio counties plus some of each surrounding county where soils are similar. The majority of the irrigated lands are in San Patricio county with some supplemental irrigation on the river bottom soils in the region.

Normally, sufficient rainfall limits the economics of irrigation in this region except for speciality crops.

A land charge of \$25.00 per acre was assessed, based on dryland cotton and grain sorghum. The alternative yields per acre and prices used in this analysis are presented in the following table.



Crop	Unit	Yields				Prices				
		600	700	800	900	1.50	2.00	2.50	3.00	3.50
Cabbage	bag	600	700	800	900	1.50	2.00	2.50	3.00	3.50
Coastal Bermudagrass	ton	6	7	8	9	15.00	20.00	25.00	30.00	35.00
Grain Sorghum	cwt	25	35	45	55	2.00	2.50	3.00	3.50	4.00
Onions	bag	100	200	300	400	1.50	2.00	2.50	3.00	3.50

RETURNS PER ACRE FOOT OF IRRIGATION WATER

COASTAL BEND
CABBAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		600.0	700.0	800.0	900.0	1000.0
PRODUCTION COSTS 1974	*					
PRICES	*					
1.500	*	-111.920	-84.320	-56.720	-29.120	-1.520
2.000	*	116.080	181.680	247.280	312.880	378.480
2.500	*	344.080	447.680	551.280	654.880	758.480
3.000	*	572.080	713.680	855.280	996.880	1138.480
3.500	*	800.080	979.680	1159.280	1338.880	1518.480
10% COST INFLATION	*					
PRICES	*					
1.500	*	-195.112	-176.752	-158.392	-140.032	-121.672
2.000	*	31.688	87.848	144.008	200.168	256.328
2.500	*	258.488	352.448	446.408	540.368	634.328
3.000	*	485.288	617.048	748.808	880.568	1012.328
3.500	*	712.088	881.648	1051.208	1220.768	1390.328
20% COST INFLATION	*					
PRICES	*					
1.500	*	-278.303	-269.184	-260.063	-250.944	-241.824
2.000	*	-52.704	-5.984	40.737	87.456	134.176
2.500	*	172.896	257.216	341.536	425.856	510.176
3.000	*	398.496	520.416	642.336	764.256	886.176
3.500	*	624.096	783.616	943.136	1102.656	1262.176

A DRYLAND RETURN OF 25.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

\$/acre foot

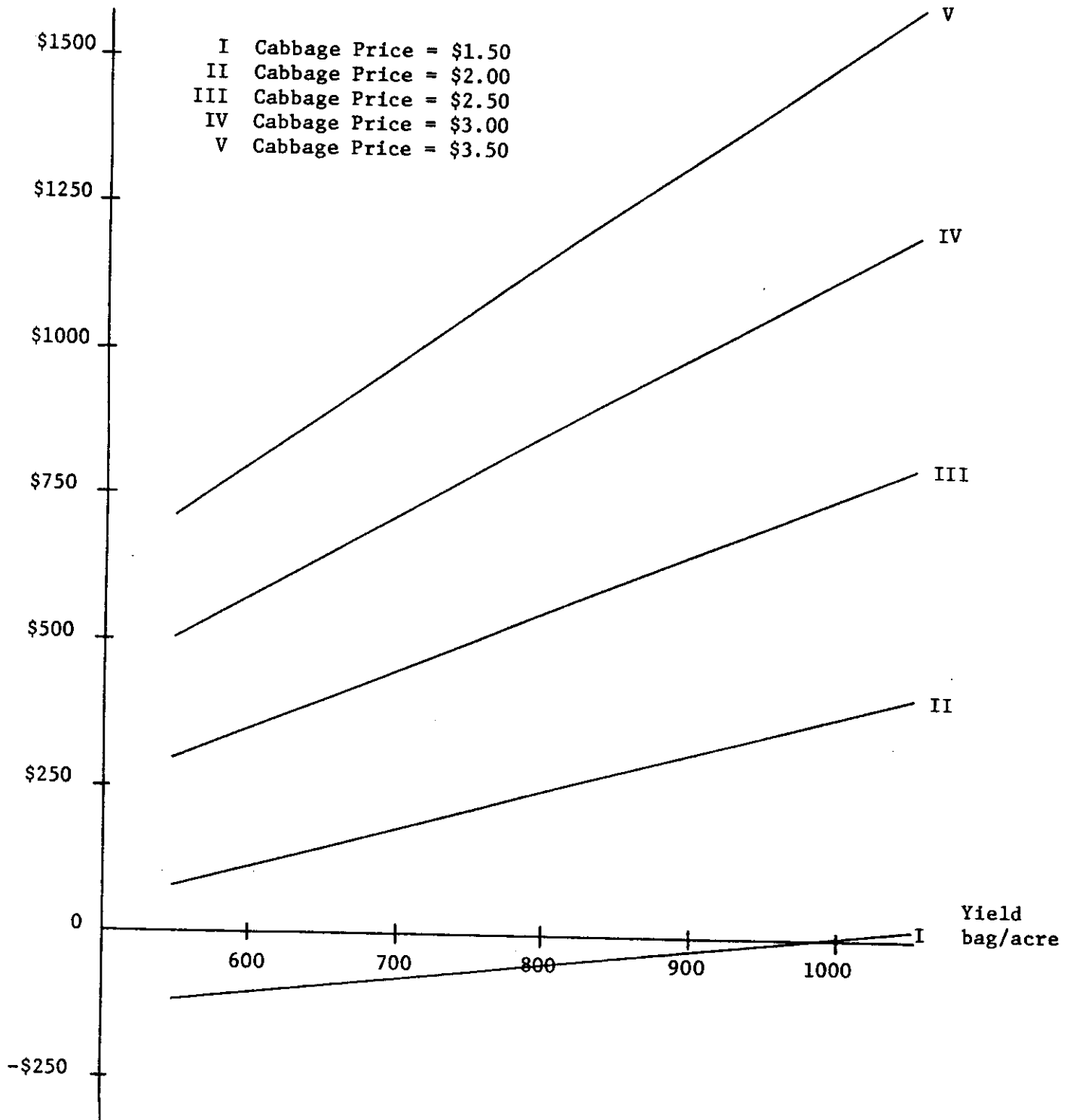


Figure Value of irrigation water applied to Cabbage in Coastal Bend for alternative Cabbage prices and yields with expected 1974 costs.

\$/acre foot

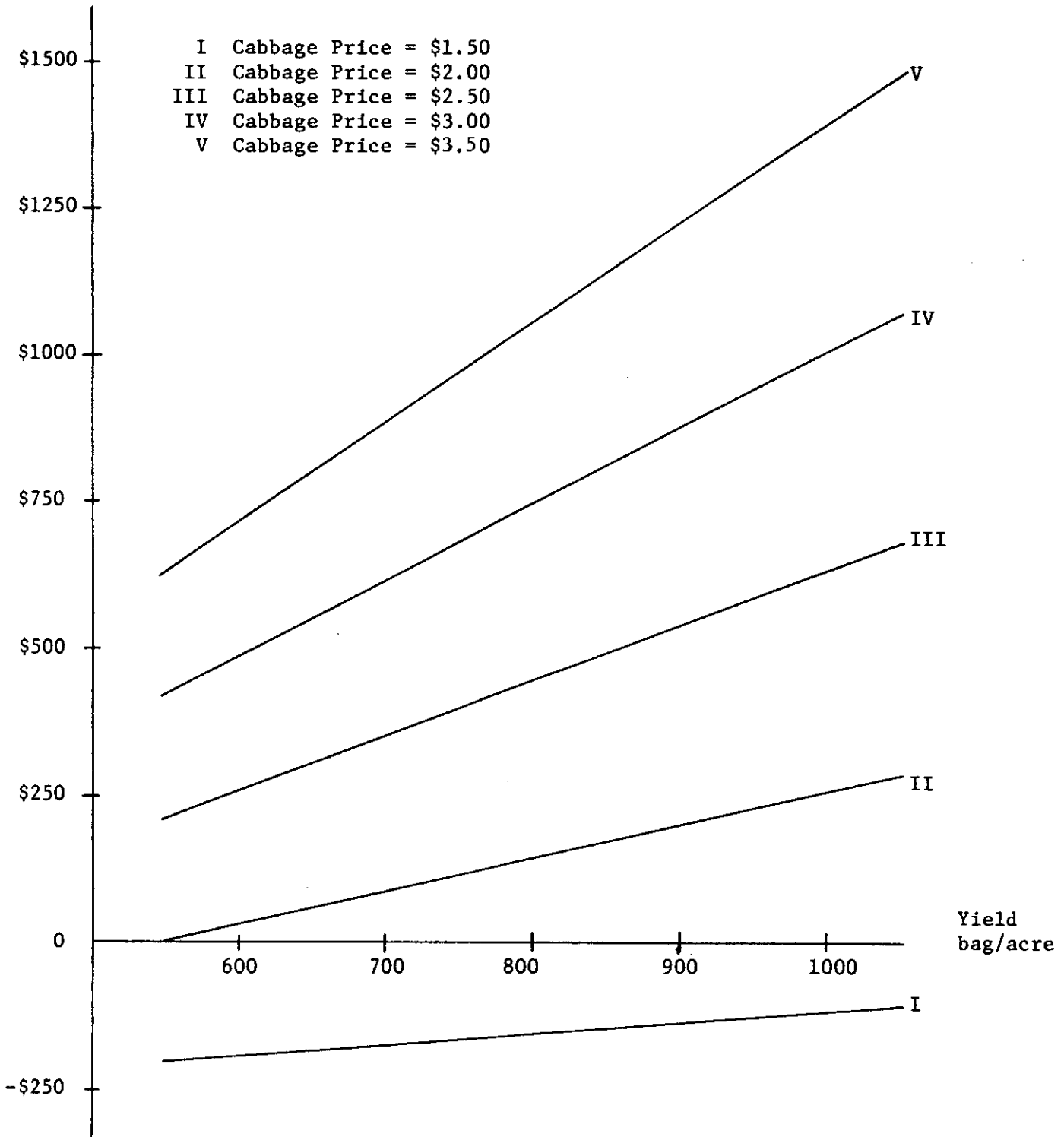


Figure Value of irrigation water applied to Cabbage in Coastal Bend for alternative Cabbage prices and yields with expected 1974 costs inflated 10 percent.

\$/acre foot

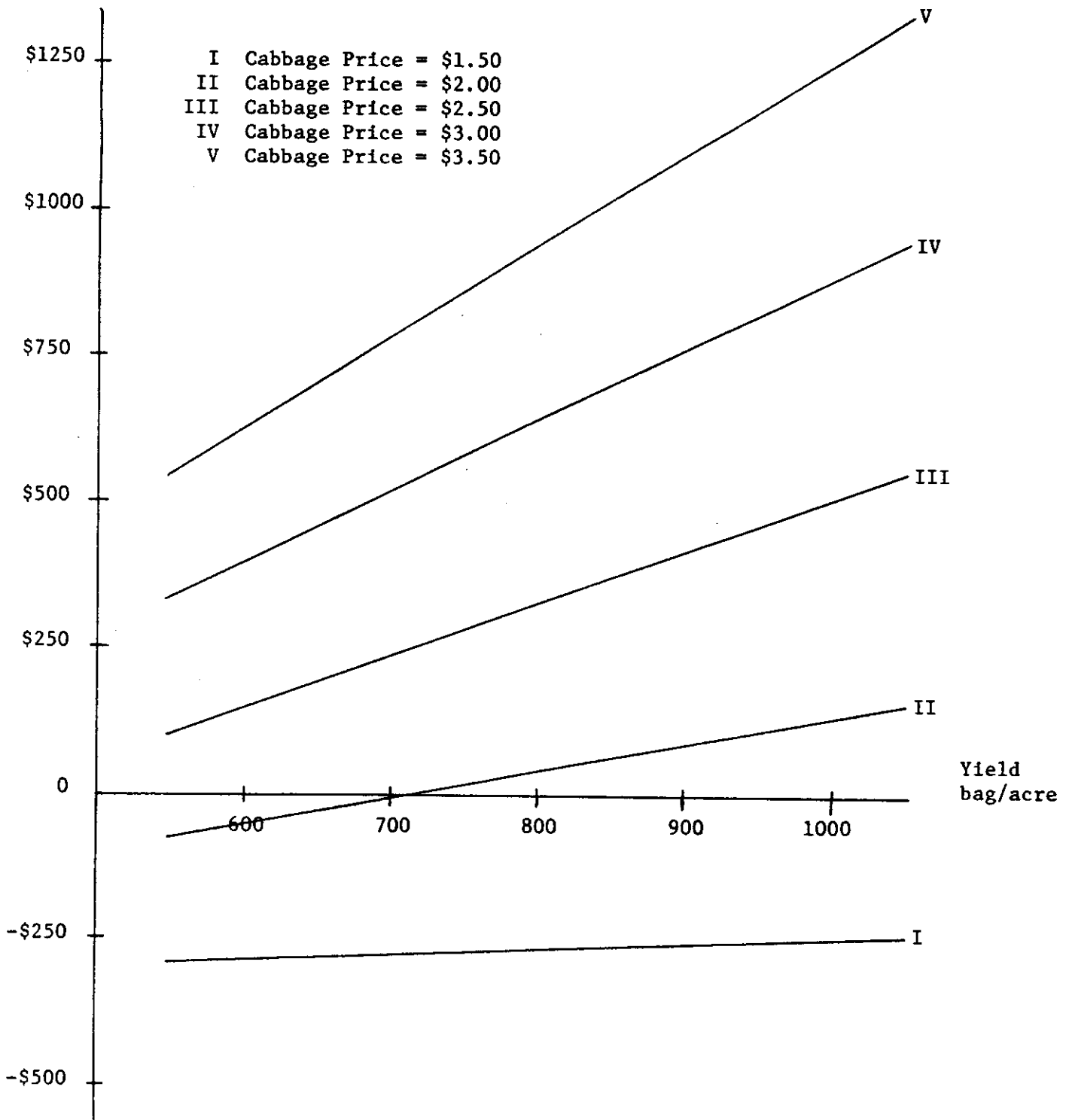


Figure Value of irrigation water applied to Cabbage in Coastal Bend for alternative Cabbage prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

COASTAL BEND
COASTAL BERMUDAGRASS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		6.0	7.0	8.0	9.0	10.0
PRODUCTION COSTS 1974	*					
PRICES	*					
15.000	*	-360.560	-370.160	-379.760	-389.360	-398.960
20.000	*	-322.560	-325.826	-329.093	-332.360	-335.626
25.000	*	-284.560	-281.493	-278.426	-275.360	-272.293
30.000	*	-246.560	-237.160	-227.760	-218.360	-208.960
35.000	*	-208.560	-192.826	-177.093	-161.360	-145.626
10% COST INFLATION	*					
PRICES	*					
15.000	*	-408.616	-421.176	-433.736	-446.295	-458.856
20.000	*	-370.816	-377.075	-383.335	-389.595	-395.856
25.000	*	-333.016	-332.976	-332.936	-332.896	-332.856
30.000	*	-295.216	-288.875	-282.535	-276.196	-269.856
35.000	*	-257.416	-244.776	-232.136	-219.495	-206.855
20% COST INFLATION	*					
PRICES	*					
15.000	*	-456.671	-472.192	-487.711	-503.231	-518.751
20.000	*	-419.072	-428.325	-437.578	-446.831	-456.085
25.000	*	-381.472	-384.458	-387.445	-390.431	-393.418
30.000	*	-343.872	-340.591	-337.312	-334.031	-330.751
35.000	*	-306.272	-296.725	-287.178	-277.631	-268.084

A DRYLAND RETURN OF 25.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
irrigation

\$/acre foot

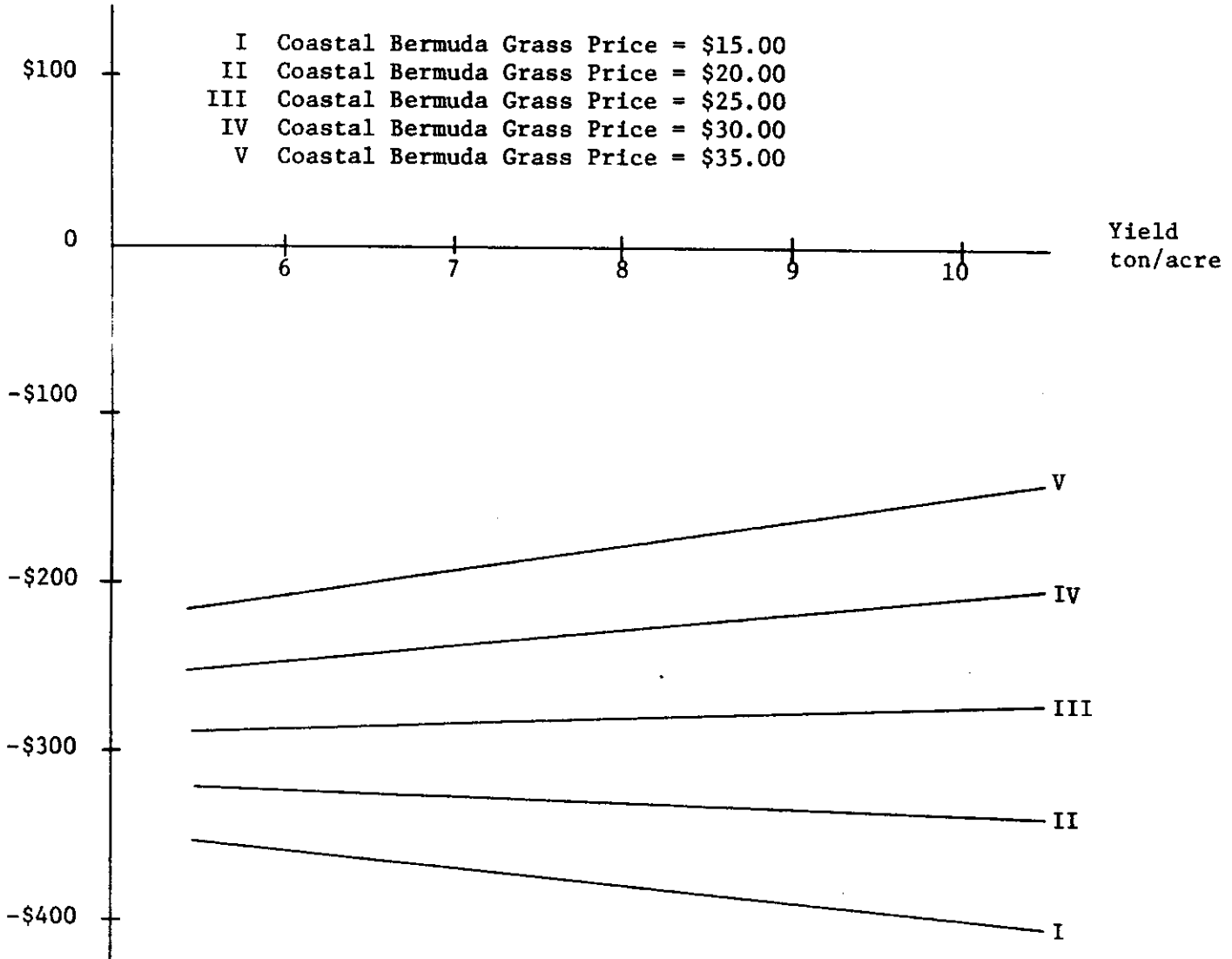


Figure Value of irrigation water applied to Coastal Bermuda Grass in Coastal Bend for alternative Coastal Bermuda Grass prices and yields with expected 1974 costs.

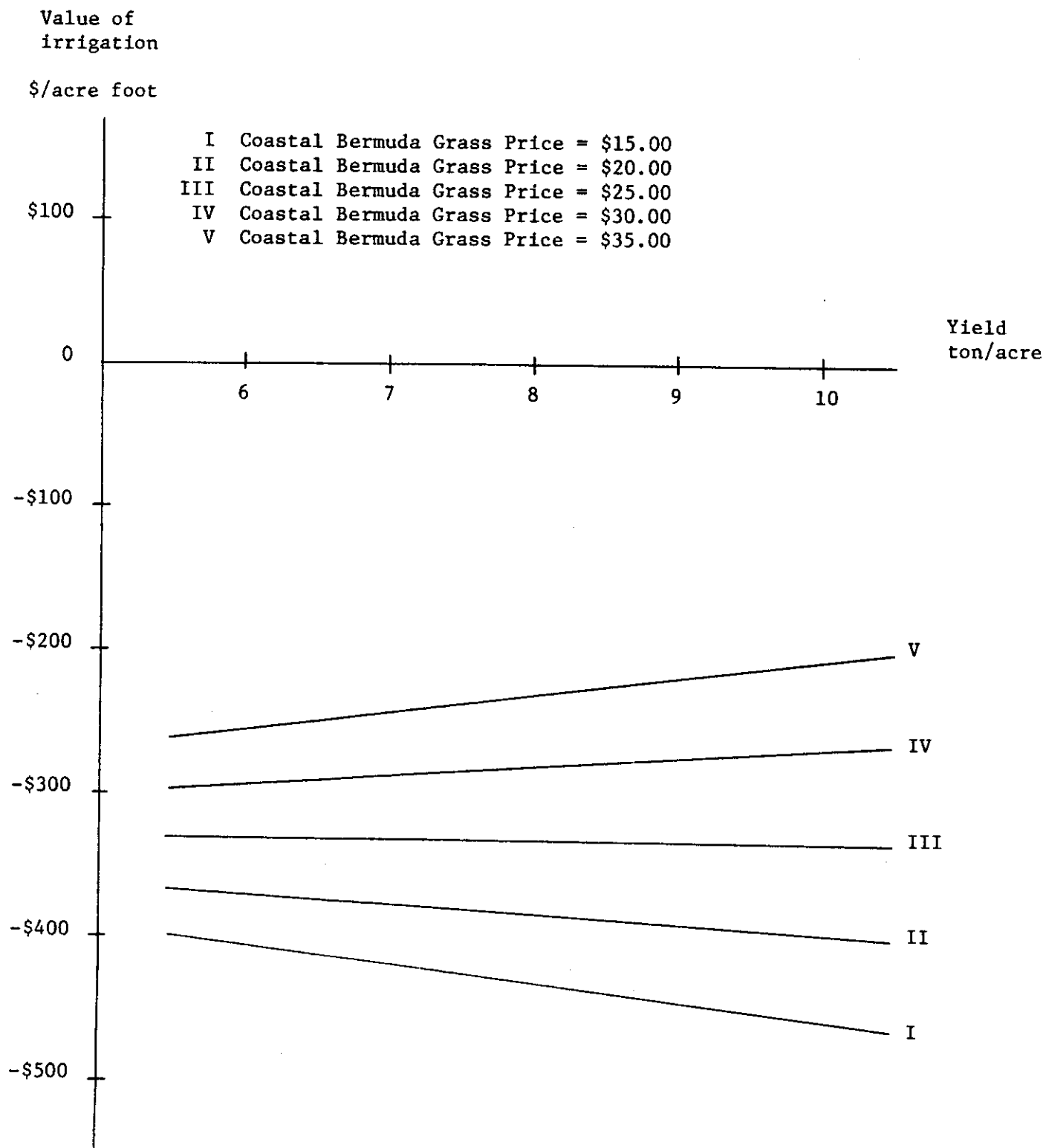


Figure Value of irrigation water applied to Coastal Bermuda Grass in Coastal Bend for alternative Coastal Bermuda Grass prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation

\$/acre foot

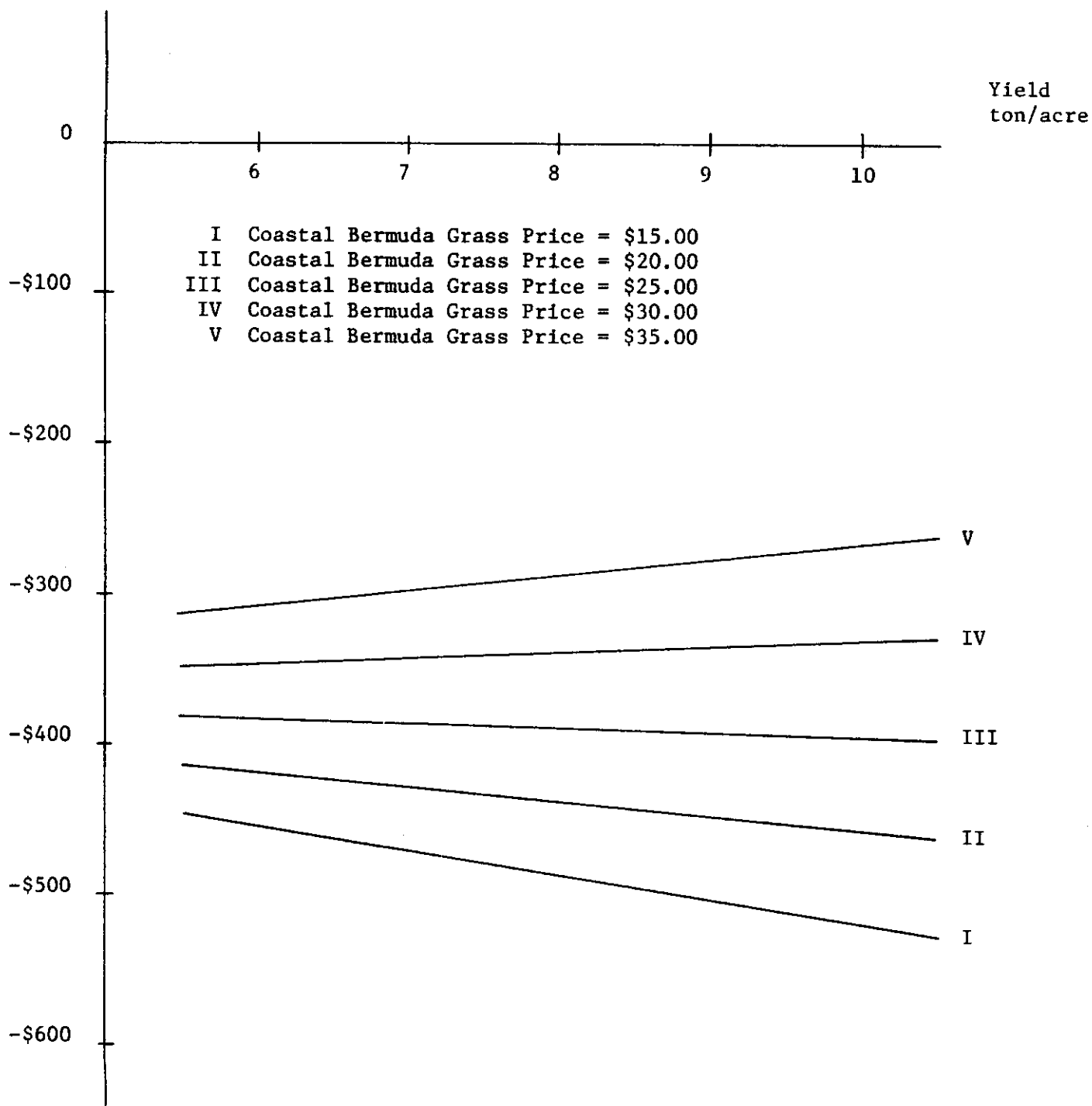


Figure Value of irrigation water applied to Coastal Bermuda Grass in Coastal Bend for alternative Coastal Bermuda Grass prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

COASTAL BEND
GRAIN SORGHUM

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		25.0	35.0	45.0	55.0	65.0
PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-143.455	-96.485	-49.515	-2.545	44.424
2.500	*	-107.470	-46.106	15.258	76.621	137.985
3.000	*	-71.485	4.273	80.030	155.788	231.545
3.500	*	-35.500	54.652	144.803	234.955	325.106
4.000	*	0.485	105.030	209.576	314.121	418.667
10% COST INFLATION	*					
PRICES	*					
2.000	*	-172.951	-127.345	-81.739	-36.133	9.473
2.500	*	-137.156	-77.232	-17.308	42.617	102.541
3.000	*	-101.361	-27.118	47.124	121.367	195.609
3.500	*	-65.565	22.995	111.556	200.117	288.677
4.000	*	-29.771	73.109	175.988	278.867	381.745
2% COST INFLATION	*					
PRICES	*					
2.000	*	-202.448	-158.206	-113.964	-69.721	-25.479
2.500	*	-166.842	-108.358	-49.873	8.612	67.097
3.000	*	-131.236	-58.509	14.218	86.945	159.673
3.500	*	-95.630	-8.661	78.309	165.279	252.249
4.000	*	-60.024	41.188	142.400	243.612	344.824

A DRYLAND RETURN OF 25.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

\$/acre foot

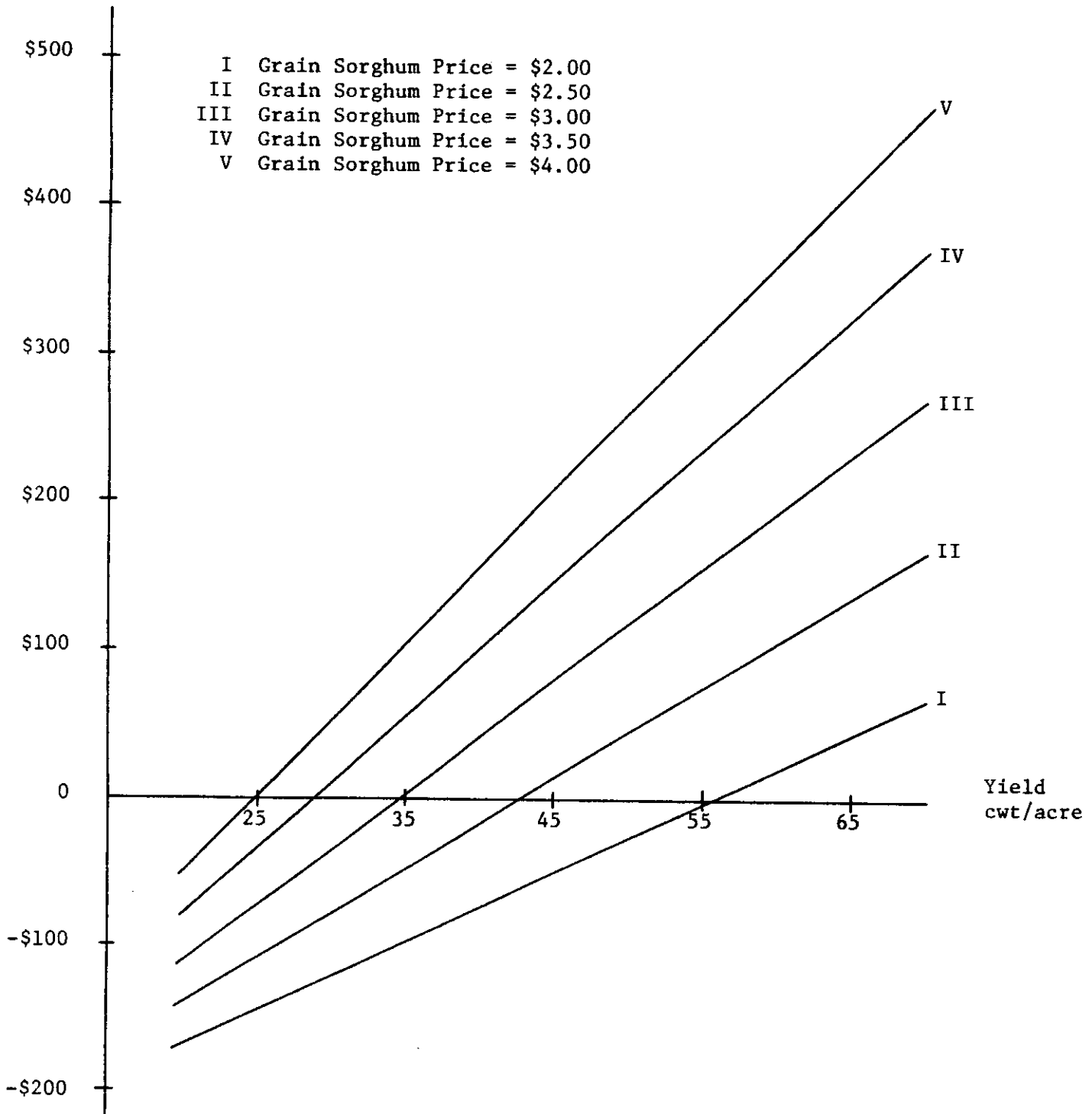


Figure Value of irrigation water applied to Grain Sorghum in Coastal Bend for alternative Grain Sorghum prices and yields with expected 1974 costs.

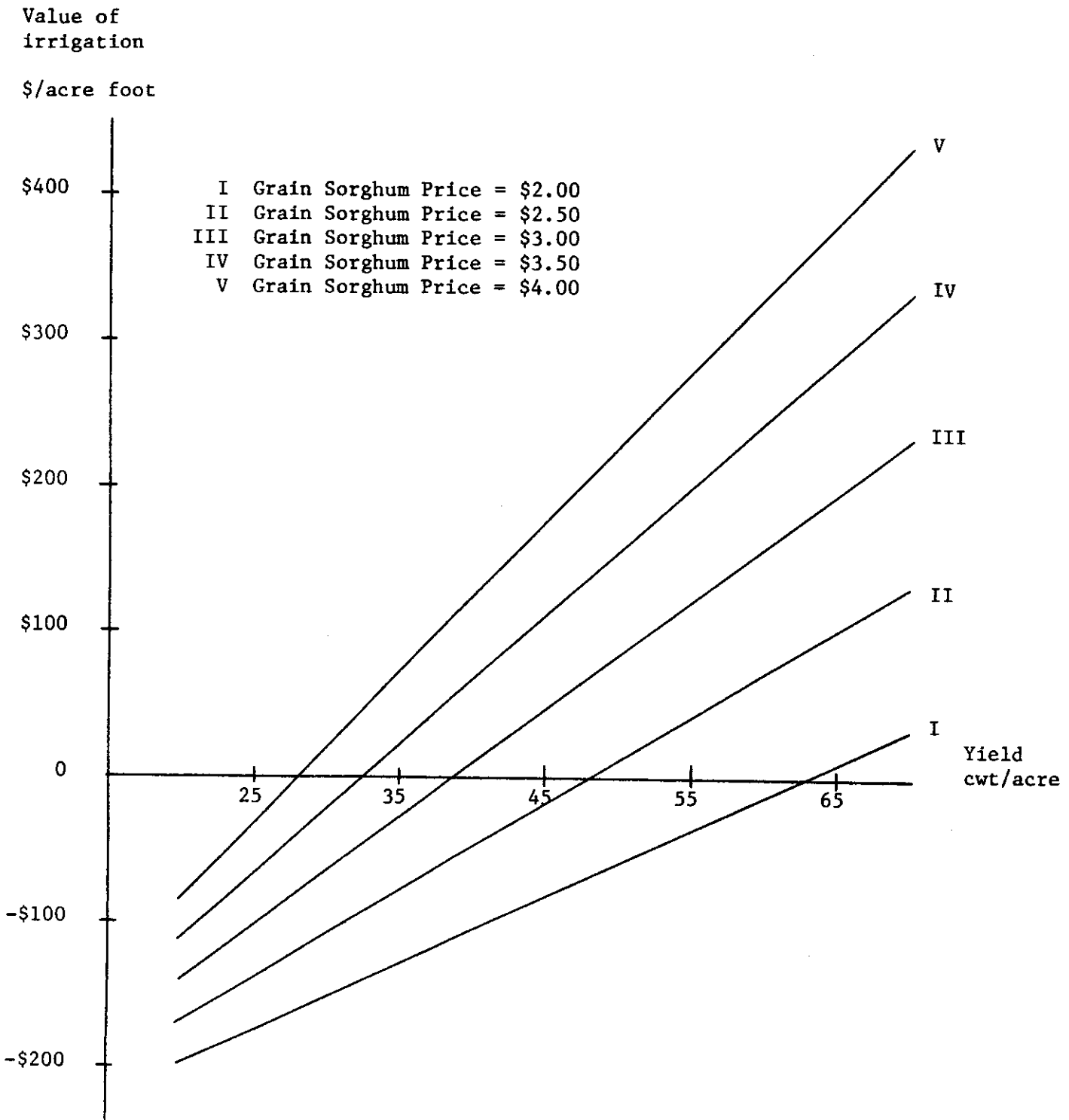


Figure Value of irrigation water applied to Grain Sorghum in Coastal Bend for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 10 percent.

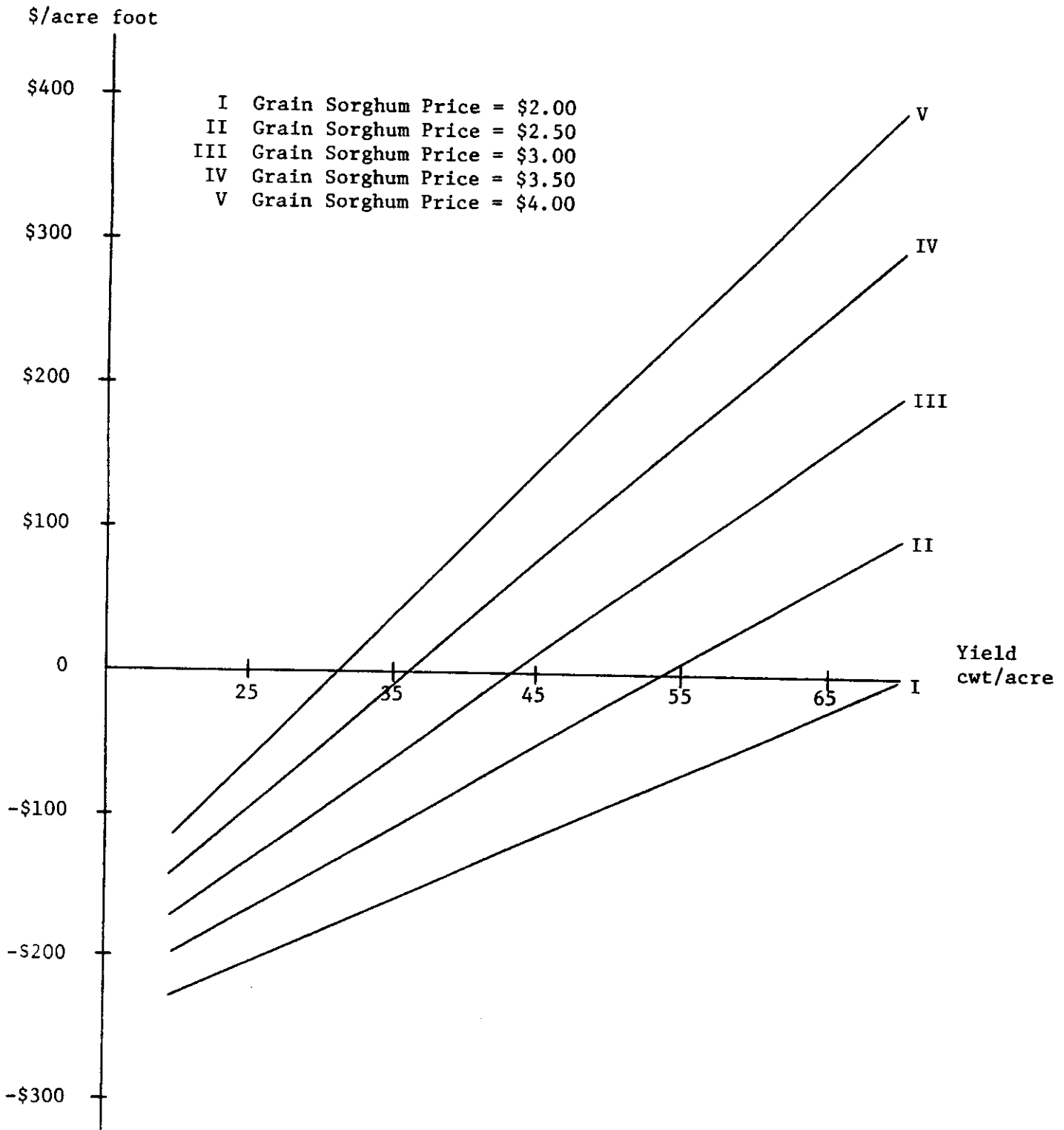


Figure Value of irrigation water applied to Grain Sorghum in Coastal Bend for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

COASTAL BEND
ONIONS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		100.0	200.0	300.0	400.0	500.0

PRODUCTION COSTS 1974	*					
PRICES	*					
1.500	*	-109.365	-111.461	-113.557	-115.653	-117.748
2.000	*	-80.922	-54.575	-28.227	-1.880	24.467
2.500	*	-52.479	2.311	57.102	111.892	166.683
3.000	*	-24.036	59.198	142.431	225.665	308.898
3.500	*	4.407	116.084	227.761	339.437	451.114

10% COST INFLATION	*					
PRICES	*					
1.500	*	-129.284	-140.571	-151.859	-163.146	-174.433
2.000	*	-100.990	-83.984	-66.978	-49.972	-32.966
2.500	*	-72.697	-27.397	17.902	63.201	108.501
3.000	*	-44.403	29.189	102.782	176.375	249.968
3.500	*	-16.110	85.776	187.662	289.548	391.435

20% COST INFLATION	*					
PRICES	*					
1.500	*	-149.202	-169.681	-190.160	-210.639	-231.118
2.000	*	-121.059	-113.394	-105.729	-98.065	-90.400
2.500	*	-92.915	-57.106	-21.298	14.510	50.319
3.000	*	-64.771	-0.819	63.133	127.085	191.037
3.500	*	-36.627	55.468	147.564	239.660	331.756

A DRYLAND RETURN OF 25.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of irrigation

\$/acre foot

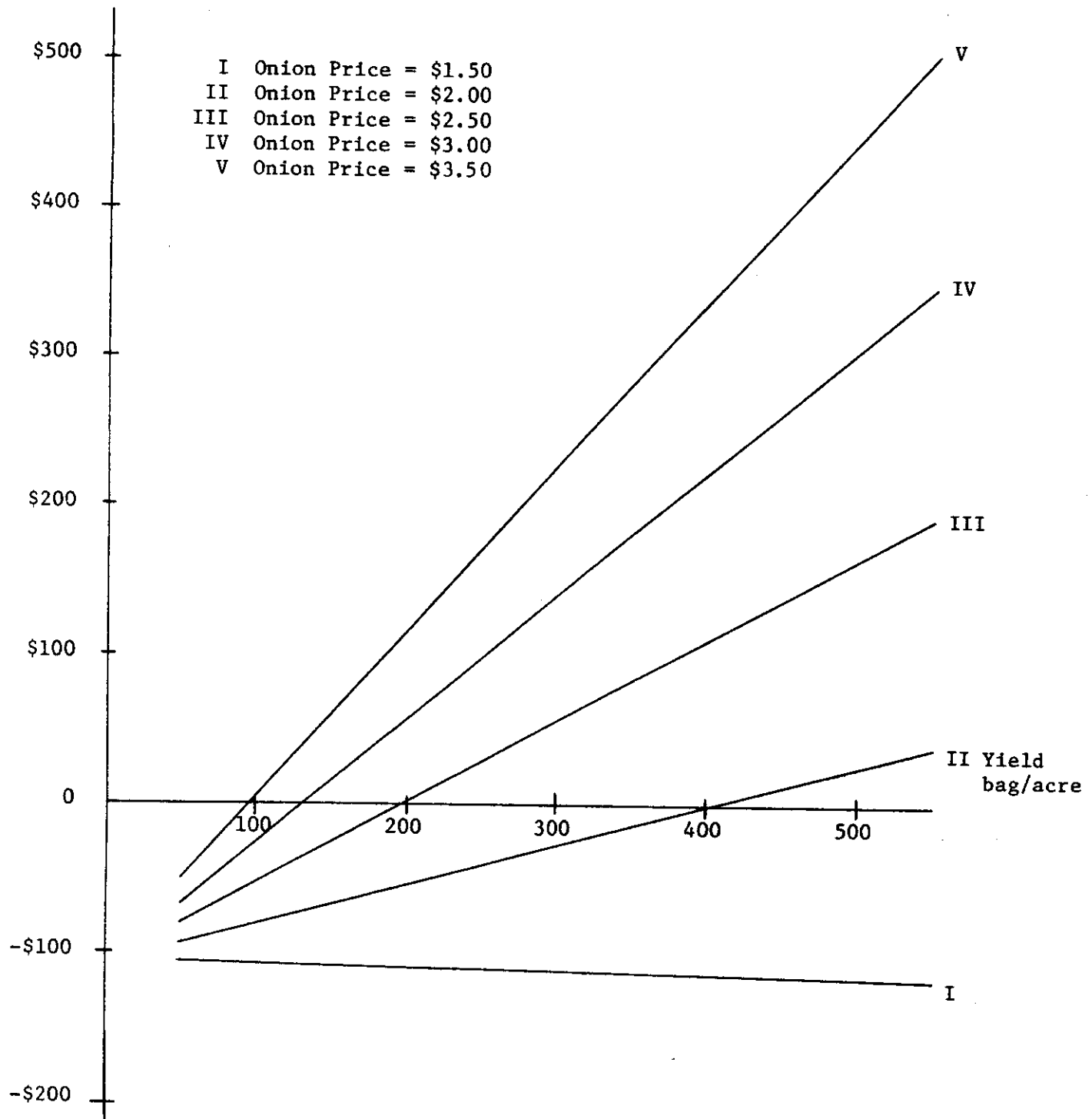


Figure Value of irrigation water applied to Onions in Coastal Bend for alternative Onion prices and yields with expected 1974 costs.

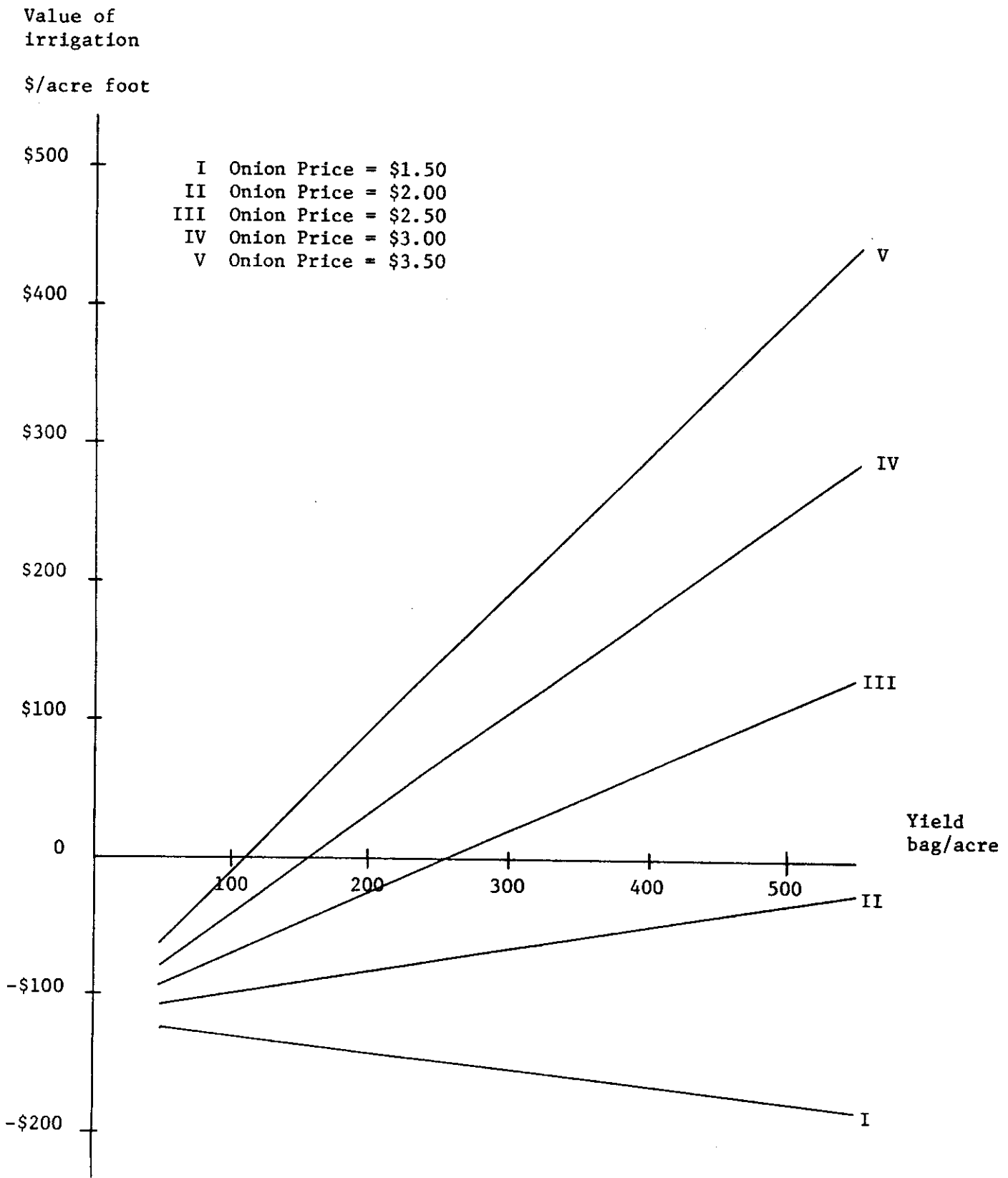


Figure Value of irrigation water applied to Onions in Coastal Bend for alternative Onion prices and yields with expected 1974 costs inflated 10 percent.

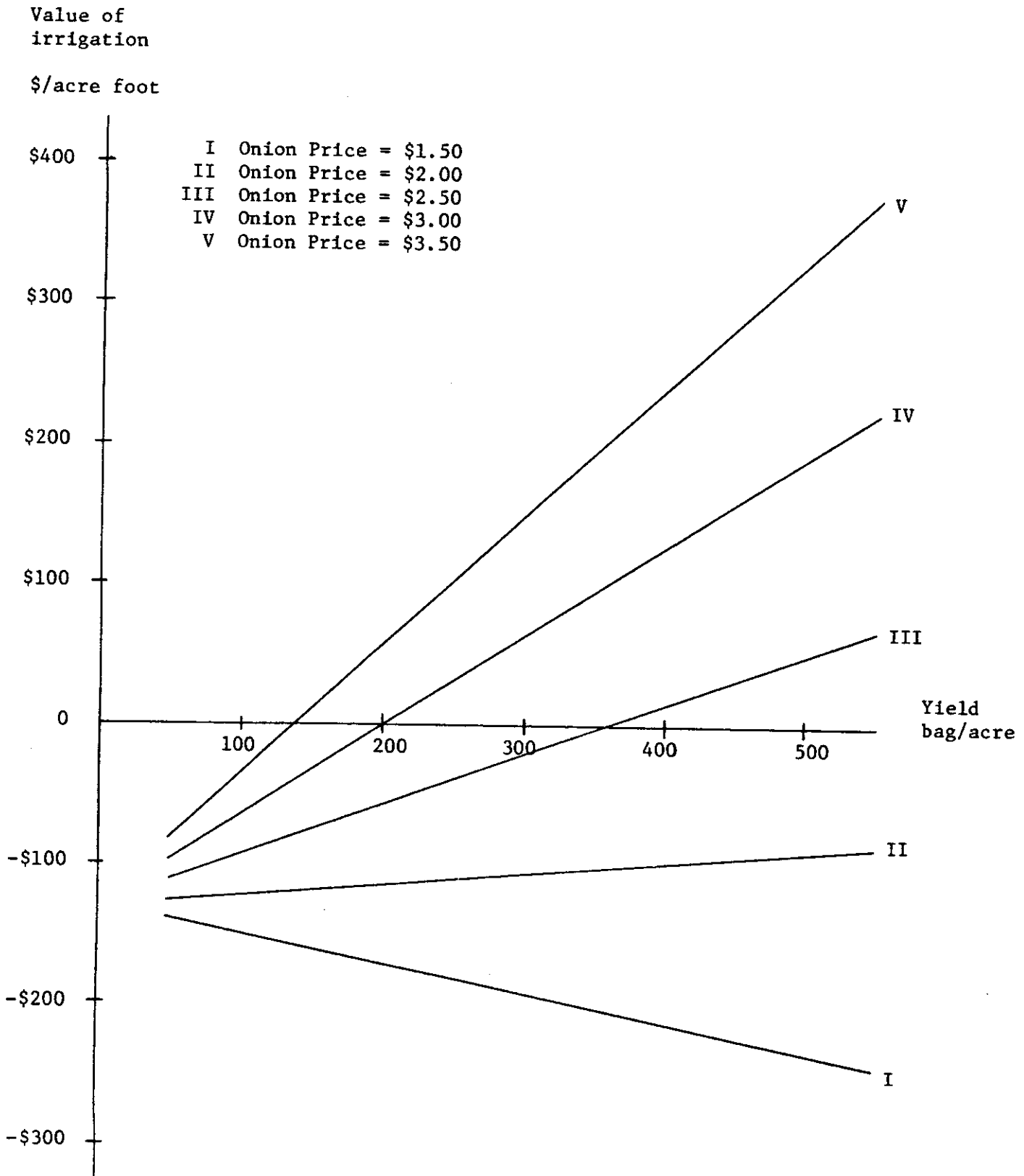


Figure Value of irrigation water applied to Onions in Coastal Bend for alternative Onion prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

CROSS TIMBERS
PEANUTS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		1250.0	1750.0	2250.0	2750.0	3250.0
PRODUCTION COSTS 1974	*					
PRICES	*					
0.120	*	-161.056	-117.056	-73.056	-29.056	14.944
0.140	*	-142.056	-90.456	-38.856	12.744	64.344
0.160	*	-123.056	-63.856	-4.656	54.544	113.744
0.180	*	-104.056	-37.256	29.544	96.344	163.144
0.200	*	-85.056	-10.656	63.744	138.144	212.544
10% COST INFLATION	*					
PRICES	*					
0.120	*	-189.162	-145.562	-101.962	-58.362	-14.762
0.140	*	-170.261	-119.101	-67.942	-16.782	34.379
0.160	*	-151.361	-92.642	-33.921	24.798	83.518
0.180	*	-132.462	-66.182	0.098	66.379	132.658
0.200	*	-113.561	-39.721	34.118	107.958	181.798
20% COST INFLATION	*					
PRICES	*					
0.120	*	-217.267	-174.067	-130.867	-87.667	-44.467
0.140	*	-198.467	-147.747	-97.027	-46.307	4.413
0.160	*	-179.667	-121.427	-63.187	-4.947	53.293
0.180	*	-160.867	-95.107	-29.347	36.413	102.173
0.200	*	-142.067	-68.787	4.493	77.773	151.053

A DRYLAND RETURN OF 25.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

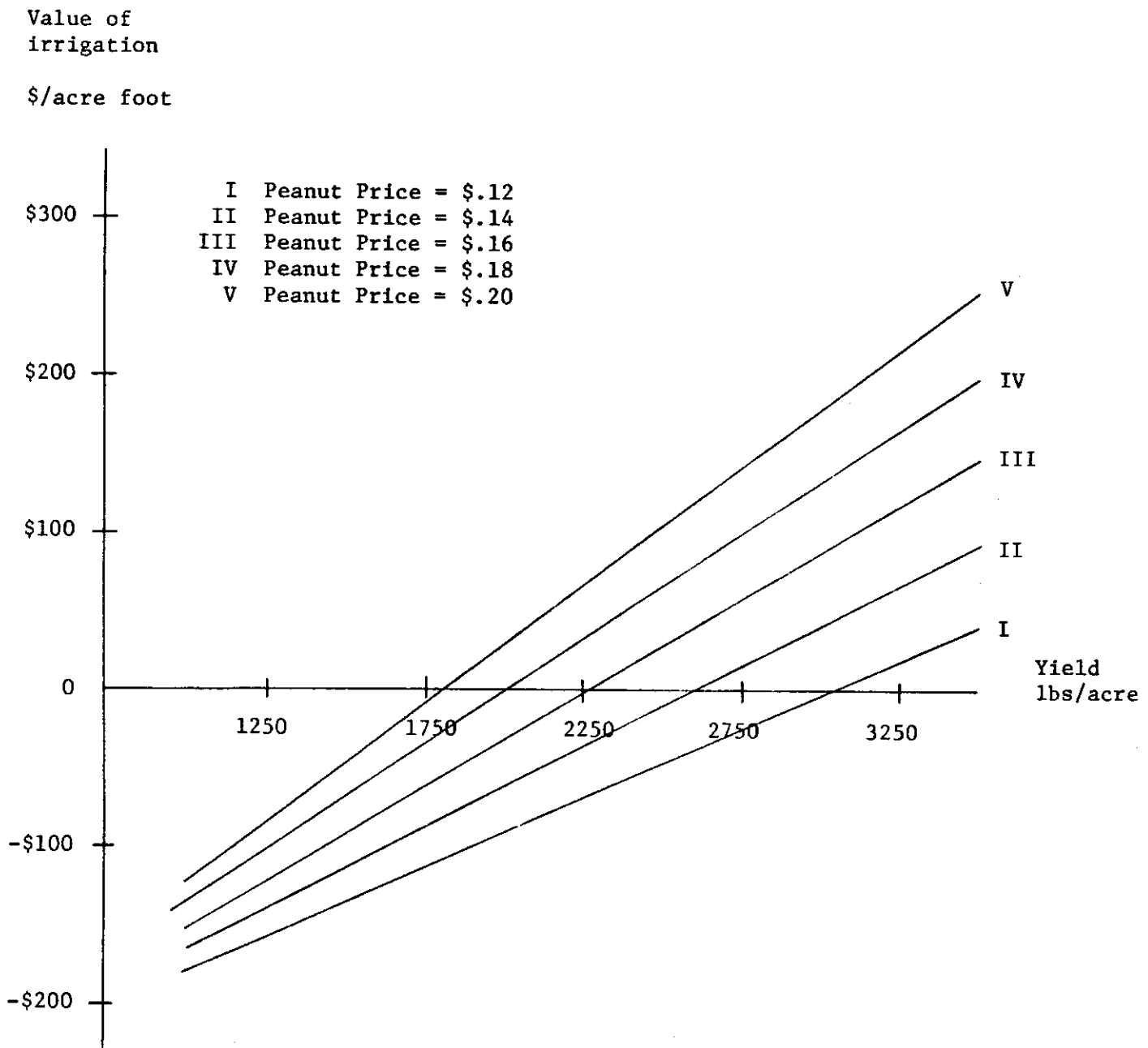


Figure Value of irrigation water applied to Peanuts in Cross Timbers for alternative Peanut prices and yields with expected 1974 costs.

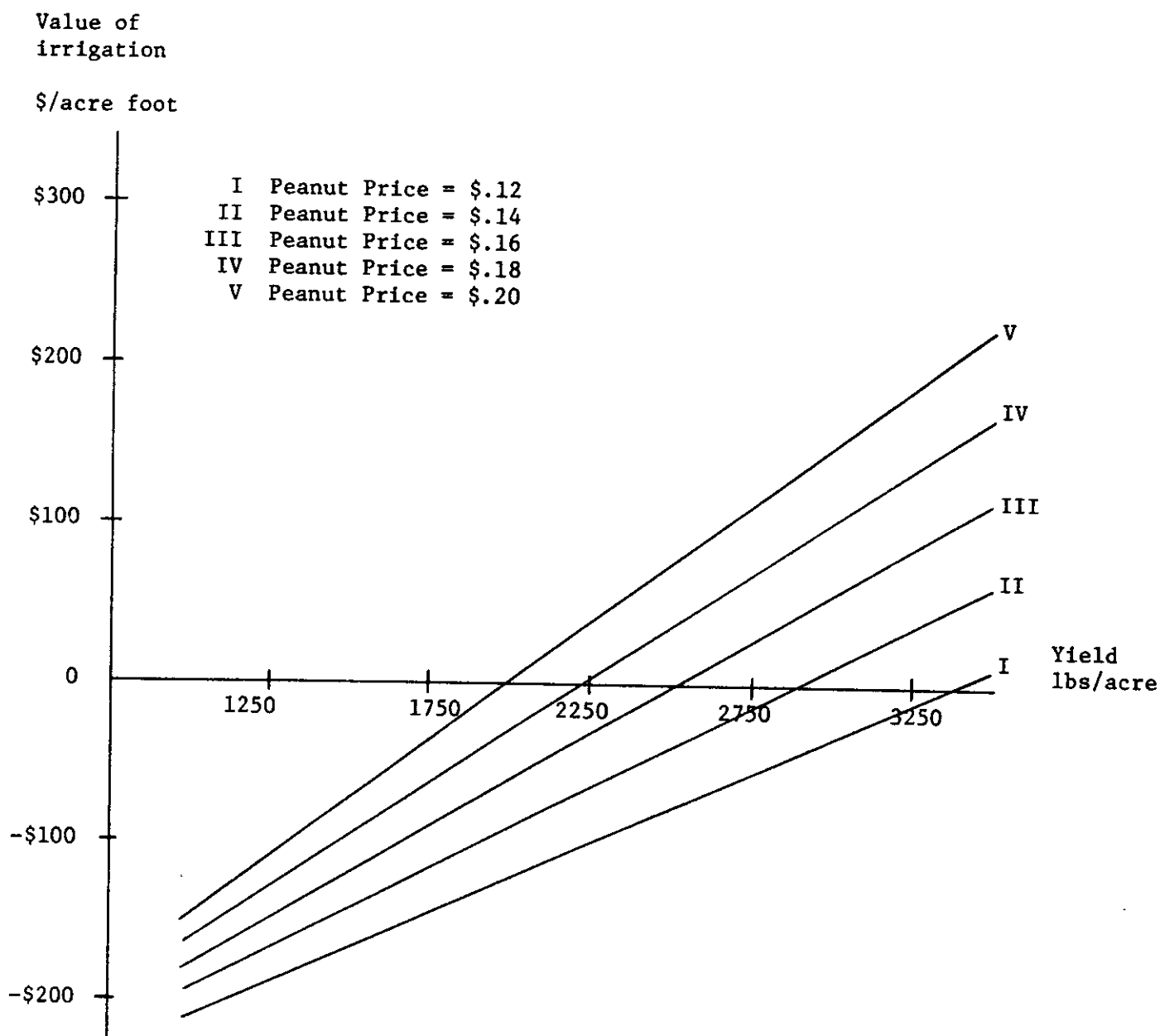


Figure Value of irrigation water applied to Peanuts in Cross Timbers for alternative Peanut prices and yields with expected 1974 costs inflated 10 percent.

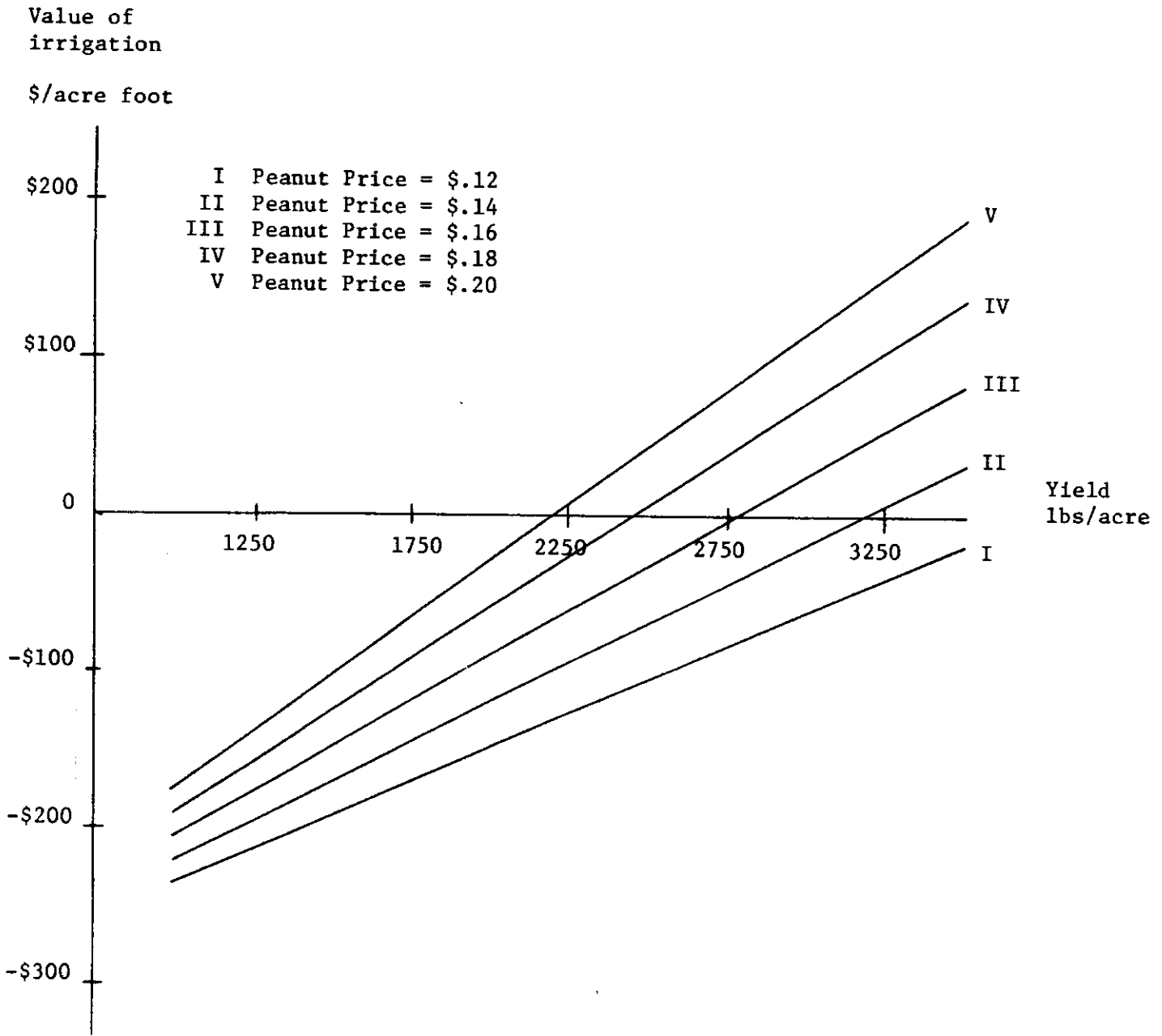


Figure Value of irrigation water applied to Peanuts in Cross Timbers for alternative Peanut prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

DEEP EAST TEXAS
PEANUTS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		2000.0	2500.0	3000.0	3500.0	4000.0
PRODUCTION COSTS 1974	*					
PRICES	*					
0.120	*	-81.071	49.881	180.834	311.786	442.739
0.140	*	9.405	162.976	316.547	470.119	623.690
0.160	*	99.881	276.072	452.262	628.453	804.643
0.180	*	190.358	389.167	587.977	786.786	985.595
0.200	*	280.833	502.262	723.690	945.119	1166.547
10% COST INFLATION	*					
PRICES	*					
0.120	*	-146.320	-16.559	113.203	242.965	372.727
0.140	*	-56.321	95.941	248.203	400.464	552.726
0.160	*	33.679	208.441	383.203	557.965	732.727
0.180	*	123.679	320.941	518.203	715.465	912.727
0.200	*	213.679	433.441	653.202	872.964	1092.726
20% COST INFLATION	*					
PRICES	*					
0.120	*	-211.571	-82.999	45.572	174.144	302.715
0.140	*	-122.047	28.905	179.857	330.810	481.762
0.160	*	-32.523	140.810	314.144	487.477	660.810
0.180	*	57.001	252.715	448.429	644.143	839.858
0.200	*	146.524	364.619	582.715	800.810	1018.905

A DRYLAND RETURN OF 45.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
irrigation

\$/acre foot

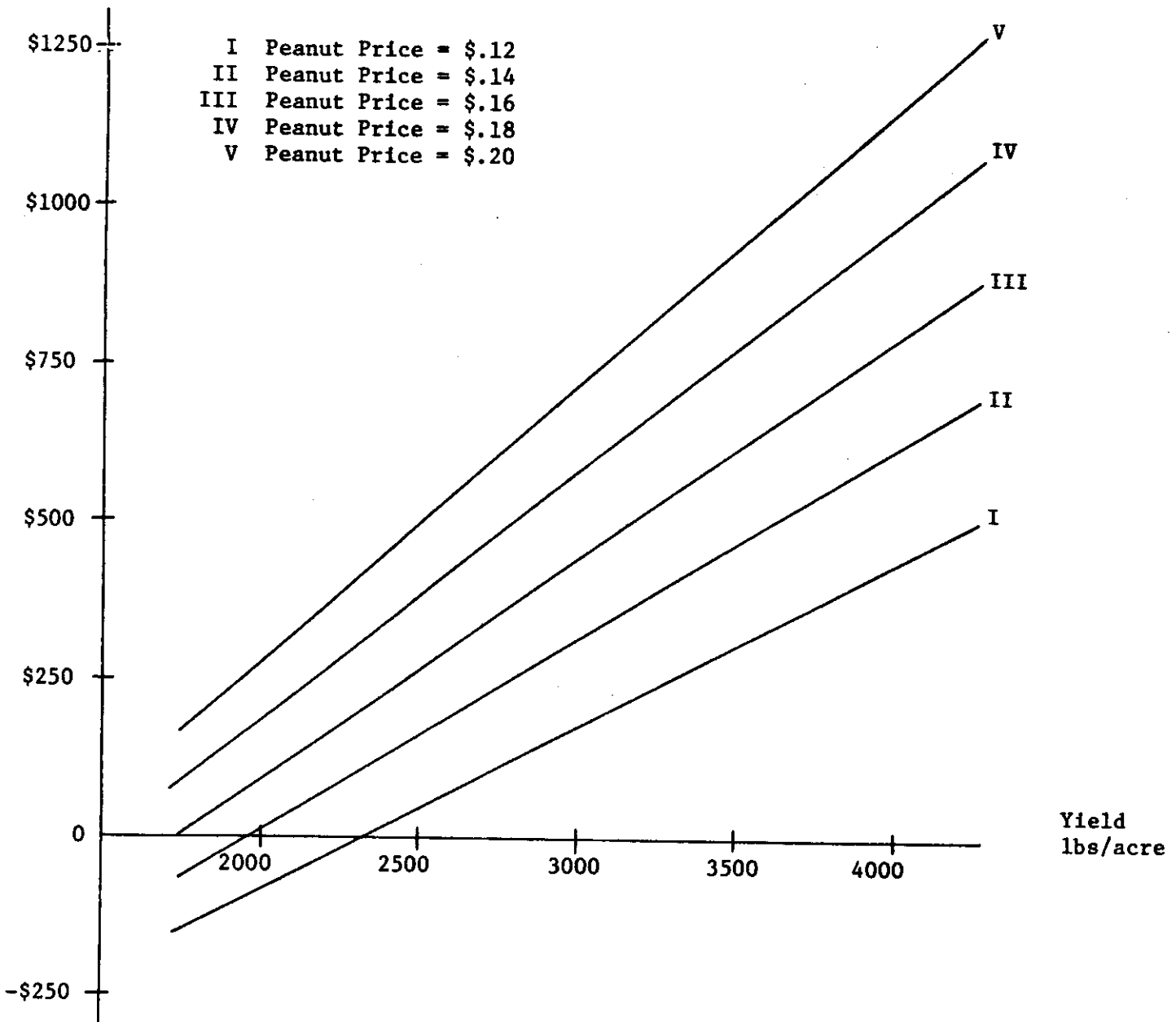


Figure Value of irrigation water applied to Peanuts in Deep East Texas for alternative Peanut prices and yields with expected 1974 costs.

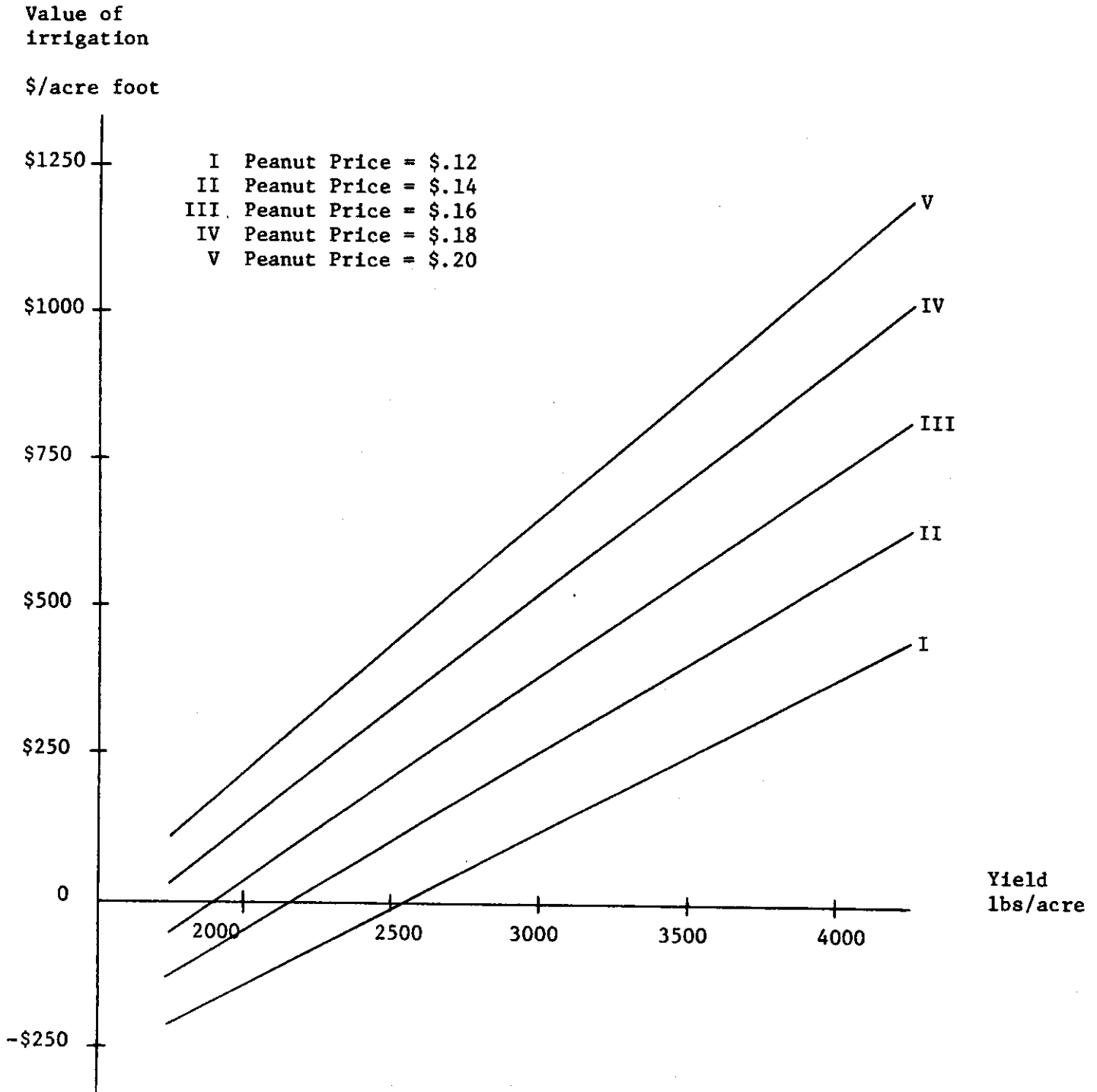


Figure Value of irrigation water applied to Peanuts in Deep East Texas for alternative Peanut prices and yields with expected 1974 costs inflated 10 percent.

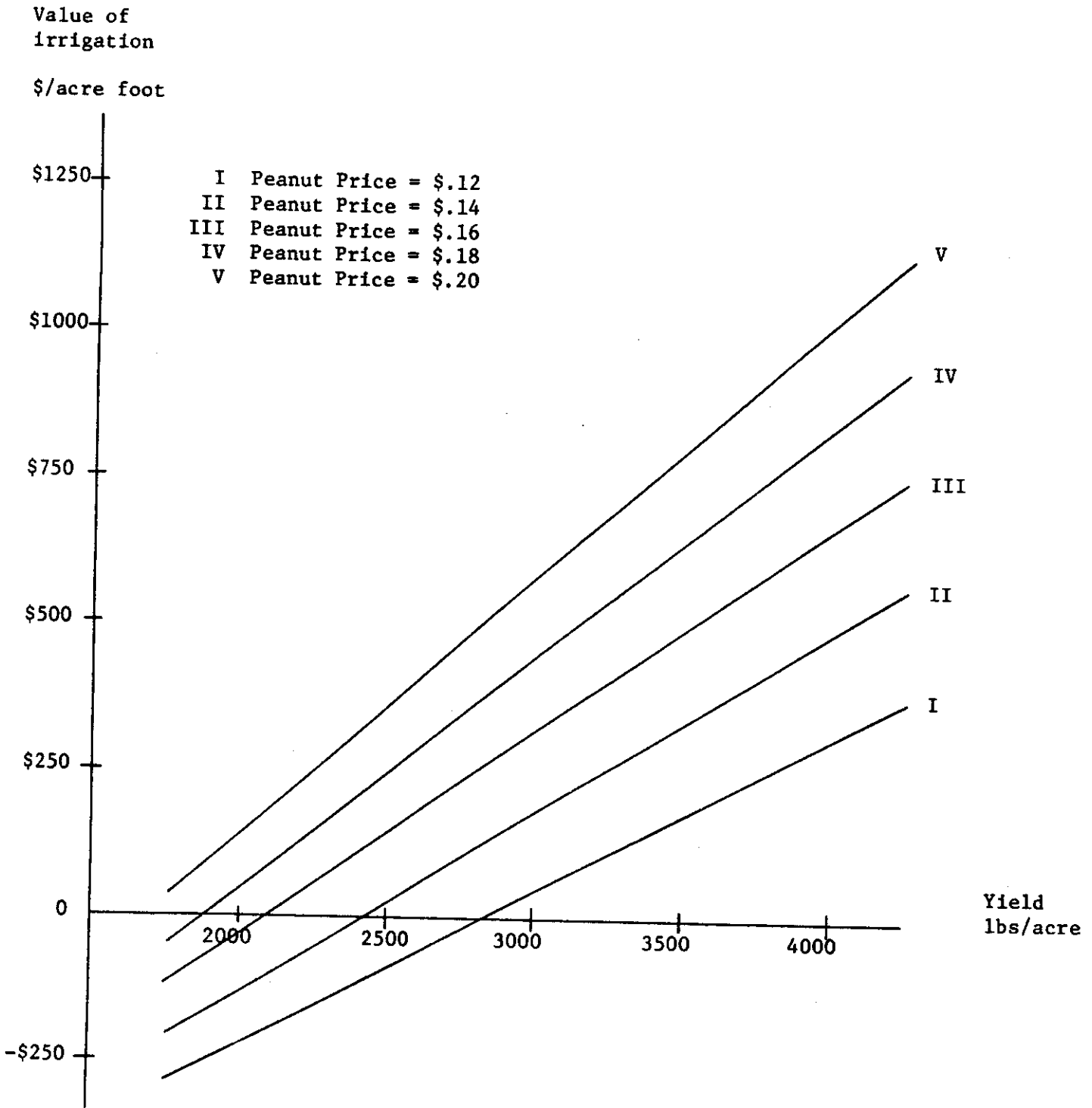


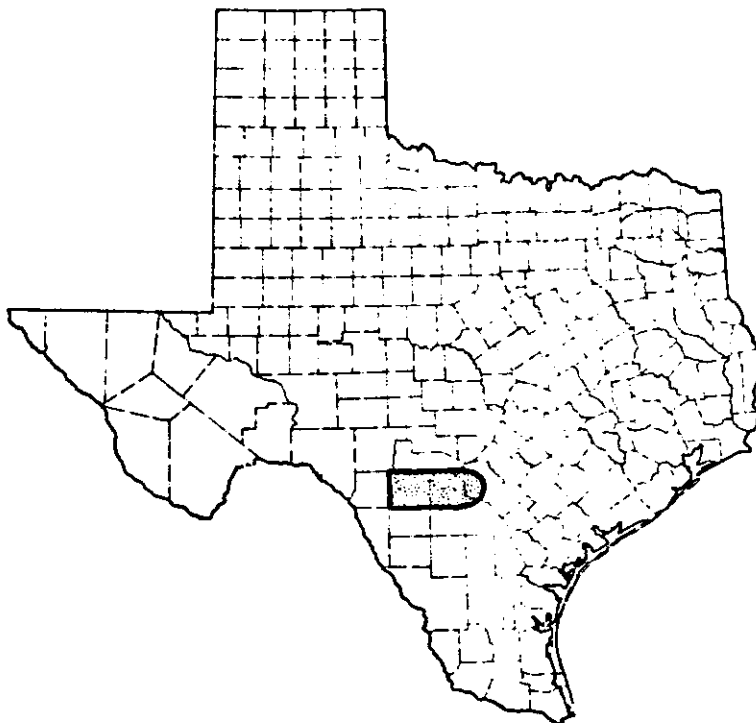
Figure Value of irrigation water applied to Peanuts in Deep East Texas for alternative Peanut prices and yields with expected 1974 costs inflated 20 percent.

Edward Aquifer

This area is comprised primarily of Medina and Uvalde counties but includes parts of Bexar, Comal, Hayes and Kinney counties.

A land charge for this area of \$15.00 per acre was applied. This charge is based on work published by the Texas Agricultural Extension Service [1].

The alternative yields and prices used in this analysis are presented in the following table.



Crop	Unit	Yields					Prices				
		350	500	650	800	950	1.25	1.50	1.75	2.00	2.25
Cabbage	bag	350	500	650	800	950	1.25	1.50	1.75	2.00	2.25
Carrots	bag	100	175	250	325	400	2.25	3.00	3.75	4.50	5.25
Coastal Bermuda hay	ton	6	7	8	9	10	20.00	30.00	40.00	50.00	60.00
Corn (grain)	bu.	60	70	80	90	100	1.00	2.00	3.00	4.00	5.00
Corn (silage)	ton	13	15	17	19	21	6.00	8.00	10.00	12.00	14.00
Cotton	lb.	400	450	500	550	600	0.20	0.30	0.40	0.50	0.60
Grain sorghum	cwt.	30	35	40	45	50	2.00	3.00	4.00	5.00	6.00
Sudan hay	ton	6	7	8	9	10	20.00	25.00	30.00	35.00	40.00
Mexican wheat	bu.	20	30	40	50	60	2.00	3.00	4.00	5.00	6.00

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
CABBAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		350.0	500.0	650.0	800.0	950.0
PRODUCTION COSTS 1974	*					
PRICES	*					
1.250	*	-159.674	-163.424	-167.174	-170.924	-174.674
1.500	*	-126.424	-115.924	-105.424	-94.924	-84.424
1.750	*	-93.174	-68.424	-43.674	-18.924	5.826
2.000	*	-59.924	-20.924	18.076	57.076	96.076
2.250	*	-26.674	26.576	79.826	133.076	186.326
10% COST INFLATION	*					
PRICES	*					
1.250	*	-193.141	-204.766	-216.391	-228.016	-239.641
1.500	*	-160.066	-157.516	-154.966	-152.416	-149.866
1.750	*	-126.991	-110.266	-93.541	-76.816	-60.091
2.000	*	-93.916	-63.016	-32.116	-1.216	29.684
2.250	*	-60.841	-15.766	29.309	74.384	119.459
20% COST INFLATION	*					
PRICES	*					
1.250	*	-226.609	-246.109	-265.609	-285.109	-304.609
1.500	*	-193.709	-199.109	-204.509	-209.909	-215.309
1.750	*	-160.809	-152.109	-143.409	-134.709	-126.009
2.000	*	-127.909	-105.109	-82.309	-59.509	-36.709
2.250	*	-95.009	-58.109	-21.209	15.691	52.591

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
\$/acre foot

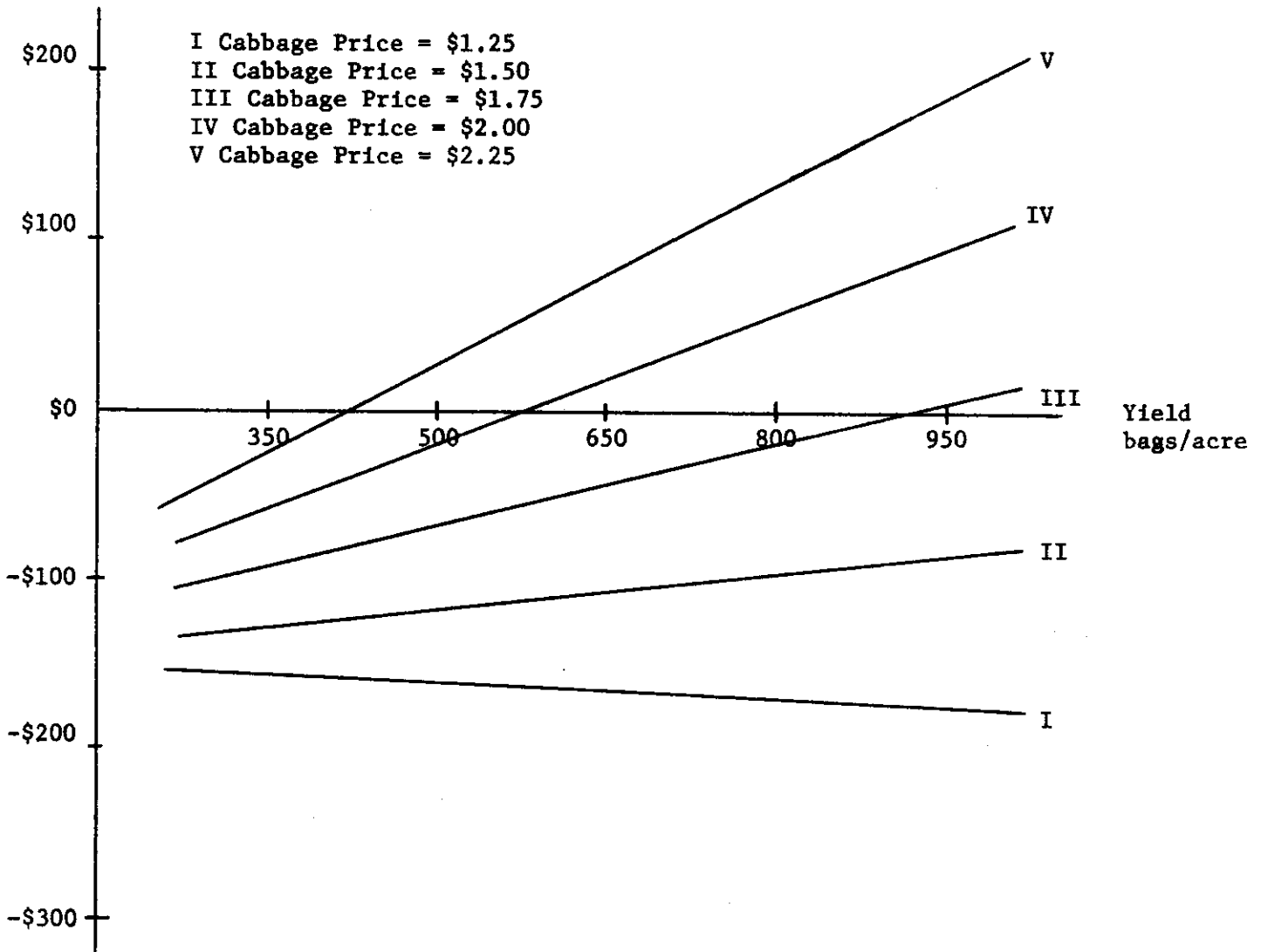


Figure Value of irrigation water applied to Cabbage in Edwards Aquifer for alternative Cabbage prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

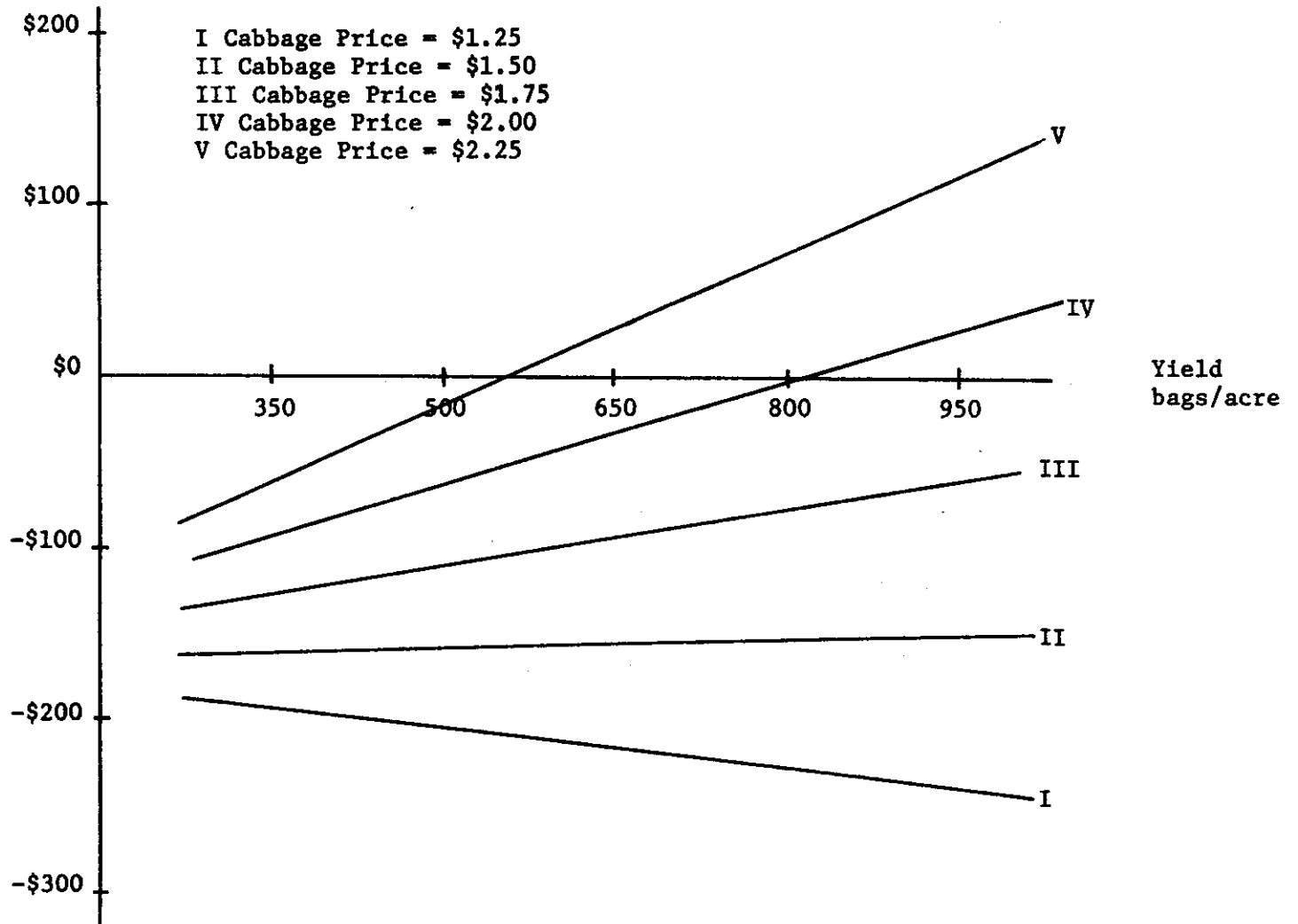


Figure Value of irrigation water applied to Cabbage in Edwards Aquifer for alternative Cabbage prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

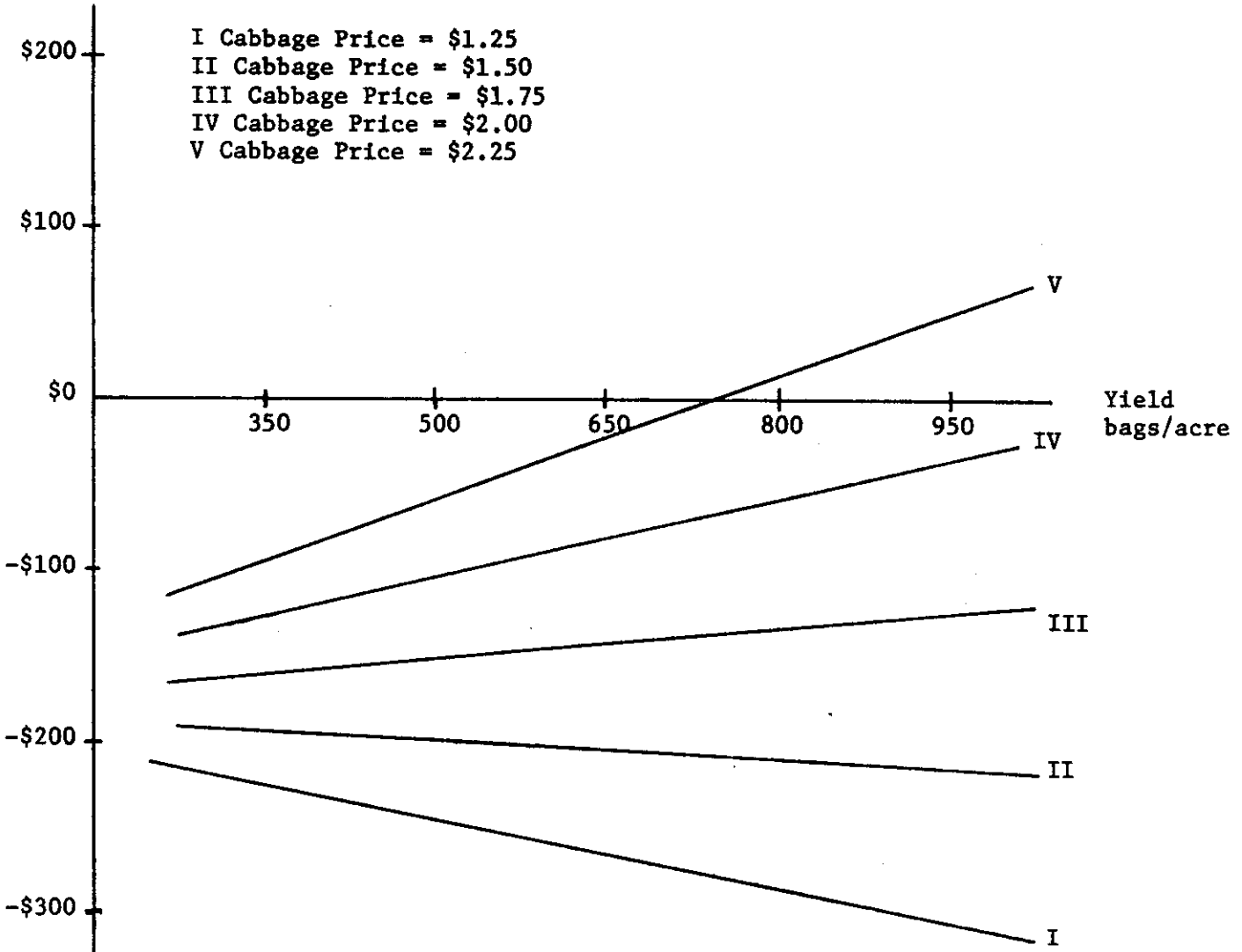


Figure Value of irrigation water applied to Cabbage in Edwards Aquifer for alternative Cabbage prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
CARROTS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		100.0	175.0	250.0	325.0	400.0

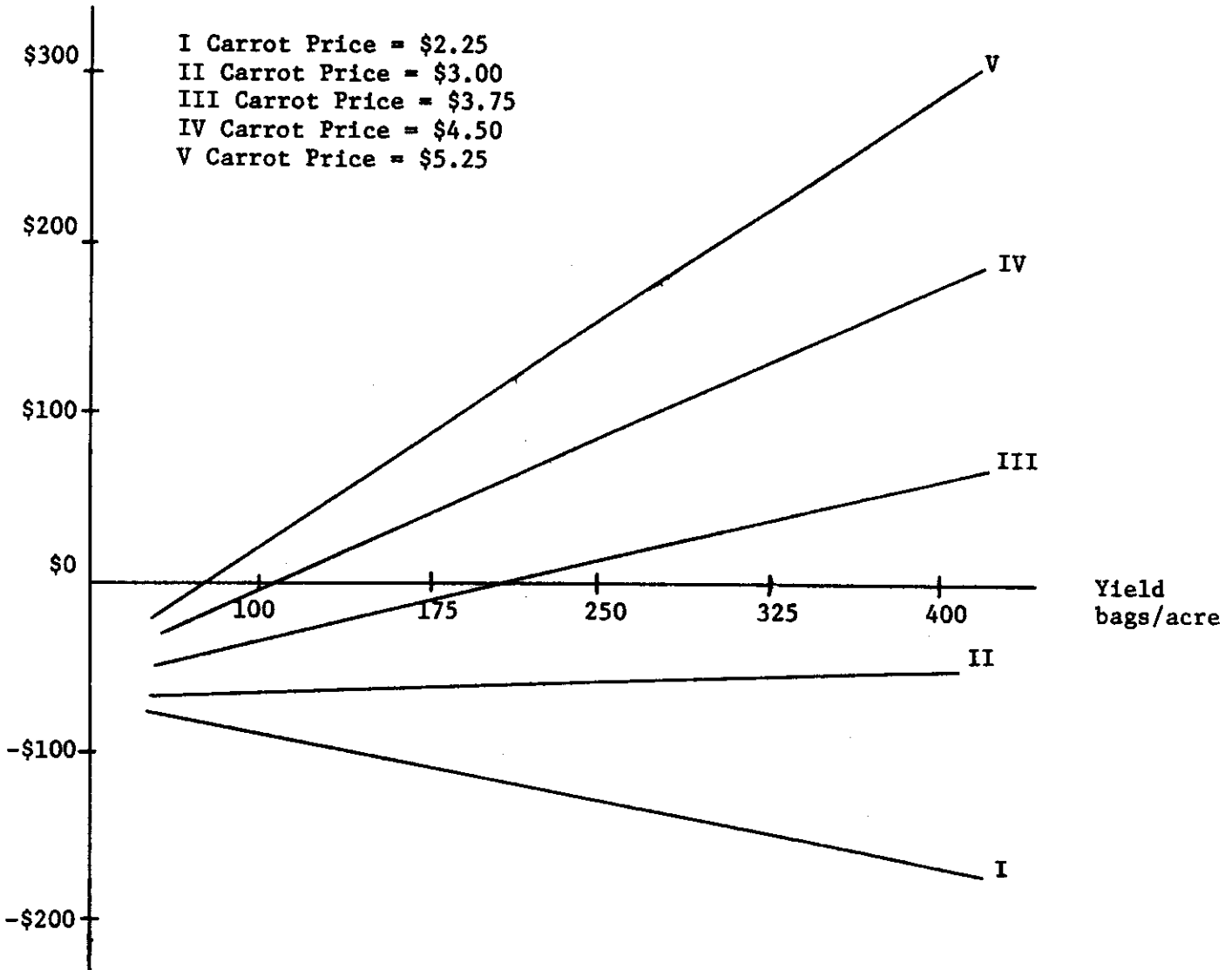
PRODUCTION COSTS 1974	*					
PRICES	*					
2.250	*	-93.548	-111.923	-130.298	-148.673	-167.048
	*					
3.000	*	-65.048	-62.048	-59.048	-56.048	-53.048
	*					
3.750	*	-36.548	-12.173	12.202	36.577	60.952
	*					
4.500	*	-8.048	37.702	83.452	129.202	174.952
	*					
5.250	*	20.452	87.577	154.702	221.827	288.952
	*					

10% COST INFLATION	*					
PRICES	*					
2.250	*	-111.903	-138.865	-165.828	-192.790	-219.753
	*					
3.000	*	-83.553	-89.253	-94.953	-100.653	-106.353
	*					
3.750	*	-55.203	-39.640	-24.078	-8.515	7.047
	*					
4.500	*	-26.853	9.972	46.797	83.622	120.447
	*					
5.250	*	1.497	59.585	117.672	175.760	233.847
	*					

20% COST INFLATION	*					
PRICES	*					
2.250	*	-130.258	-165.808	-201.358	-236.908	-272.458
	*					
3.000	*	-102.058	-116.458	-130.858	-145.253	-159.658
	*					
3.750	*	-73.858	-67.108	-60.358	-53.608	-46.858
	*					
4.500	*	-45.558	-17.758	10.142	38.042	65.942
	*					
5.250	*	-17.458	31.592	80.642	129.692	178.742
	*					

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

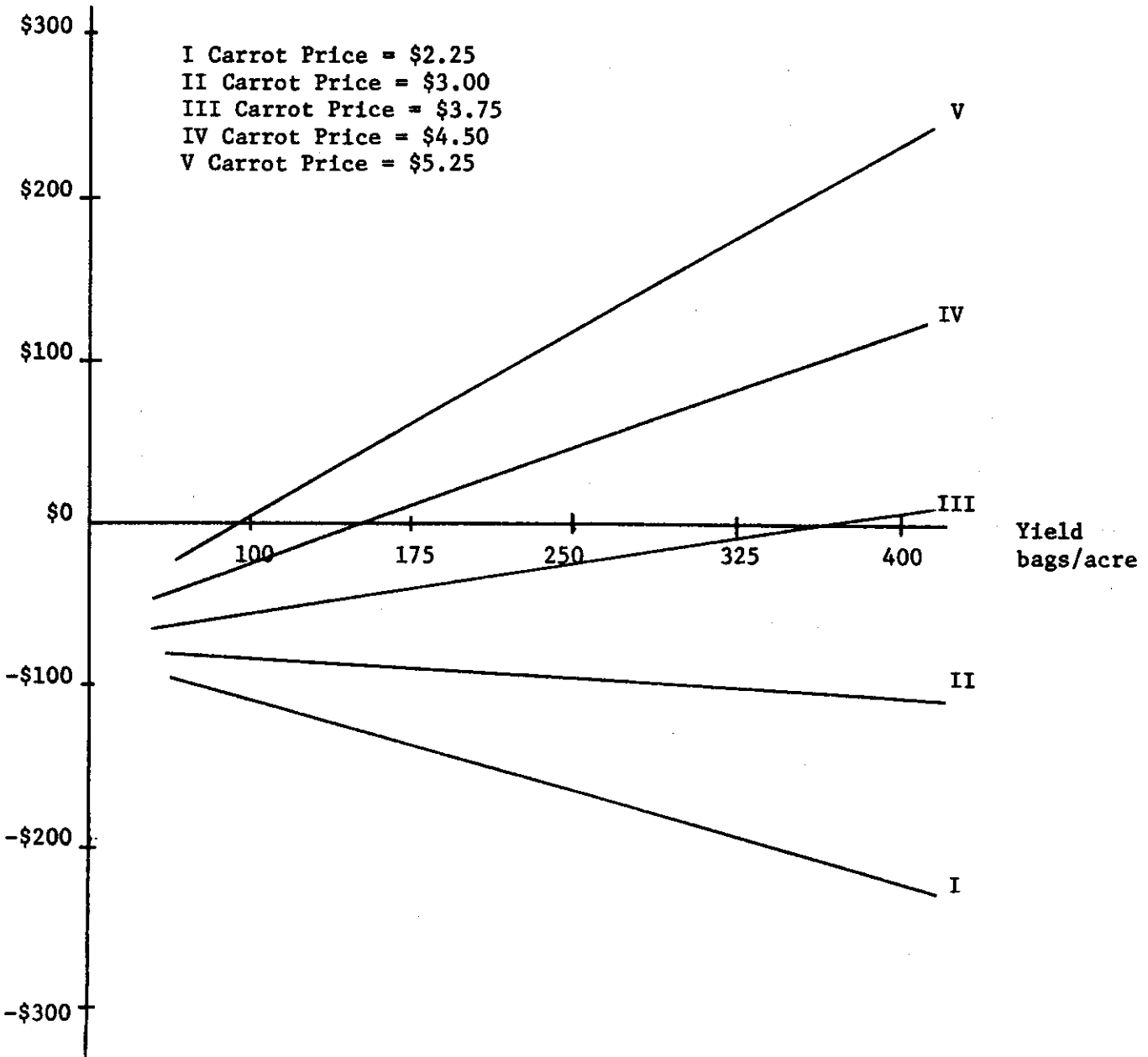
Value of
Irrigation
\$/acre foot



Figure

Value of irrigation water applied to Carrots in Edwards Aquifer for alternative Carrot prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot



Figure

Value of irrigation water applied to Carrots in Edwards Aquifer for alternative Carrot prices and yields with expected 1974 costs inflated 10 percent.

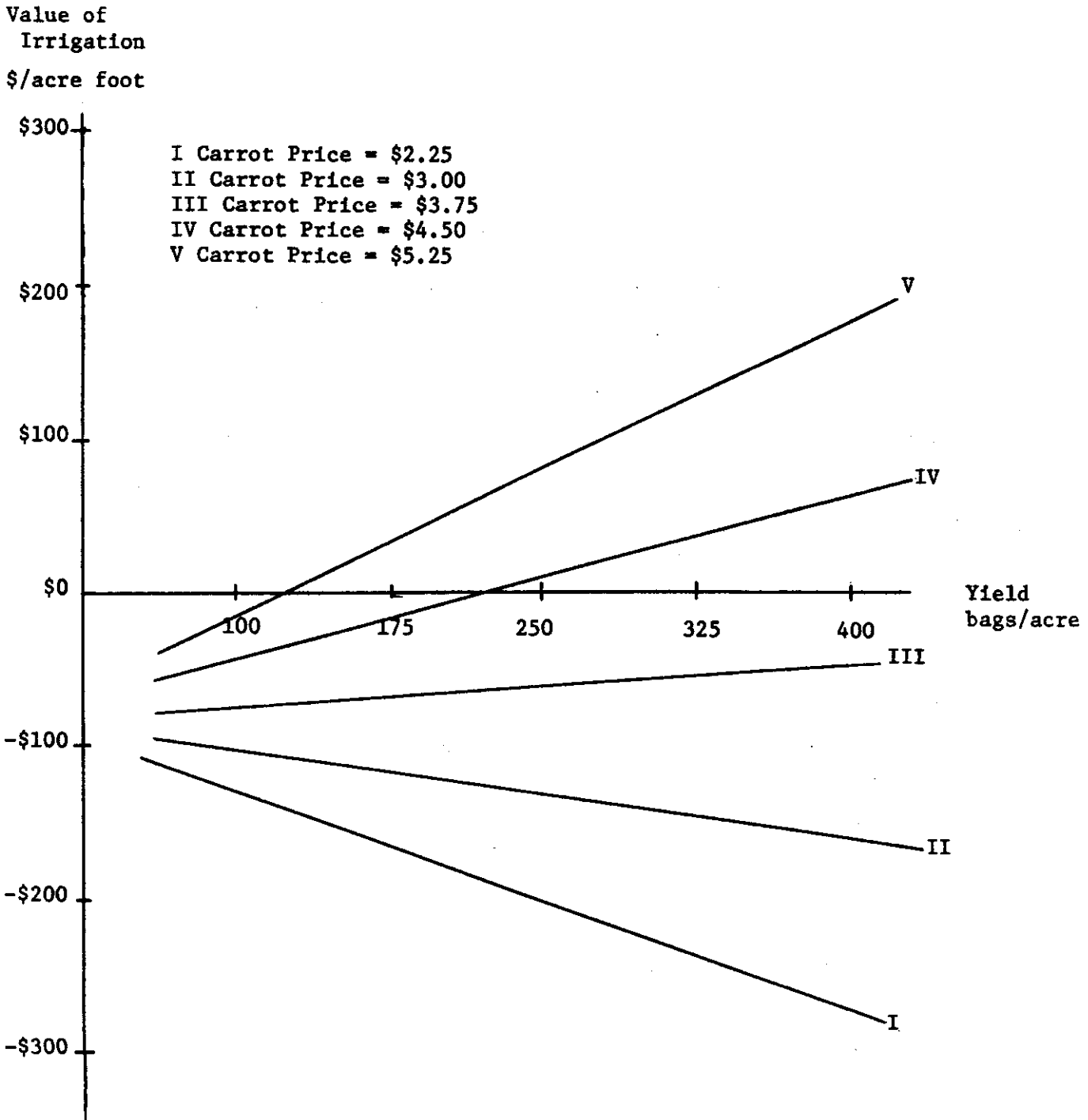


Figure Value of irrigation water applied to Carrots in Edwards Aquifer for alternative Carrot prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
COASTAL BERMUDA HAY

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		6.0	7.0	8.0	9.0	10.0

PRODUCTION COSTS 1974	*					
PRICES	*					
20.000	*	-60.070	-60.887	-61.703	-62.520	-63.337
	*					
30.000	*	-41.070	-38.720	-36.370	-34.020	-31.670
	*					
40.000	*	-22.070	-16.553	-11.037	-5.520	-0.003
	*					
50.000	*	-3.070	5.613	14.297	22.980	31.663
	*					
60.000	*	15.930	27.780	39.630	51.480	63.330
	*					

10% COST INFLATION	*					
PRICES	*					
20.000	*	-70.077	-71.642	-73.207	-74.772	-76.337
	*					
30.000	*	-51.177	-49.592	-48.007	-46.422	-44.837
	*					
40.000	*	-32.277	-27.542	-22.807	-18.072	-13.337
	*					
50.000	*	-13.377	-5.492	2.393	10.278	18.163
	*					
60.000	*	5.523	16.558	27.593	38.623	49.663
	*					

20% COST INFLATION	*					
PRICES	*					
20.000	*	-80.084	-82.397	-84.711	-87.024	-89.337
	*					
30.000	*	-61.284	-60.464	-59.644	-58.824	-58.004
	*					
40.000	*	-42.484	-38.531	-34.577	-30.624	-26.670
	*					
50.000	*	-23.684	-16.597	-9.511	-2.424	4.663
	*					
60.000	*	-4.884	5.336	15.556	25.776	35.996
	*					

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation

\$/acre foot

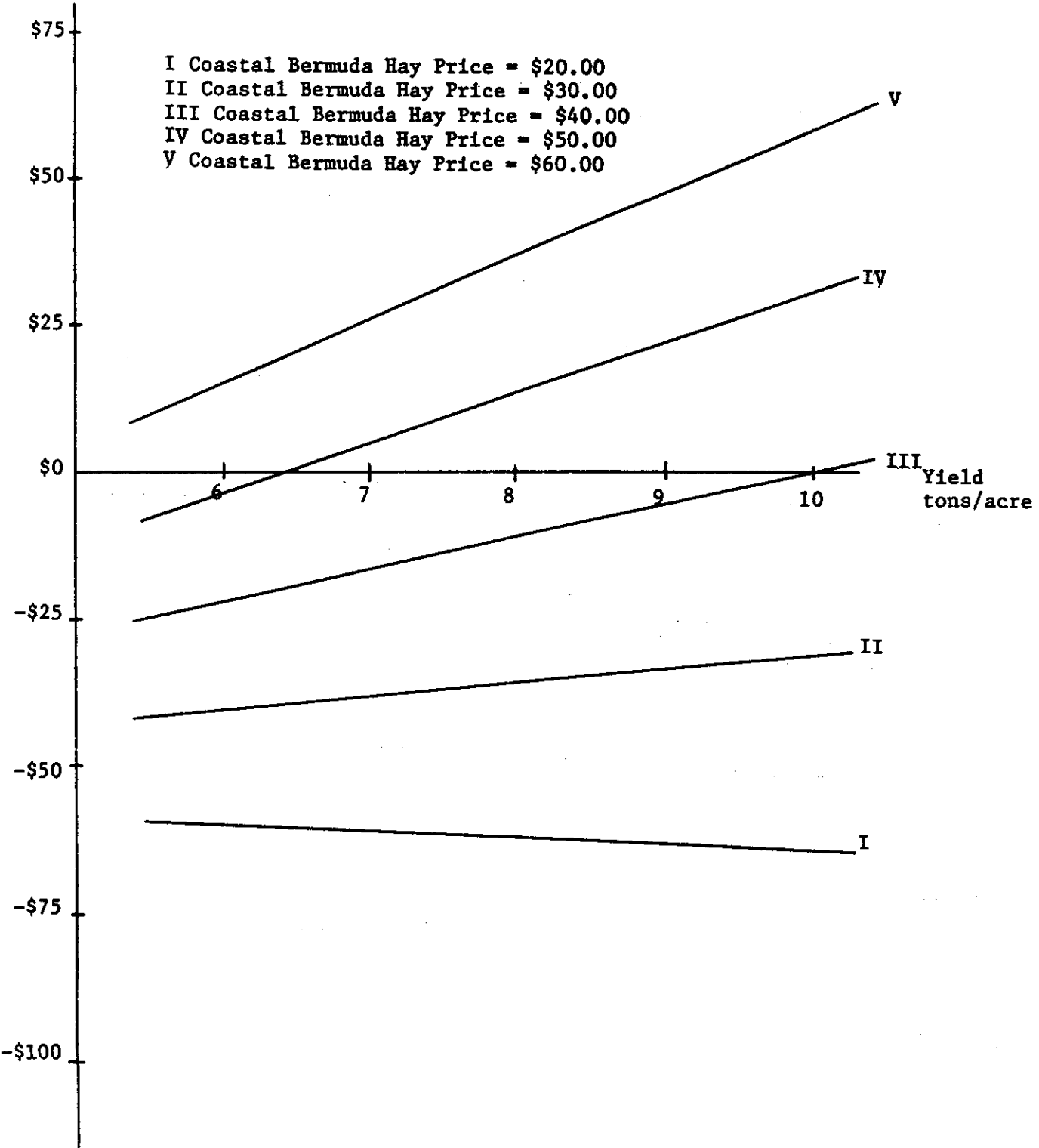


Figure Value of irrigation water applied to Coastal Bermuda Hay in Edwards Aquifer for alternative Coastal Bermuda Hay prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

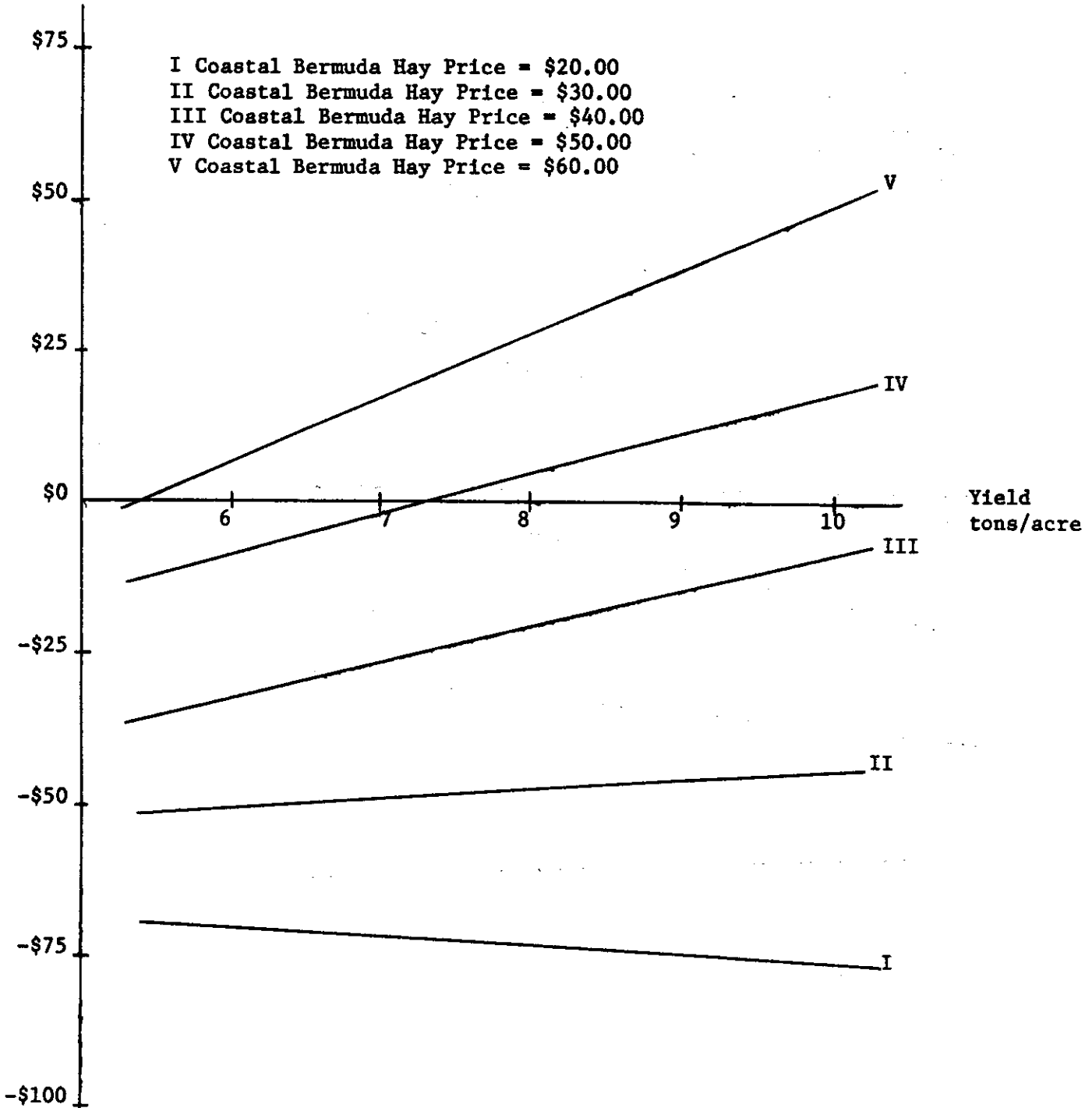


Figure Value of irrigation water applied to Coastal Bermuda Hay in Edwards Aquifer for alternative Coastal Bermuda Hay prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

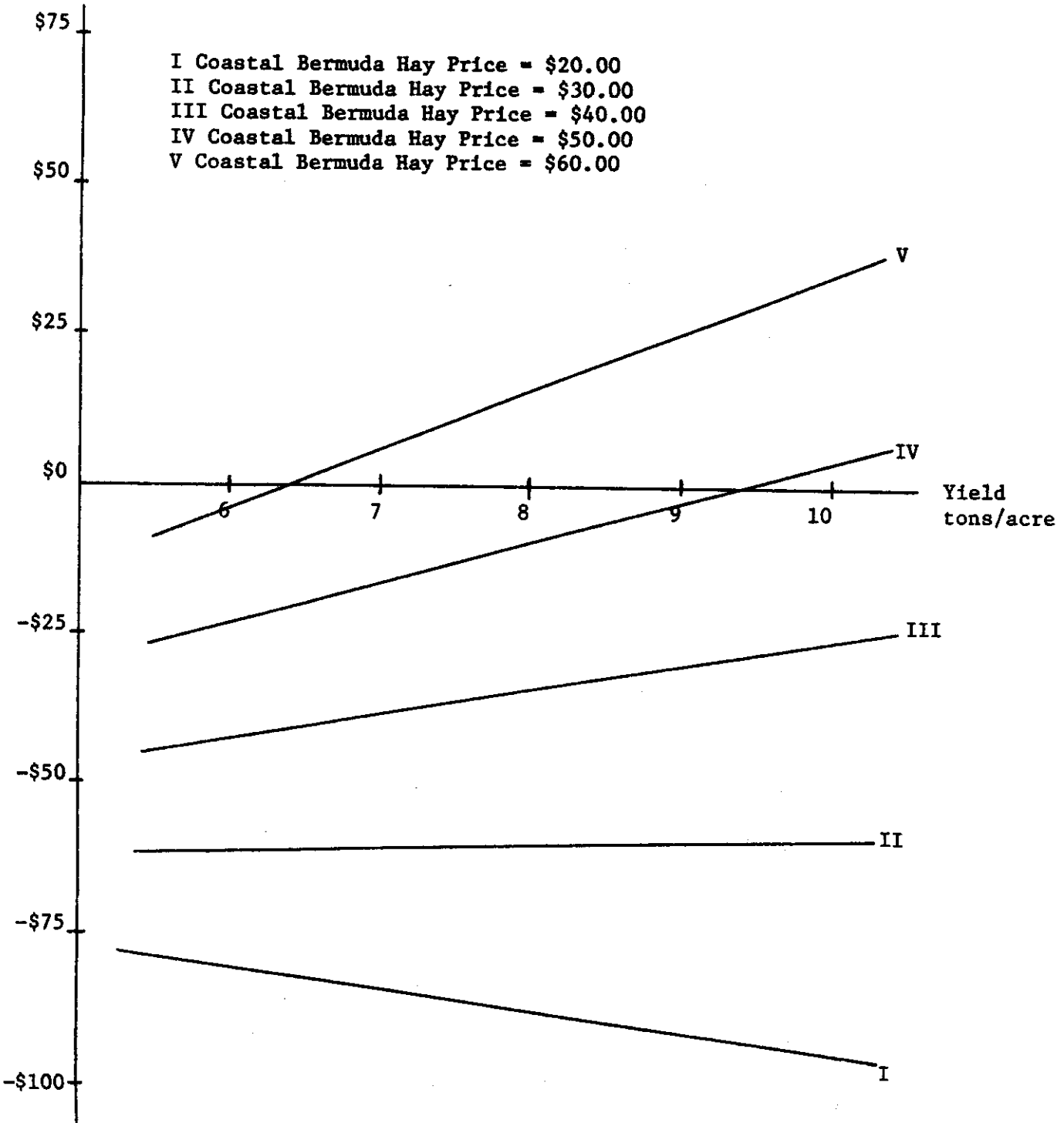


Figure Value of irrigation water applied to Coastal Bermuda Hay in Edwards Aquifer for alternative Coastal Bermuda Hay prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
CCRN

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		60.0	70.0	80.0	90.0	100.0

PRODUCTION COSTS 1974	*					
PRICES	*					
1.000	*	-53.445	-49.395	-45.345	-41.295	-37.245
2.000	*	-24.945	-16.145	-7.345	1.455	10.255
3.000	*	3.555	17.105	30.655	44.205	57.755
4.000	*	32.055	50.355	68.655	86.955	105.255
5.000	*	60.555	83.605	106.655	129.705	152.755

10% COST INFLATION	*					
PRICES	*					
1.000	*	-61.789	-57.834	-53.880	-49.924	-45.969
2.000	*	-33.439	-24.759	-16.079	-7.399	1.281
3.000	*	-5.090	8.316	21.720	35.126	48.531
4.000	*	23.260	41.391	59.520	77.650	95.781
5.000	*	51.611	74.465	97.320	120.176	143.030

20% COST INFLATION	*					
PRICES	*					
1.000	*	-70.134	-66.274	-62.414	-58.554	-54.694
2.000	*	-41.934	-33.374	-24.814	-16.254	-7.694
3.000	*	-13.734	-0.474	12.786	26.046	39.306
4.000	*	14.466	32.426	50.386	68.346	86.306
5.000	*	42.666	65.326	87.986	110.646	133.306

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
\$/acre foot

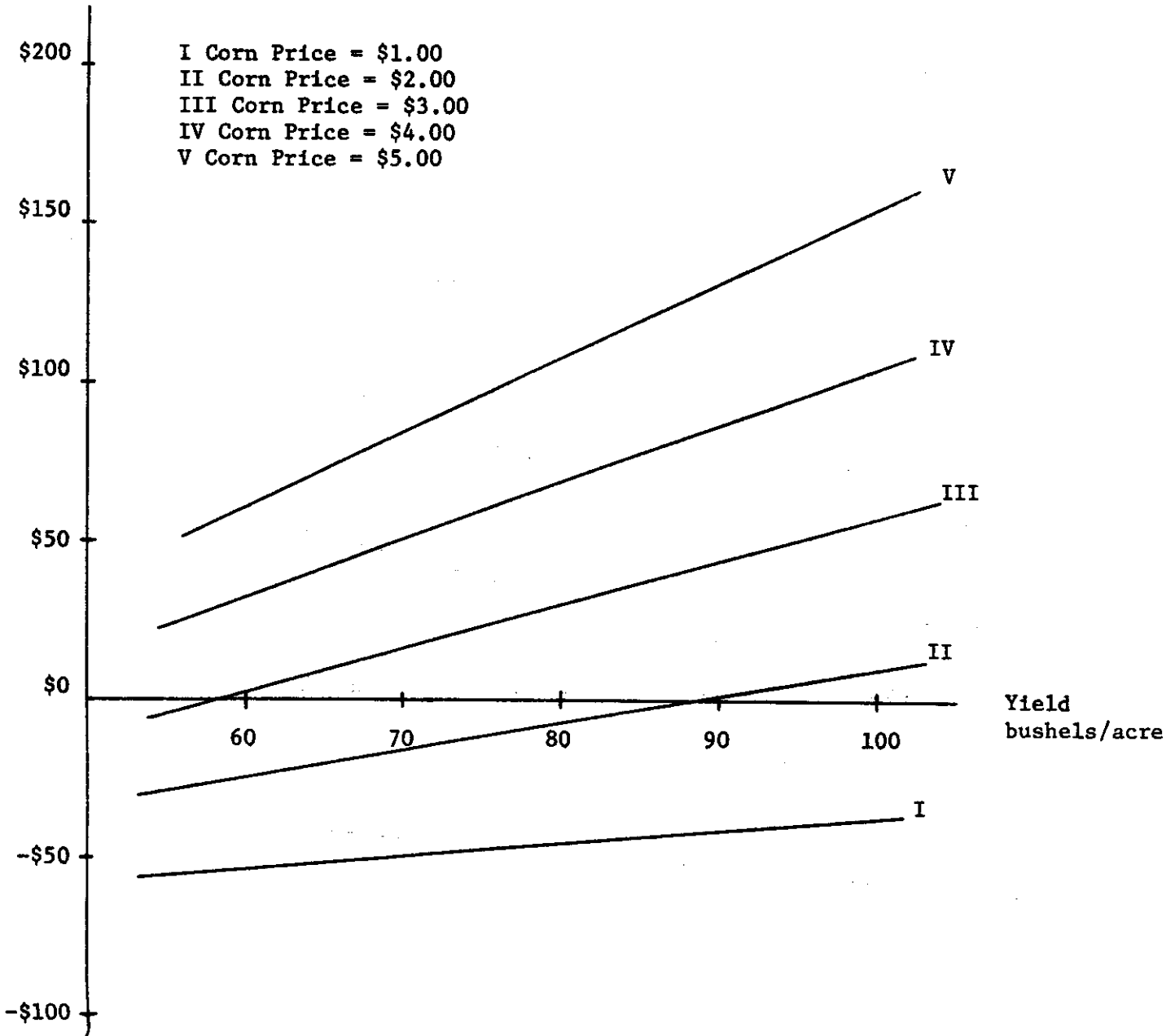


Figure Value of irrigation water applied to Corn in Edwards Aquifer for alternative Corn prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

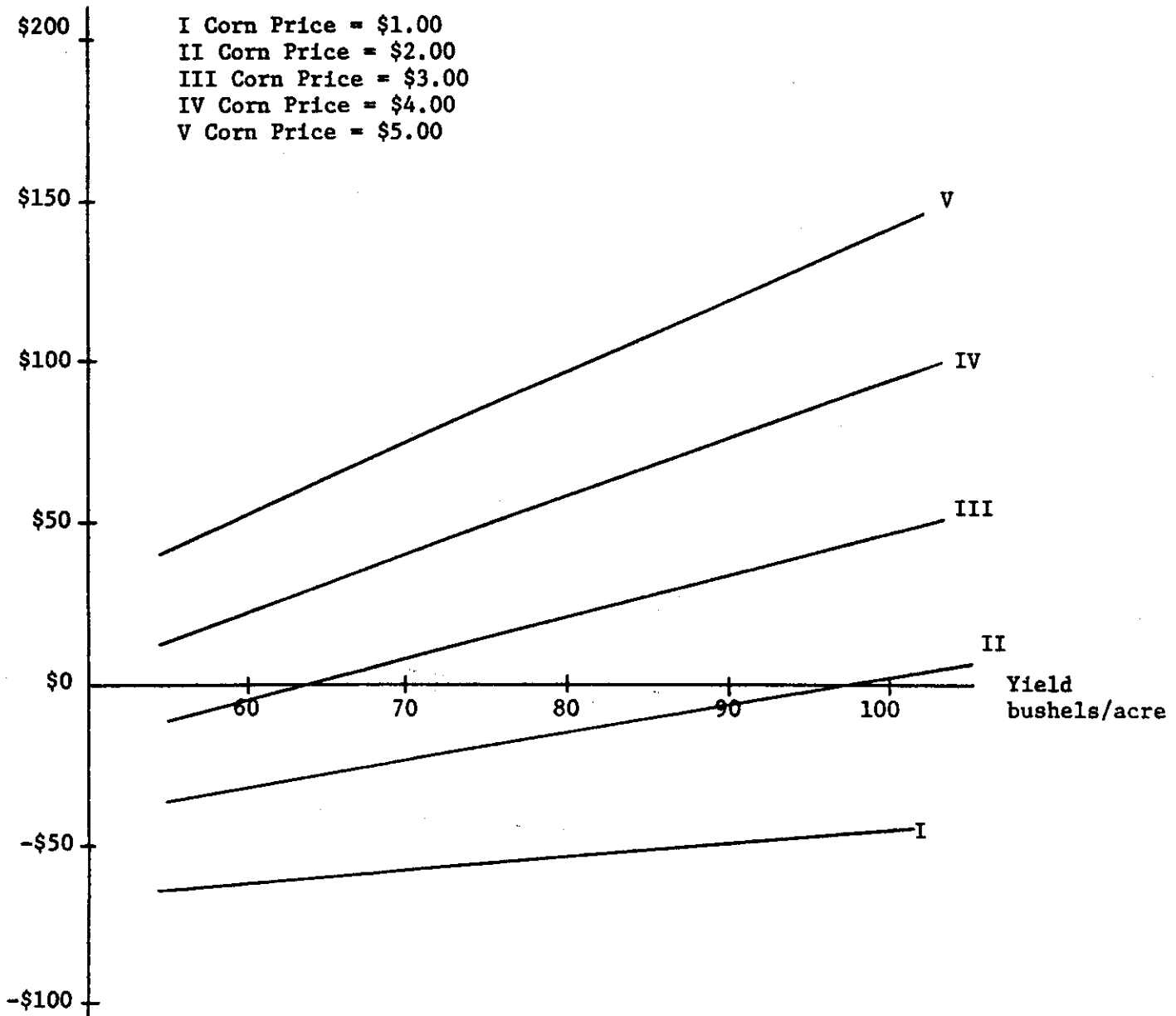


Figure Value of irrigation water applied to Corn in Edwards Aquifer for alternative Corn prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

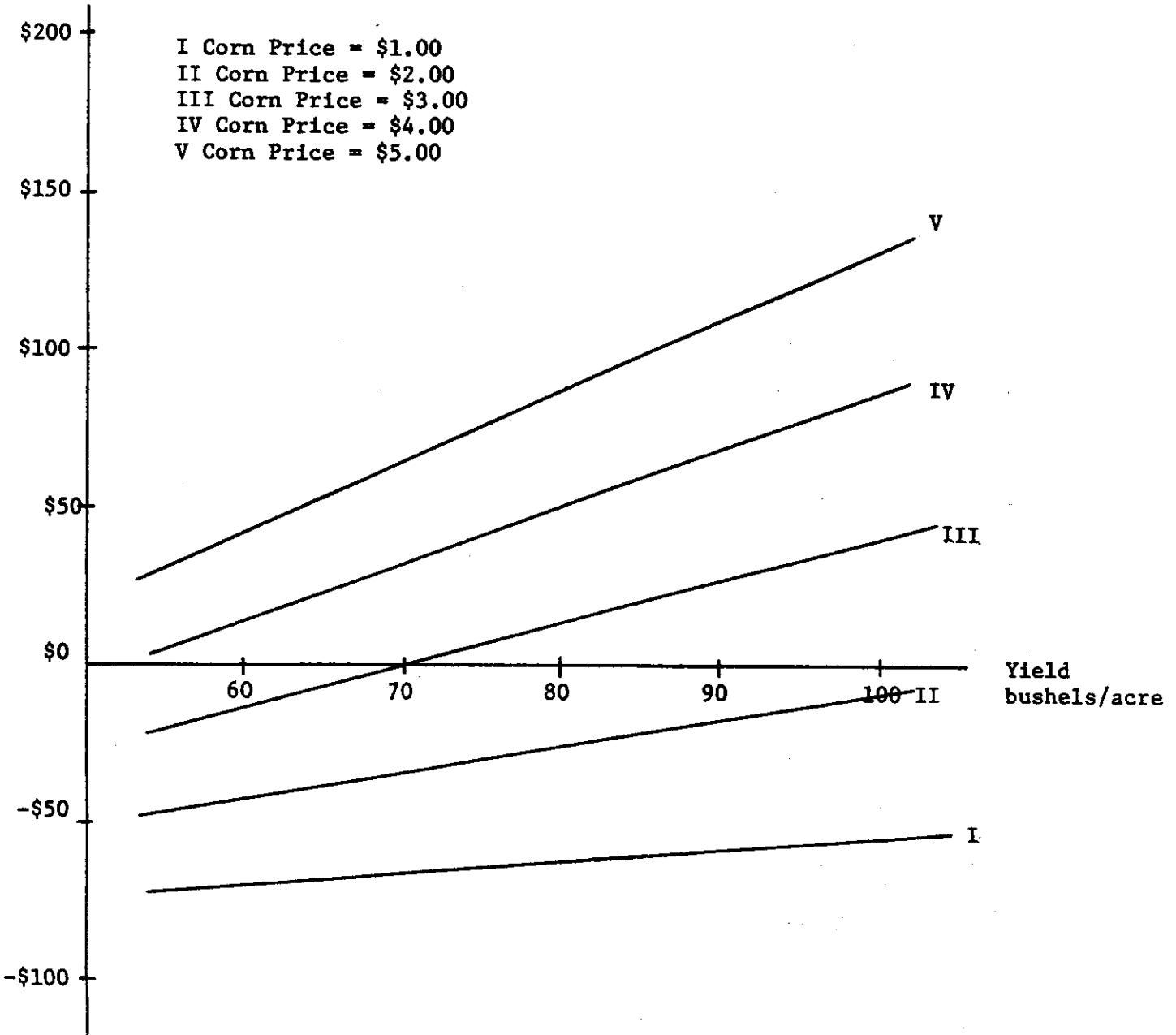


Figure Value of irrigation water applied to Corn in Edwards Aquifer for alternative Corn prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
CORN SILAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		13.0	15.0	17.0	19.0	21.0

PRODUCTION COSTS 1974	*					
PRICES	*					
6.000	*	-33.455	-27.755	-22.055	-16.355	-10.655
8.000	*	-21.105	-13.505	-5.905	1.695	9.295
10.000	*	-8.755	0.745	10.245	19.745	29.245
12.000	*	3.595	14.995	26.395	37.795	49.195
14.000	*	15.945	29.245	42.545	55.845	69.145
	*					

10% COST INFLATION	*					
PRICES	*					
6.000	*	-40.700	-35.030	-29.360	-23.690	-18.020
8.000	*	-28.415	-20.855	-13.295	-5.735	1.825
10.000	*	-16.130	-6.680	2.770	12.220	21.669
12.000	*	-3.845	7.495	18.835	30.174	41.515
14.000	*	8.440	21.669	34.900	48.130	61.359
	*					

20% COST INFLATION	*					
PRICES	*					
6.000	*	-47.946	-42.306	-36.666	-31.026	-25.386
8.000	*	-35.726	-28.206	-20.686	-13.166	-5.646
10.000	*	-23.506	-14.106	-4.706	4.694	14.094
12.000	*	-11.286	-0.006	11.274	22.554	33.834
14.000	*	0.934	14.054	27.254	40.414	53.574
	*					

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
\$/acre foot

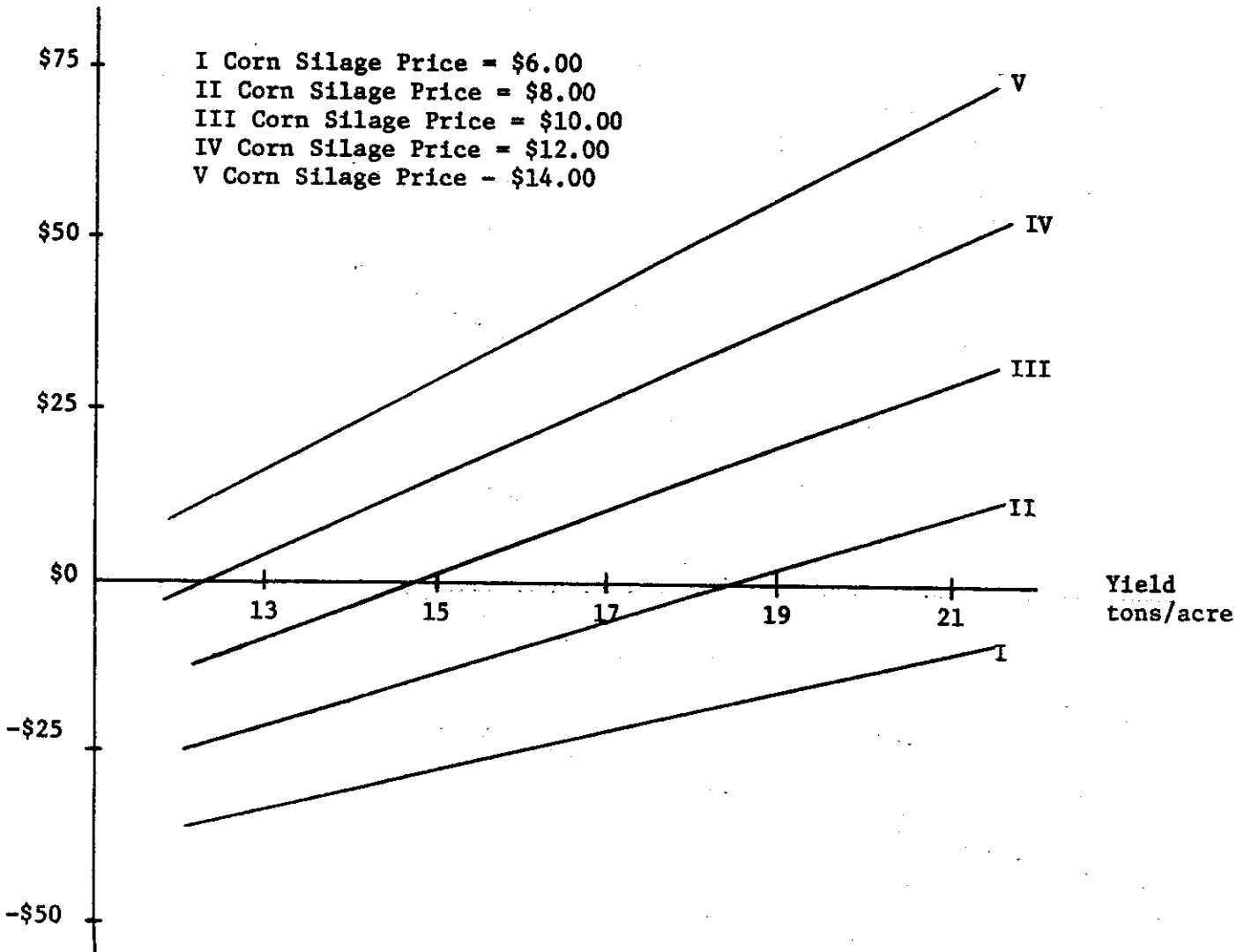


Figure Value of irrigation water applied to Corn Silage in Edwards Aquifer for alternative Corn Silage prices and yield with expected 1974 costs.

Value of
Irrigation
\$/acre foot

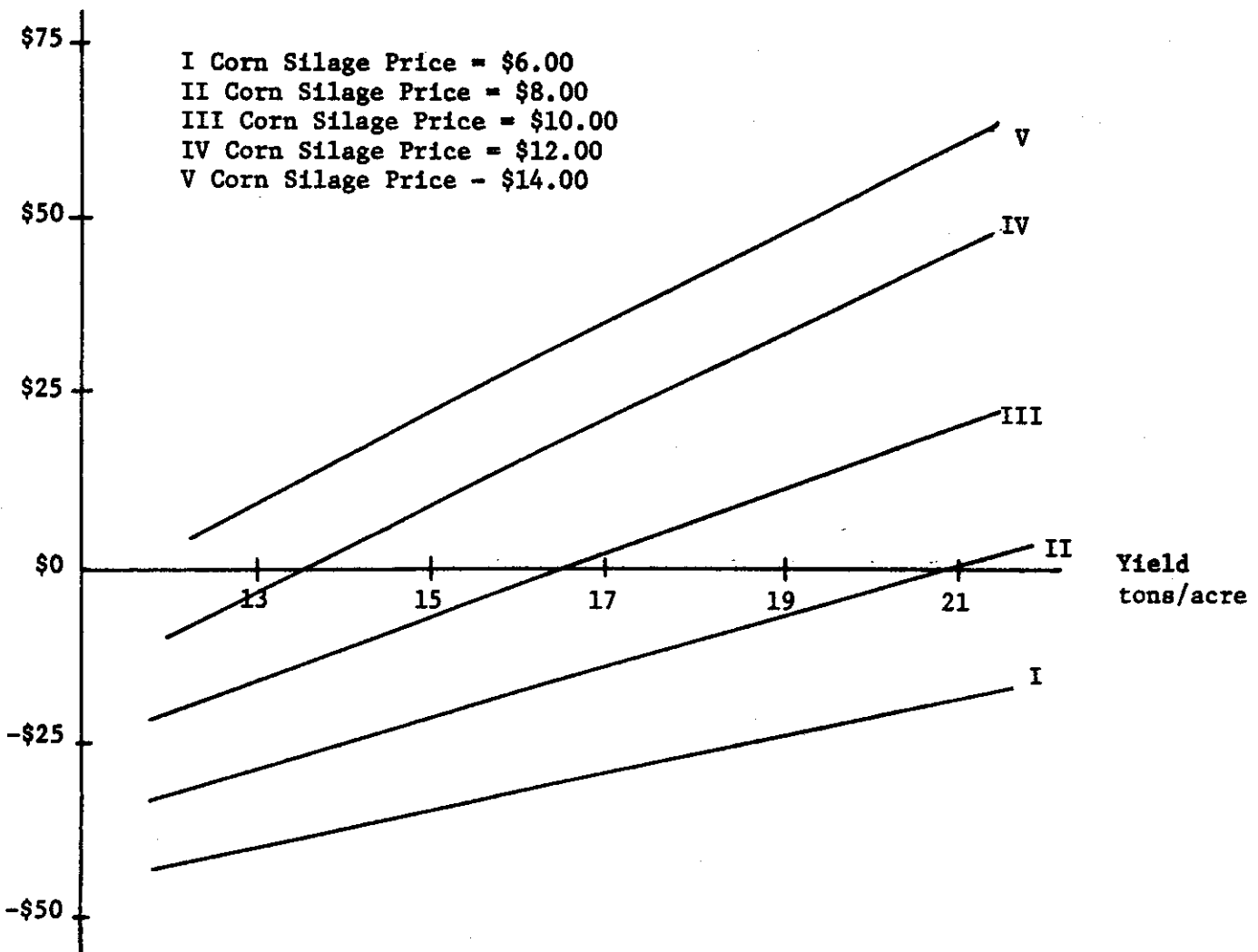


Figure Value of irrigation water applied to Corn Silage in Edwards Aquifer for alternative Corn Silage prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

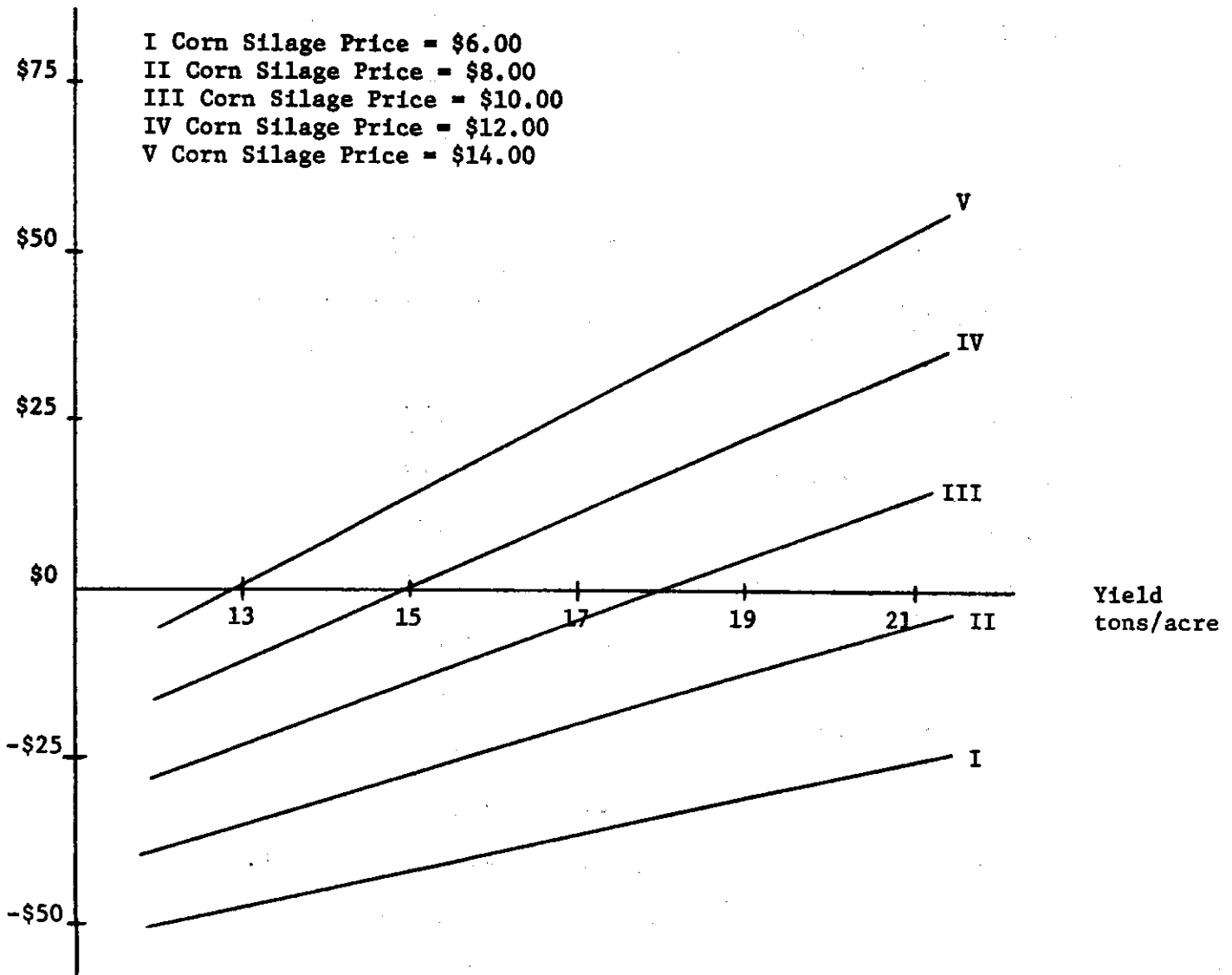


Figure Value of irrigation water applied to Corn Silage in Edwards Aquifer for alternative Corn Silage prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
COTTON

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		400.0	450.0	500.0	550.0	600.0

PRODUCTION COSTS 1974	*					
PRICES	*					
0.200	*	-58.487	-53.800	-49.113	-44.427	-39.740
	*					
0.300	*	-33.153	-25.300	-17.447	-9.593	-1.740
	*					
0.400	*	-7.820	3.200	14.220	25.240	36.260
	*					
0.500	*	17.513	31.700	45.887	60.073	74.260
	*					
0.600	*	42.847	60.200	77.553	94.907	112.260
	*					

10% COST INFLATION	*					
PRICES	*					
0.200	*	-70.949	-66.620	-62.291	-57.963	-53.634
	*					
0.300	*	-45.749	-38.270	-30.791	-23.313	-15.834
	*					
0.400	*	-20.549	-9.920	0.709	11.337	21.966
	*					
0.500	*	4.651	18.430	32.209	45.987	59.766
	*					
0.600	*	29.851	46.780	63.709	80.637	97.566
	*					

20% COST INFLATION	*					
PRICES	*					
0.200	*	-83.411	-79.440	-75.469	-71.499	-67.528
	*					
0.300	*	-58.344	-51.240	-44.136	-37.032	-29.928
	*					
0.400	*	-33.277	-23.040	-12.803	-2.565	7.672
	*					
0.500	*	-8.211	5.160	18.531	31.901	45.272
	*					
0.600	*	16.856	33.360	49.864	66.368	82.872
	*					

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

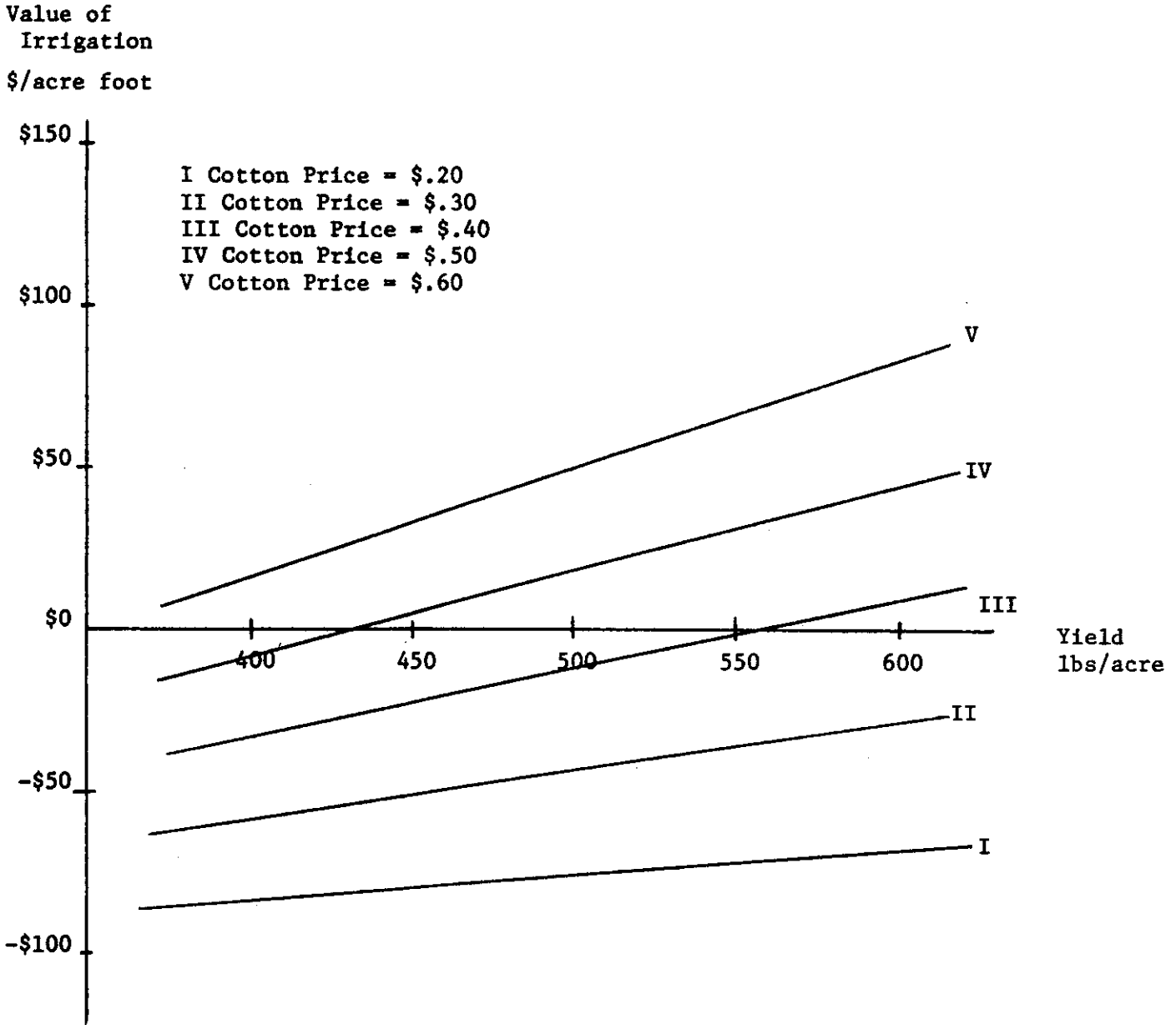


Figure Value of irrigation water applied to Cotton in Edwards Aquifer for alternative Cotton prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
GRAIN SORGHUM

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		30.0	35.0	40.0	45.0	50.0
PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-37.000	-31.667	-26.333	-21.000	-15.667
3.000	*	-13.000	-9.500	-1.000	7.500	16.000
4.000	*	1.000	12.667	24.333	36.000	47.667
5.000	*	20.000	34.833	49.667	64.500	79.333
6.000	*	39.000	57.000	75.000	93.000	111.000
10% COST INFLATION	*					
PRICES	*					
2.000	*	-44.700	-39.500	-34.300	-29.100	-23.900
3.000	*	-25.800	-17.450	-9.100	-0.750	7.600
4.000	*	-6.900	4.600	16.100	27.600	39.100
5.000	*	12.000	26.650	41.300	55.950	70.600
6.000	*	30.900	48.700	66.500	84.300	102.100
20% COST INFLATION	*					
PRICES	*					
2.000	*	-52.400	-47.333	-42.267	-37.200	-32.133
3.000	*	-33.600	-25.400	-17.200	-9.000	-0.800
4.000	*	-14.800	-3.467	7.867	19.200	31.533
5.000	*	4.000	18.467	32.933	47.400	61.867
6.000	*	22.800	40.400	58.000	75.600	93.200

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

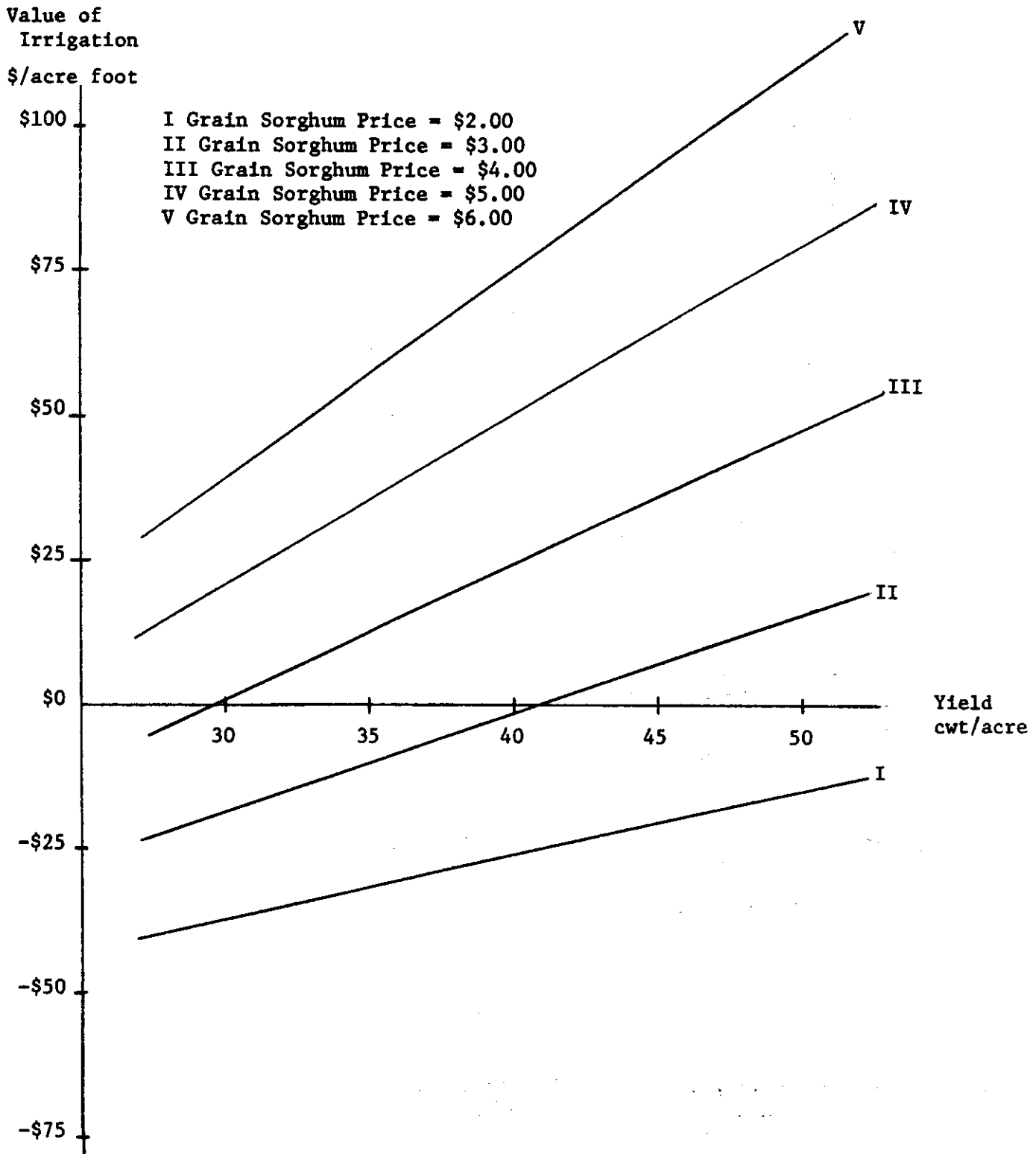


Figure Value of irrigation water applied to Grain Sorghum in Edwards Aquifer for alternative Grain Sorghum prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

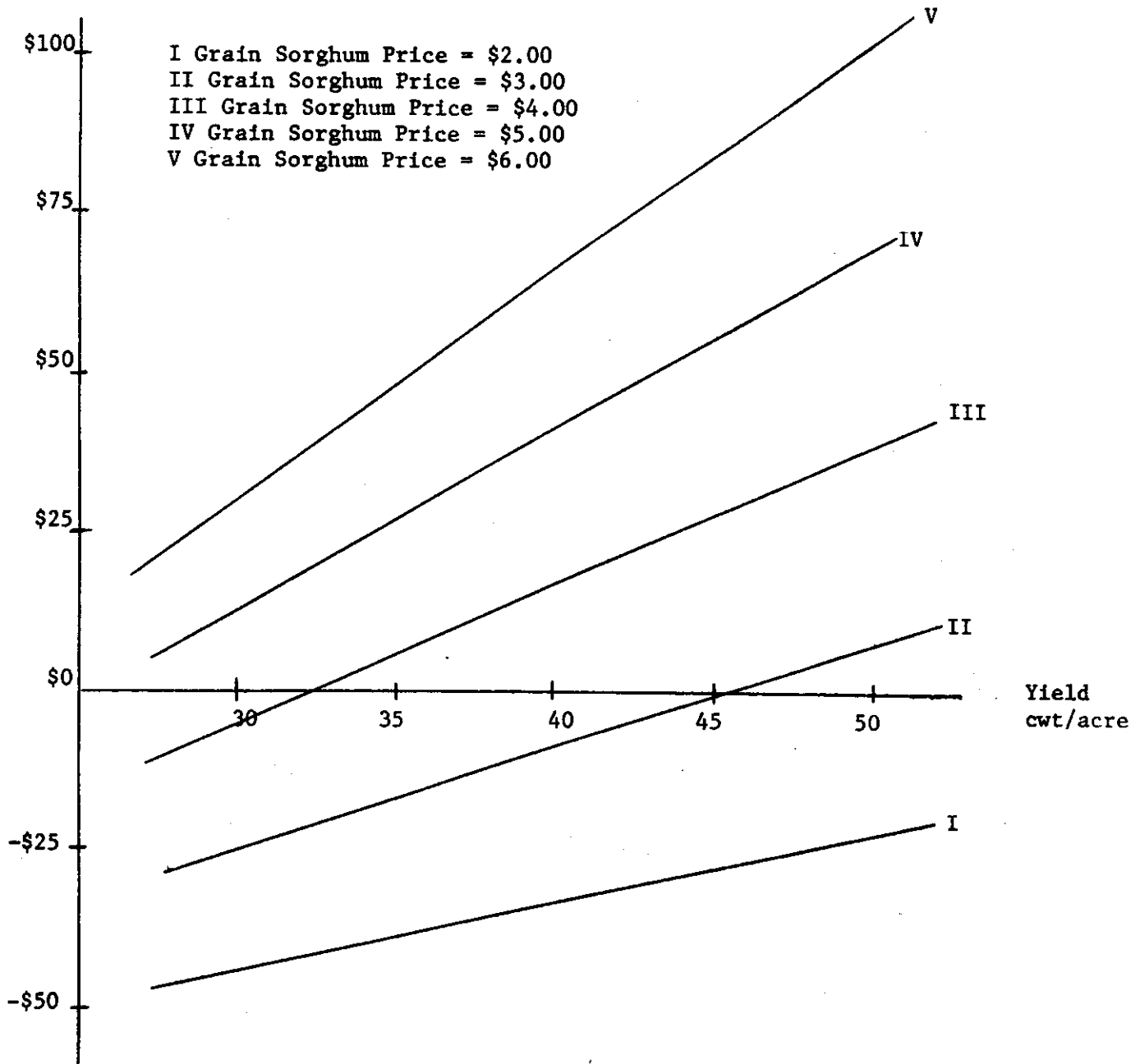


Figure Value of irrigation water applied to Grain Sorghum in Edwards Aquifer for alternative Grain Sorghum prices and yields for 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

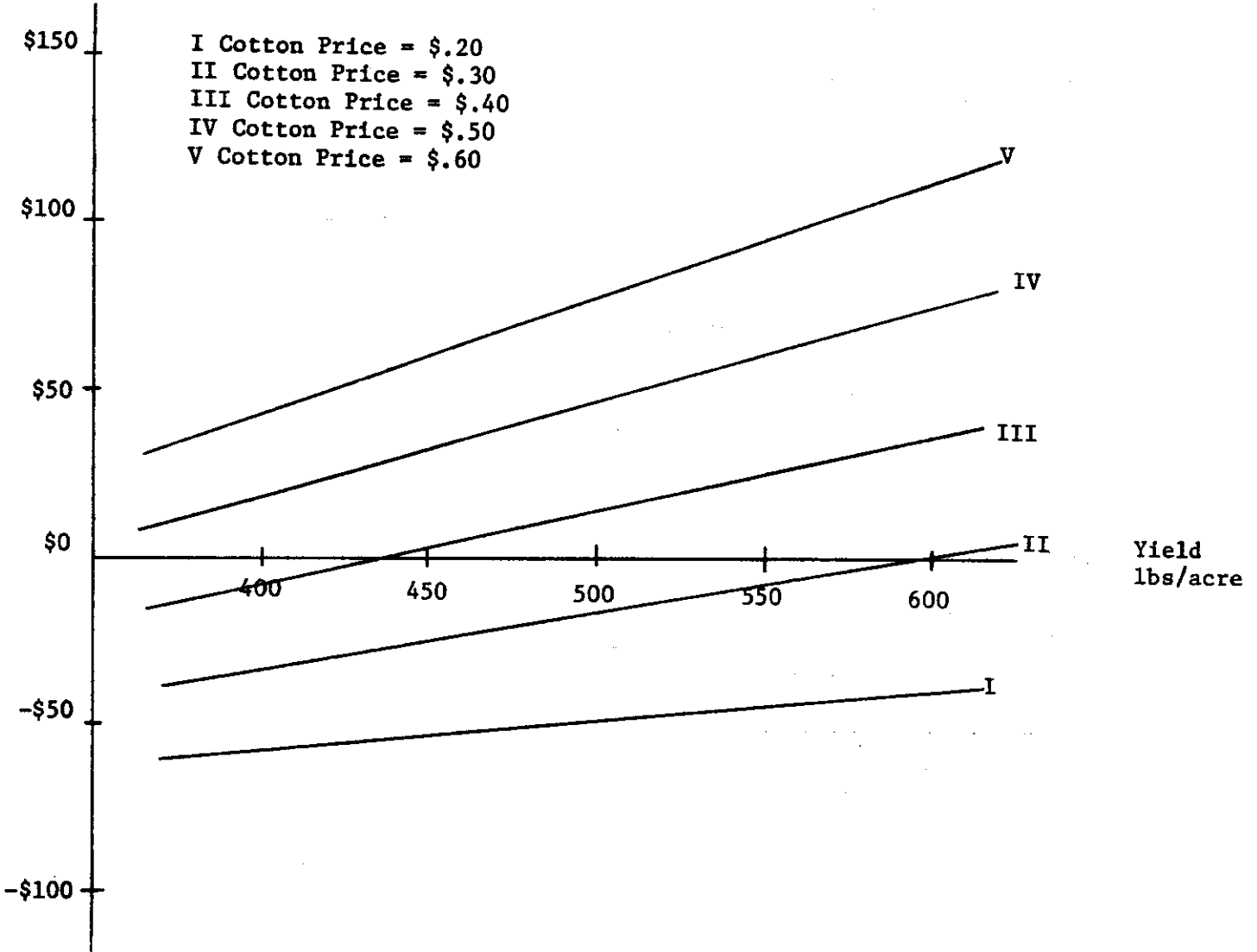
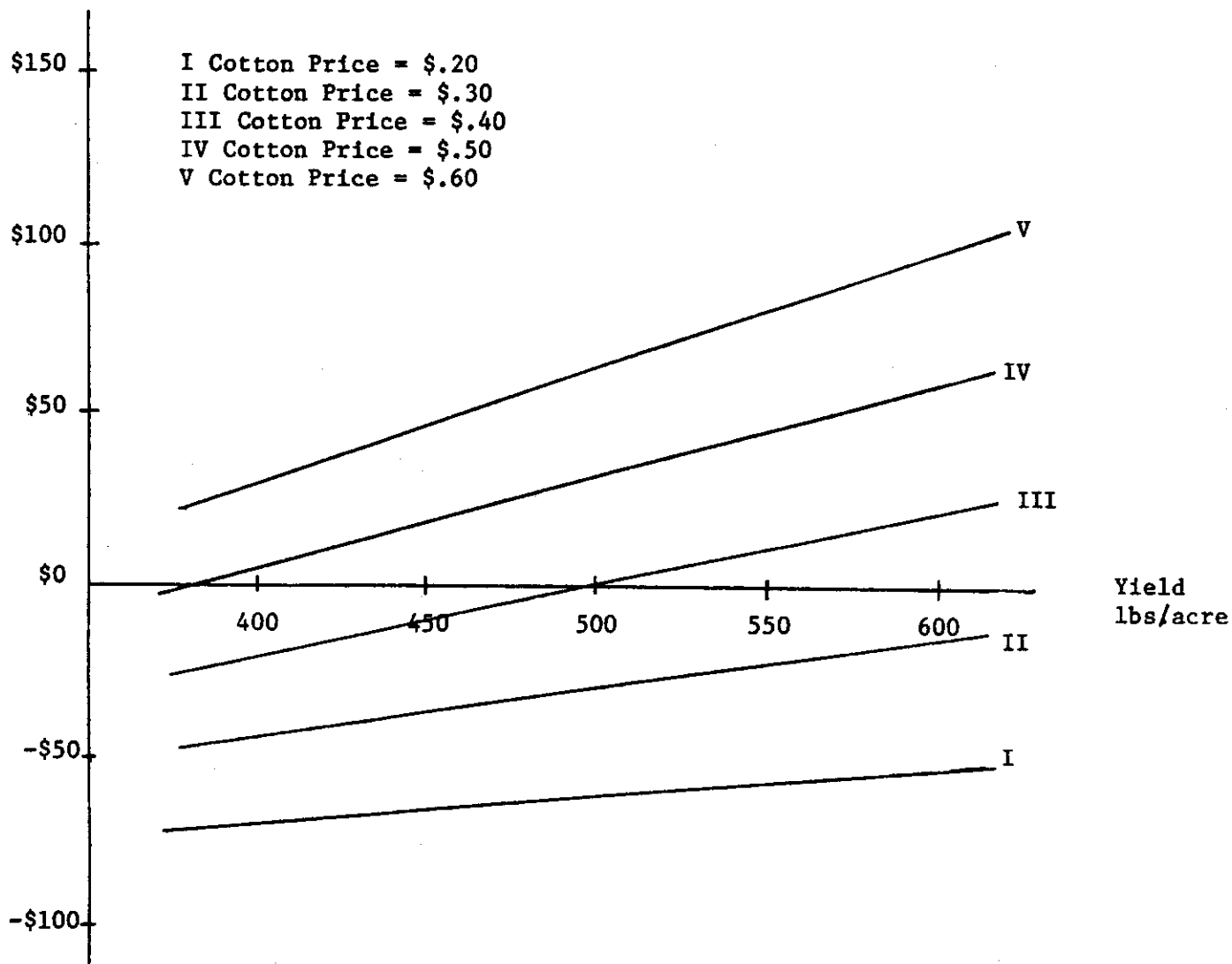


Figure Value of irrigation water applied to Cotton in Edwards Aquifer for alternative Cotton prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot



Figure

Value of irrigation water applied to Cotton in Edwards Aquifer for alternative Cotton price and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

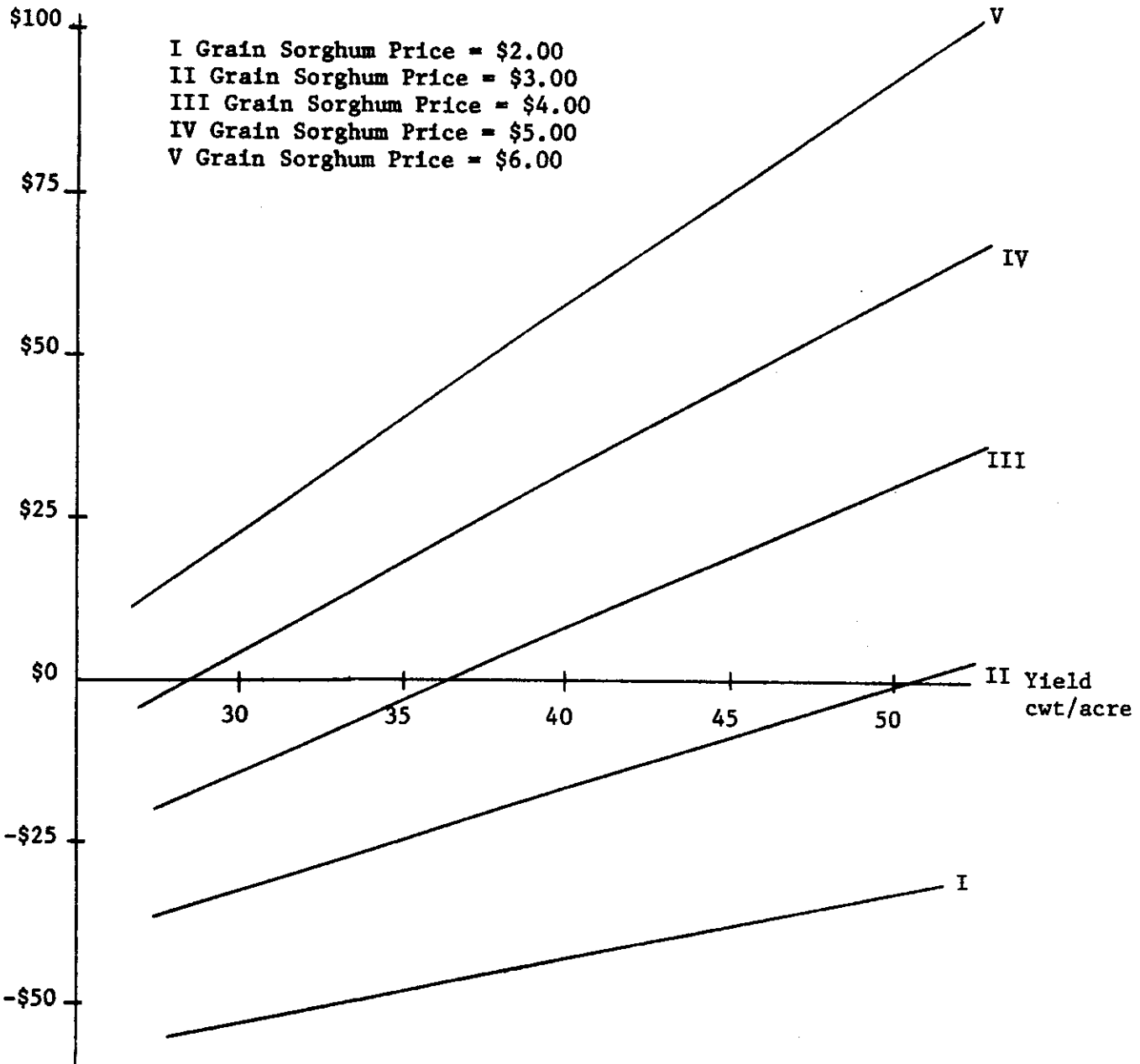


Figure Value of irrigation water applied to Grain Sorghum in Edwards Aquifer for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
SUDAN HAY

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		6.0	7.0	8.0	9.0	10.0

PRODUCTION COSTS 1974	*					
PRICES	*					
20.000	*	-82.953	-84.733	-86.513	-58.293	-90.073
25.000	*	-63.953	-62.567	-61.180	-59.793	-58.407
30.000	*	-44.953	-40.400	-35.847	-31.293	-26.740
35.000	*	-25.953	-18.233	-10.513	-2.793	4.927
40.000	*	-6.953	3.933	14.820	25.707	36.593

10% COST INFLATION	*					
PRICES	*					
20.000	*	-99.249	-102.540	-105.831	-109.123	-112.414
25.000	*	-80.349	-80.490	-80.631	-80.773	-80.914
30.000	*	-61.449	-58.440	-55.431	-52.423	-49.414
35.000	*	-42.548	-36.390	-30.231	-24.073	-17.914
40.000	*	-23.649	-14.340	-5.031	4.278	13.536

20% COST INFLATION	*					
PRICES	*					
20.000	*	-115.544	-120.347	-125.149	-129.952	-134.754
25.000	*	-96.744	-98.413	-100.082	-101.752	-103.421
30.000	*	-77.944	-76.480	-75.016	-73.552	-72.088
35.000	*	-59.144	-54.546	-49.949	-45.352	-40.754
40.000	*	-40.344	-32.613	-24.882	-17.152	-9.421

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
\$/acre foot

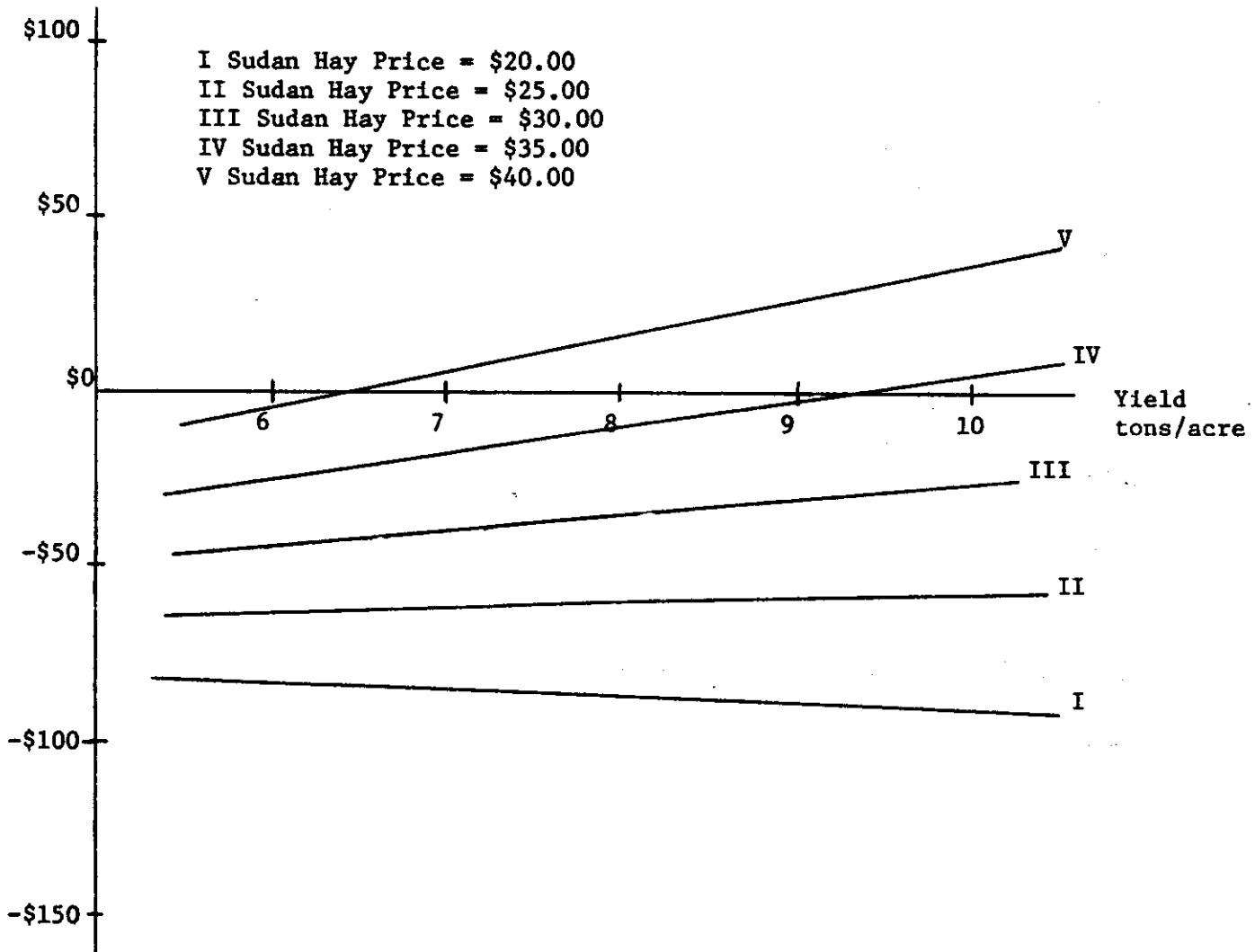


Figure Value of irrigation water applied to Sudan Hay in Edwards Aquifer for alternative Sudan Hay prices and yields with 1974 costs.

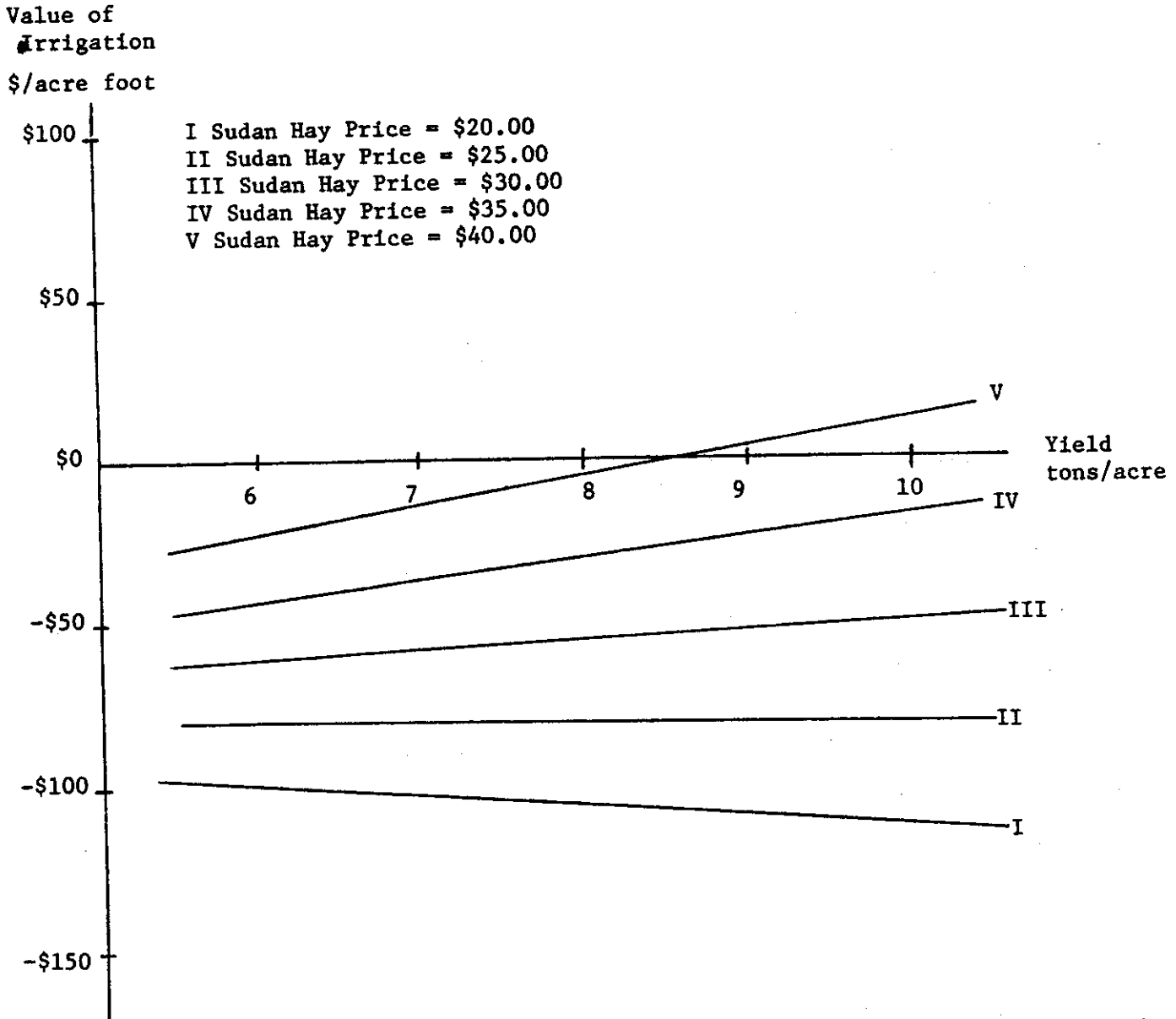


Figure Value of irrigation water applied to Sudan Hay in Edwards Aquifer for alternative Sudan Hay prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

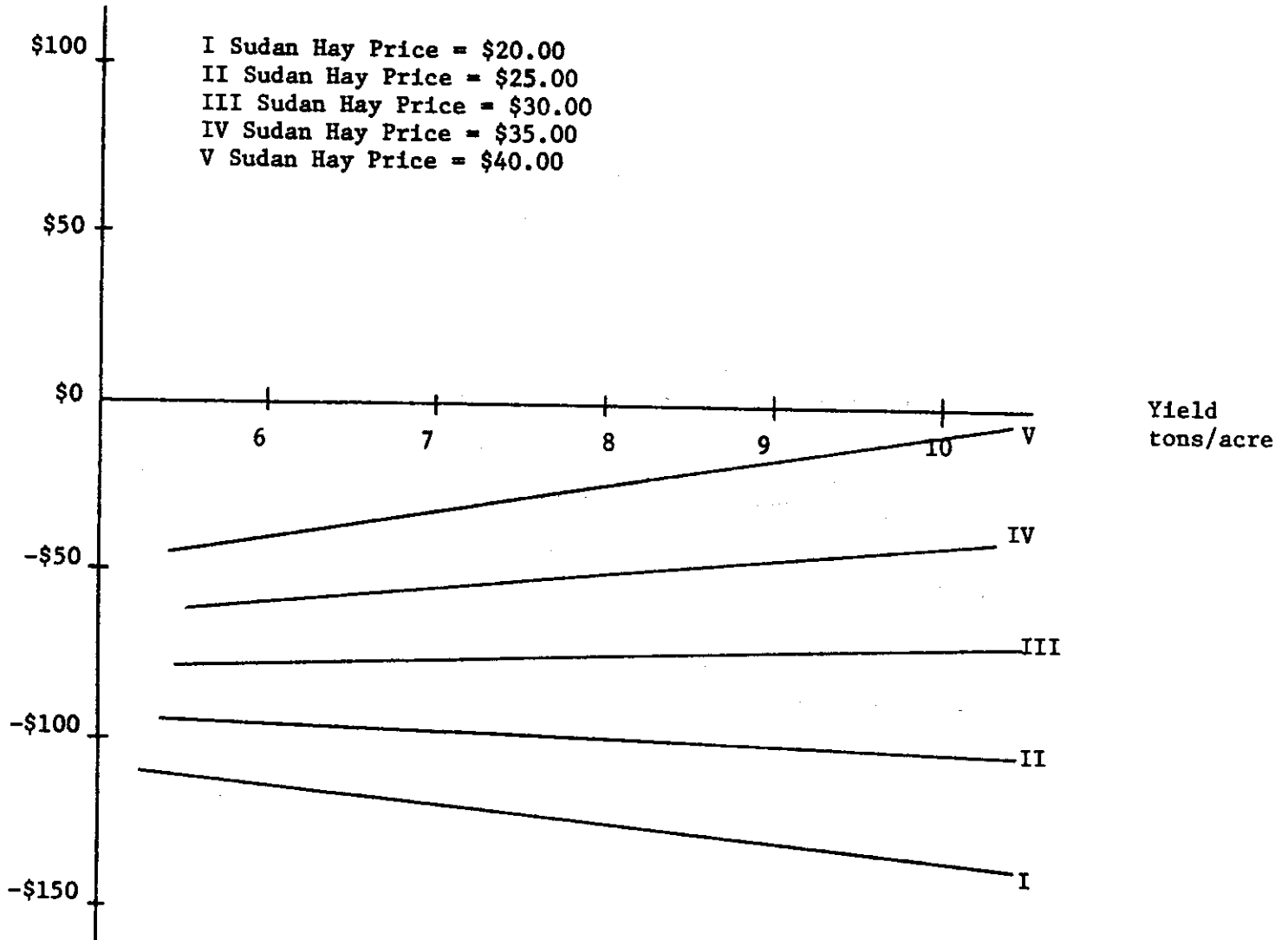


Figure Value of irrigation water applied to Sudan Hay in Edwards Aquifer for alternative Sudan Hay prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EDWARDS AQUIFER
MEXICAN WHEAT

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		20.0	30.0	40.0	50.0	60.0

PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-41.160	-29.093	-17.027	-4.960	7.107
3.000	*	-28.493	-10.093	8.307	26.707	45.107
4.000	*	-15.827	8.907	33.640	58.373	83.107
5.000	*	-3.160	27.907	58.973	90.040	121.107
6.000	*	9.507	46.907	84.307	121.707	159.107

10% COST INFLATION	*					
PRICES	*					
2.000	*	-47.943	-36.003	-24.063	-12.123	-0.183
3.000	*	-35.343	-17.103	1.137	19.377	37.617
4.000	*	-22.743	1.797	26.337	50.877	75.417
5.000	*	-10.143	20.697	51.537	82.377	113.217
6.000	*	2.457	39.597	76.737	113.877	151.017

20% COST INFLATION	*					
PRICES	*					
2.000	*	-54.725	-42.912	-31.099	-19.285	-1.472
3.000	*	-42.192	-24.112	-6.032	12.048	30.128
4.000	*	-29.659	-5.312	19.035	43.381	67.728
5.000	*	-17.125	13.488	44.101	74.715	105.328
6.000	*	-4.592	32.288	69.168	106.048	142.928

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
\$/acre foot

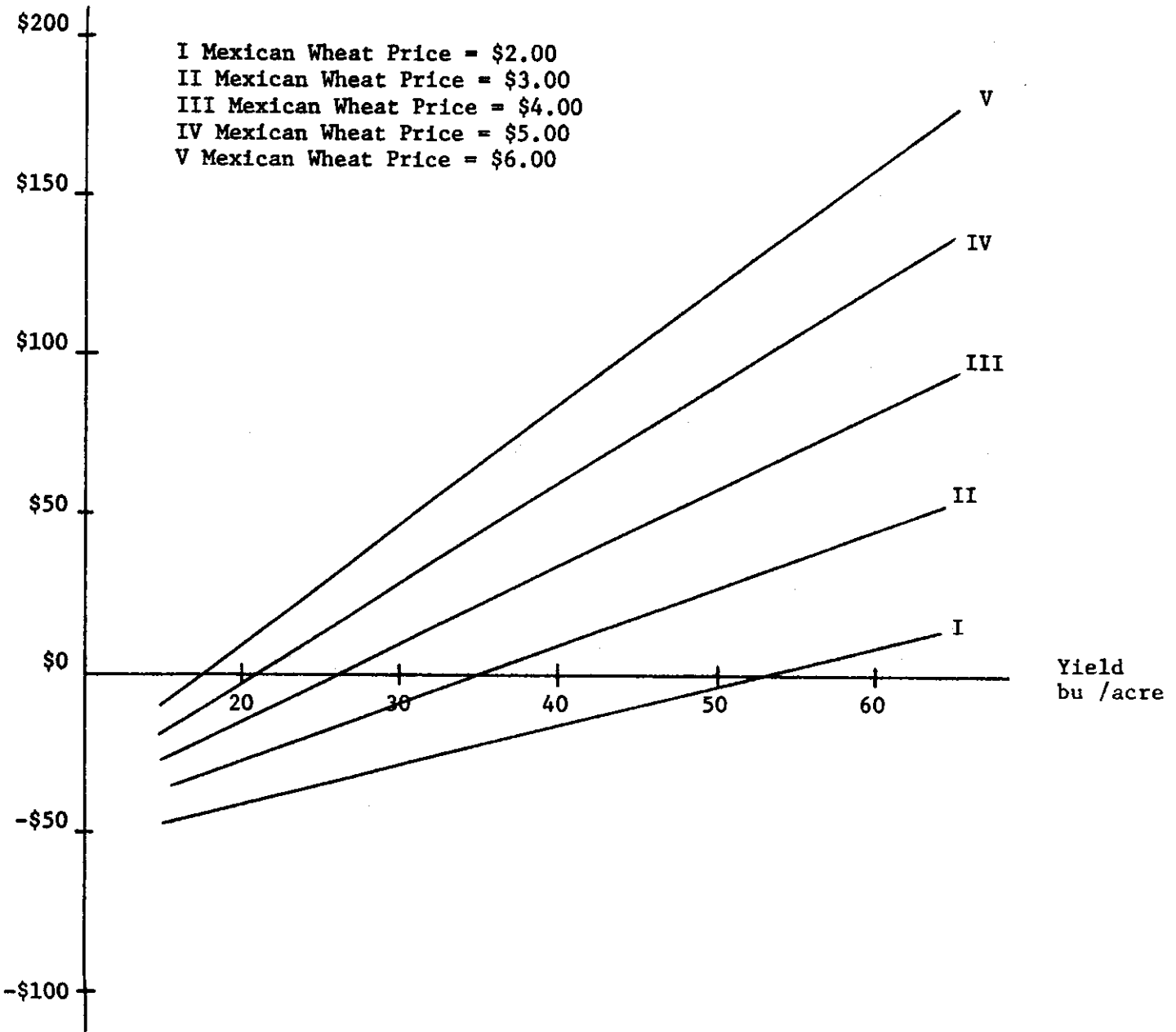


Figure Value of irrigation water applied to Mexican Wheat in Edwards Aquifer for alternative Mexican Wheat prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

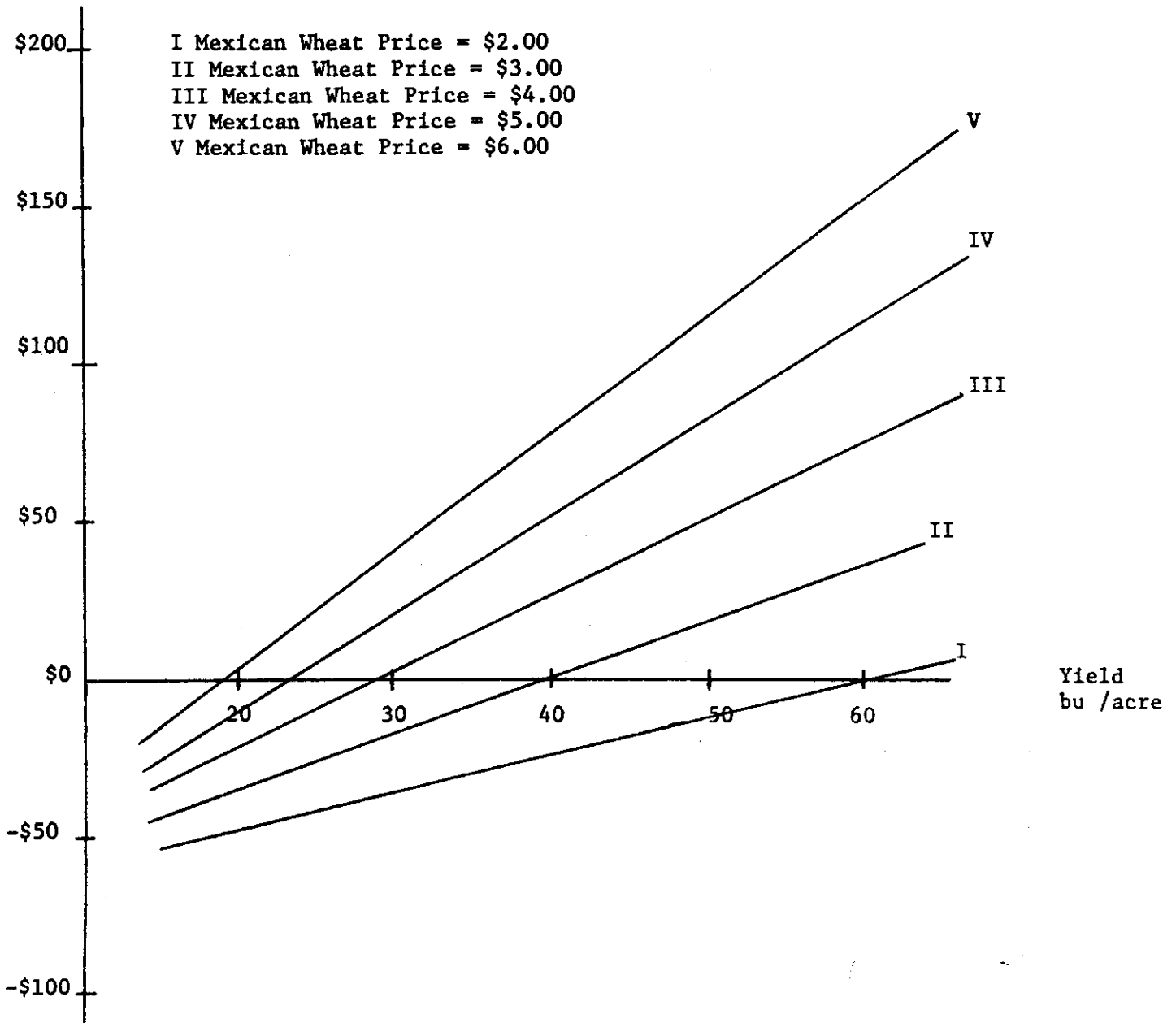


Figure Value of irrigation water applied to Mexican Wheat in Edwards Aquifer for alternative Mexican Wheat prices and yields with expected 1974 inflated 10 percent.

Value of
Irrigation
\$/acre foot

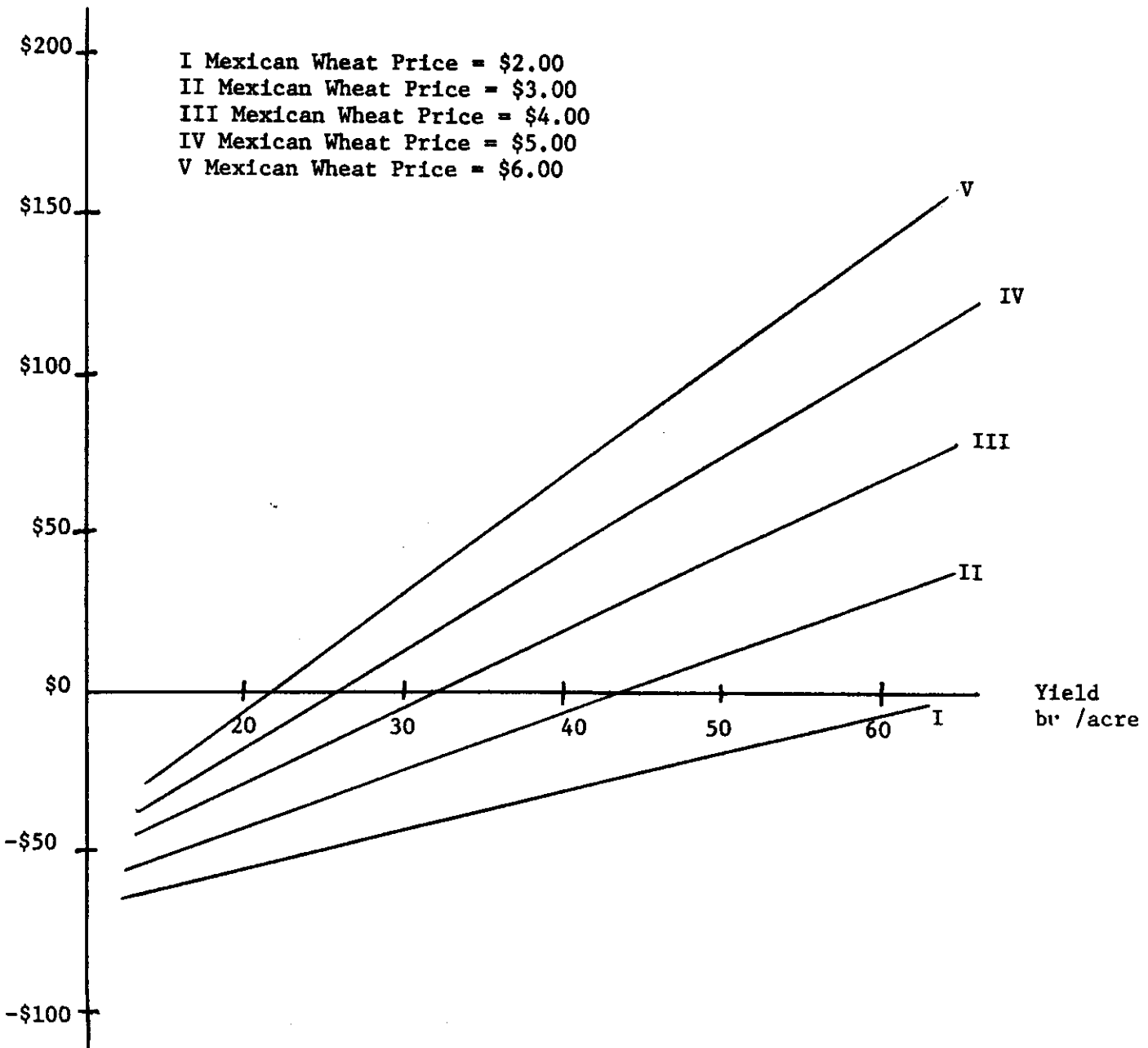


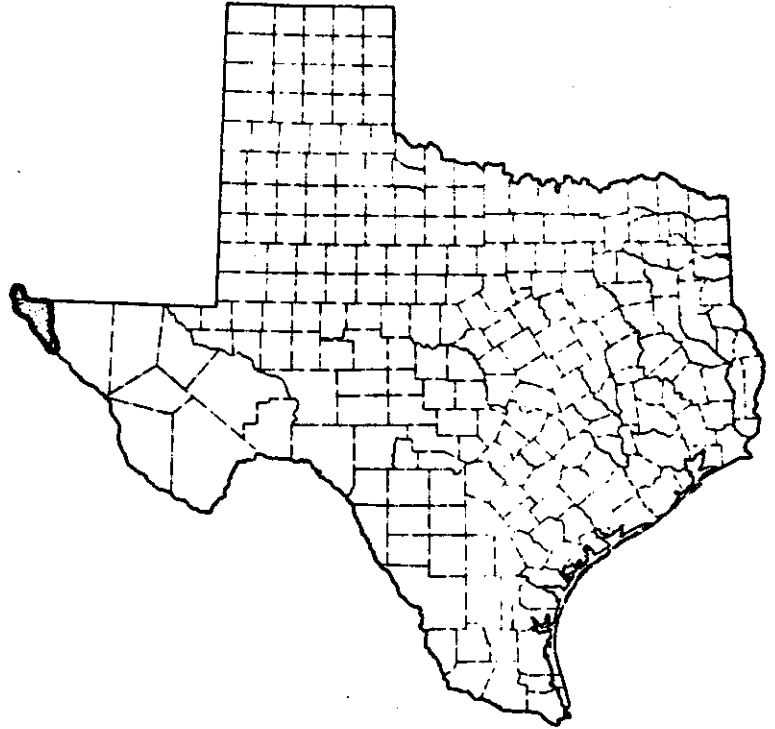
Figure Value of irrigation water applied to Mexican Wheat in Edwards Aquifer for alternative Mexican Wheat prices and yields with expected 1974 costs inflated 20 percent.

Texas El Paso Region

This area includes the irrigated lands in El Paso and Hudspeth counties along the El Paso river, with irrigation from the River Project. Supplemental irrigation is drawn from underground sources for fall and winter crops.

A land charge of \$52.50 was assessed based on data presented in MP-1027, Texas Crop Budgets by The Texas Agricultural Service.

The alternative yields per acre and prices used in this analysis are presented in the following table.



Crop	Unit	Yields					Prices				
		2	4	6	8	10	10.00	20.00	30.00	40.00	50.00
Alfalfa	ton	2	4	6	8	10	10.00	20.00	30.00	40.00	50.00
Barley	cwt	10	20	30	40	50	2.00	3.00	4.00	5.00	6.00
Corn Silage	ton	2	4	6	8	10	10.00	20.00	30.00	40.00	50.00
Cotton, Pima	lbs	300	400	500	600	700	.40	.60	.80	1.00	1.20
Cotton, Upland	lbs	500	600	700	800	900	.20	.30	.40	.50	.60
Grain sorghum	cwt	15	25	35	45	55	2.00	2.50	3.00	3.50	4.00

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EL PASO
ALFALFA

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		2.0	4.0	6.0	8.0	10.0
PRODUCTION COSTS 1974	*					
PRICES	*					
10.000	*	-70.748	-71.413	-72.077	-72.742	-73.406
20.000	*	-64.619	-59.155	-53.690	-48.226	-42.761
30.000	*	-58.490	-46.897	-35.303	-23.710	-12.116
40.000	*	-52.361	-34.639	-16.916	0.807	18.529
50.000	*	-46.232	-22.381	1.471	25.323	49.174
10% COST INFLATION	*					
PRICES	*					
10.000	*	-78.468	-79.844	-81.221	-82.597	-83.973
20.000	*	-72.372	-67.651	-62.930	-58.210	-53.489
30.000	*	-66.275	-55.457	-44.640	-33.822	-23.005
40.000	*	-60.178	-43.264	-26.350	-9.435	7.479
50.000	*	-54.081	-31.070	-8.059	14.952	37.963
20% COST INFLATION	*					
PRICES	*					
10.000	*	-86.188	-88.276	-90.364	-92.451	-94.539
20.000	*	-80.124	-76.147	-72.170	-68.193	-64.217
30.000	*	-74.059	-64.018	-53.977	-43.935	-33.894
40.000	*	-67.995	-51.889	-35.783	-19.677	-3.571
50.000	*	-61.930	-39.760	-17.590	4.581	26.751

A DRYLAND RETURN OF 52.500 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

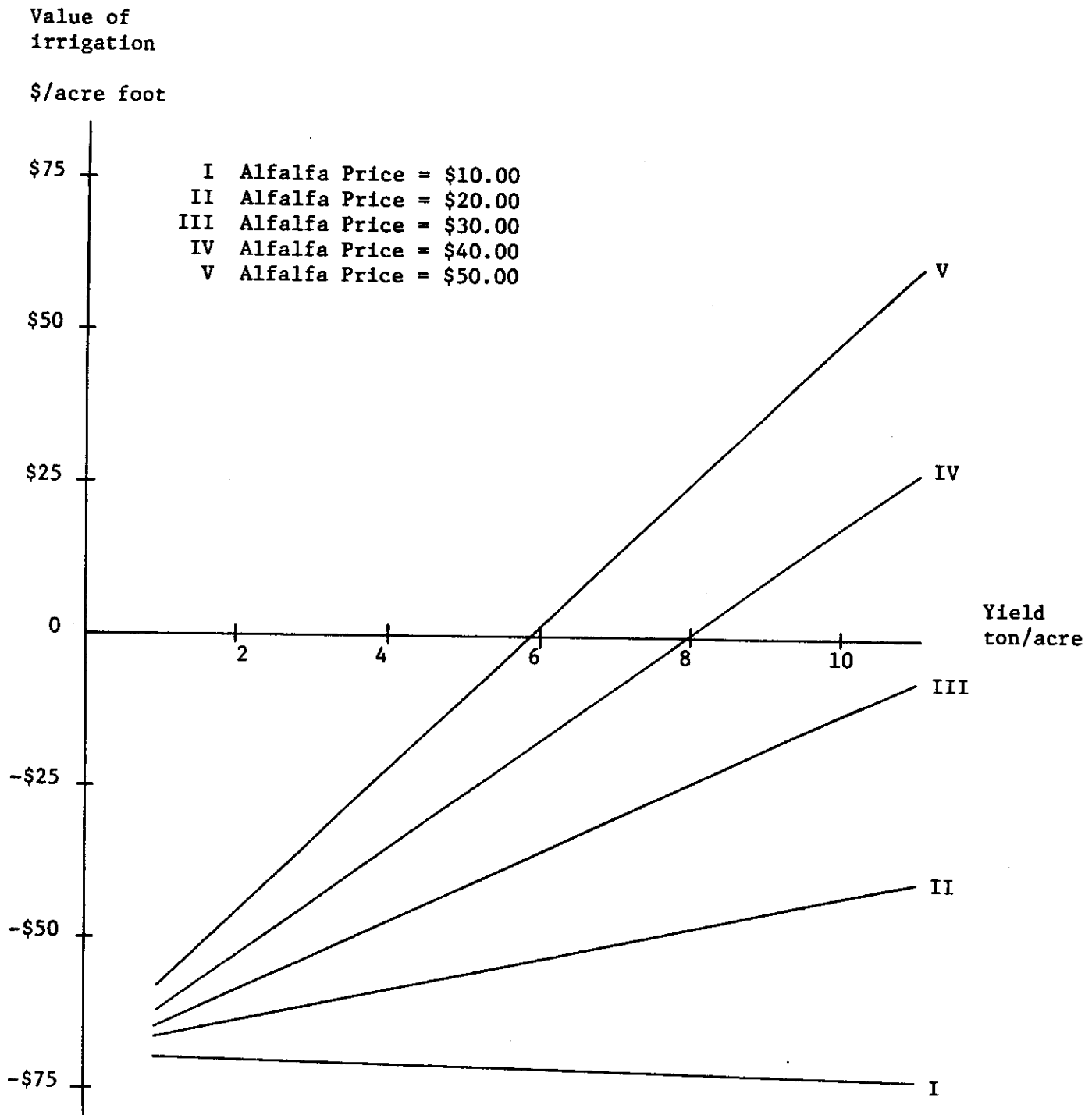


Figure Value of irrigation water applied to Alfalfa in El Paso for alternative Alfalfa prices and yields with expected 1974 costs.

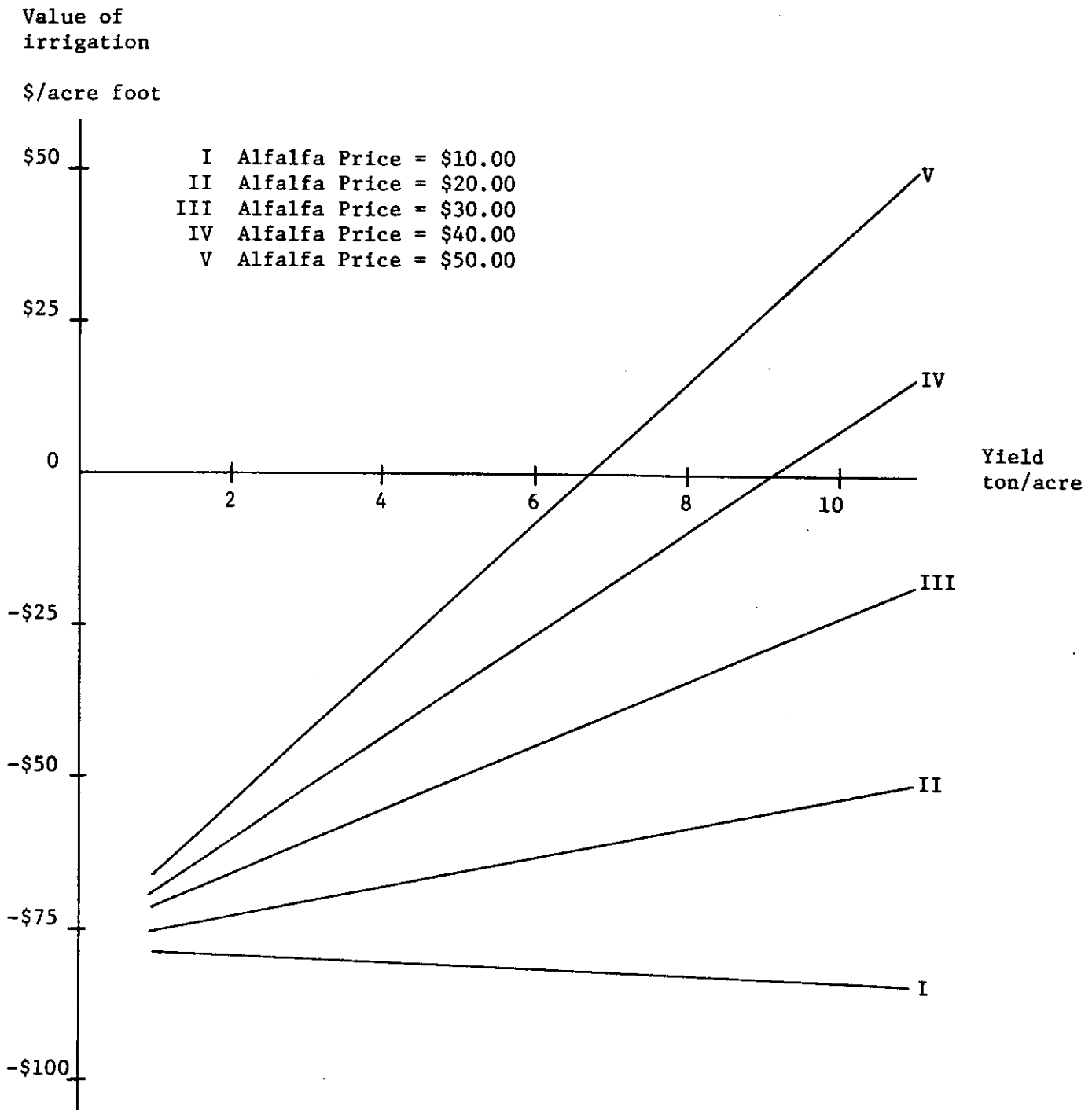


Figure Value of irrigation water applied to Alfalfa in El Paso for alternative Alfalfa prices and yields with expected 1974 costs inflated 10 percent.

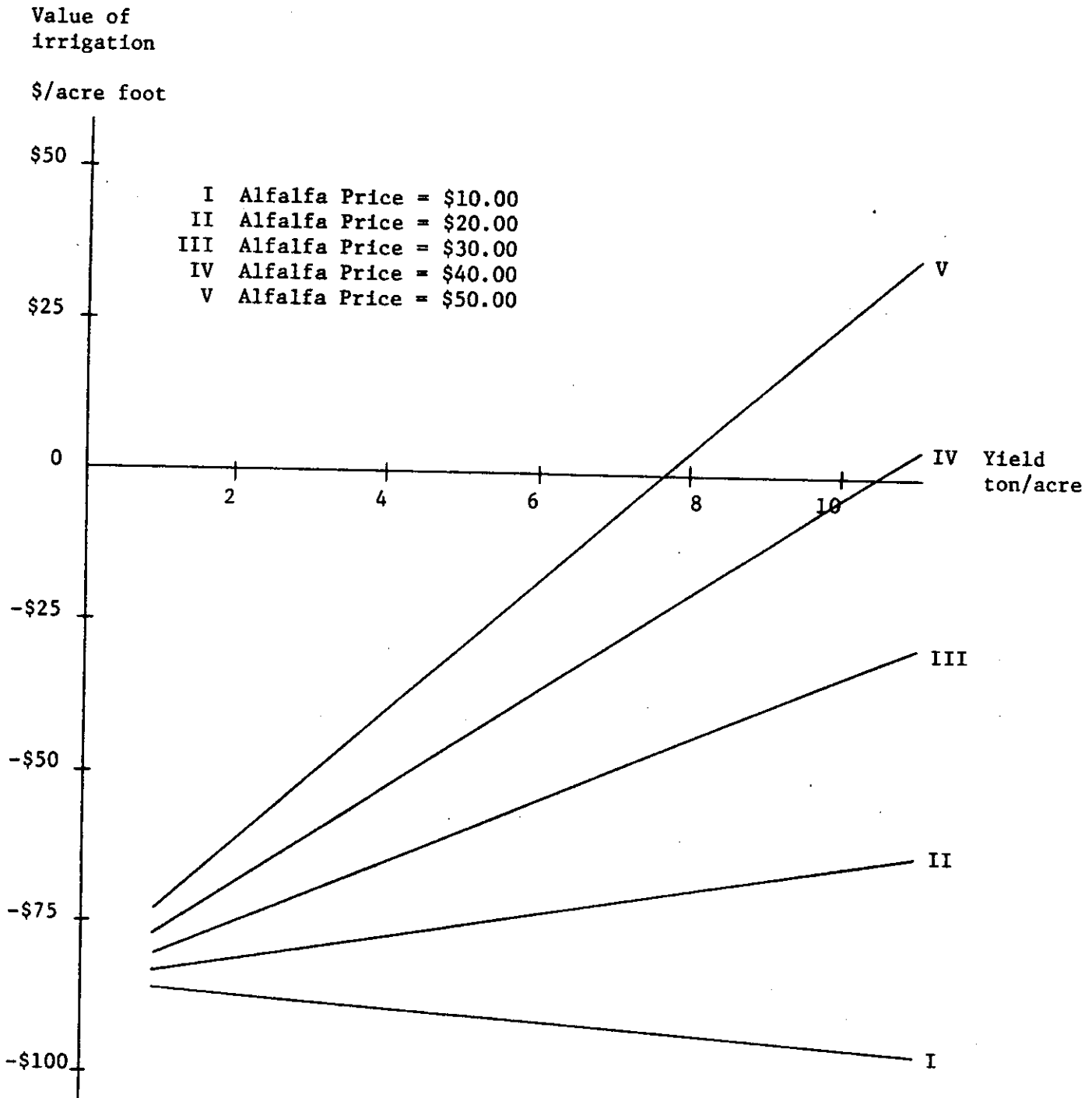


Figure Value of irrigation water applied to Alfalfa in El Paso for alternative Alfalfa prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EL PASO
BARLEY

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		10.0	20.0	30.0	40.0	50.0

PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-67.141	-58.605	-50.068	-41.532	-32.995
	*					
3.000	*	-62.507	-49.337	-36.166	-22.995	-9.824
	*					
4.000	*	-57.873	-40.068	-22.263	-4.459	13.346
	*					
5.000	*	-53.239	-30.800	-8.361	14.078	36.517
	*					
6.000	*	-48.605	-21.532	5.541	32.615	59.688
	*					

10% COST INFLATION	*					
PRICES	*					
2.000	*	-74.831	-66.417	-58.002	-49.587	-41.173
	*					
3.000	*	-70.221	-57.197	-44.173	-31.148	-18.124
	*					
4.000	*	-65.612	-47.978	-30.343	-12.709	4.925
	*					
5.000	*	-61.002	-38.758	-16.514	5.730	27.974
	*					
6.000	*	-56.392	-29.539	-2.685	24.169	51.022
	*					

20% COST INFLATION	*					
PRICES	*					
2.000	*	-82.521	-74.228	-65.936	-57.643	-49.350
	*					
3.000	*	-77.936	-65.058	-52.179	-39.301	-26.423
	*					
4.000	*	-73.350	-55.887	-38.423	-20.960	-3.497
	*					
5.000	*	-68.765	-46.716	-24.667	-2.619	19.430
	*					
6.000	*	-64.179	-37.545	-10.911	15.723	42.357
	*					

A DRYLAND RETURN OF 52.500 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

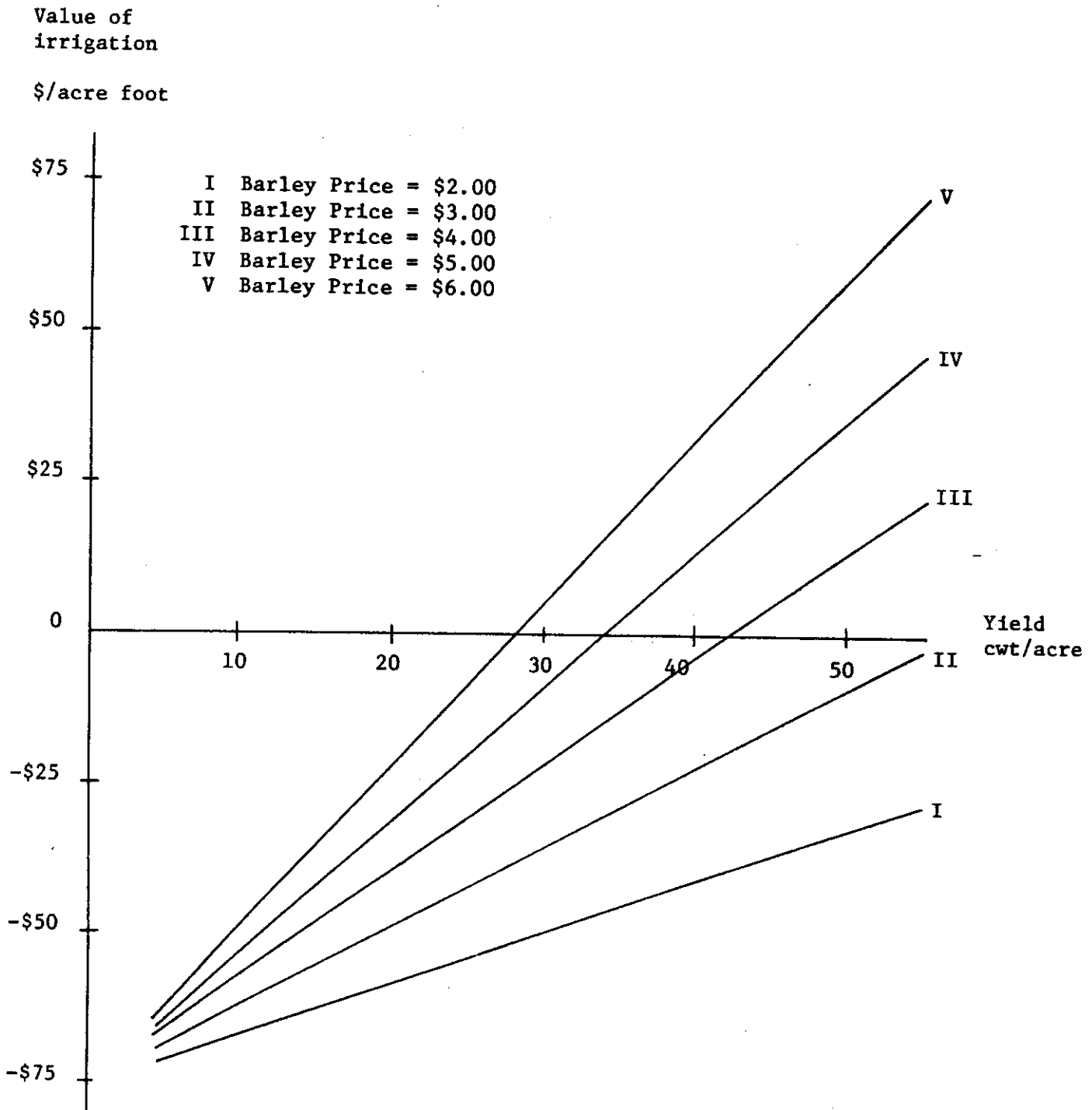


Figure Value of irrigation water applied to Barley in El Paso for alternative Barley prices and yields with expected 1974 costs.

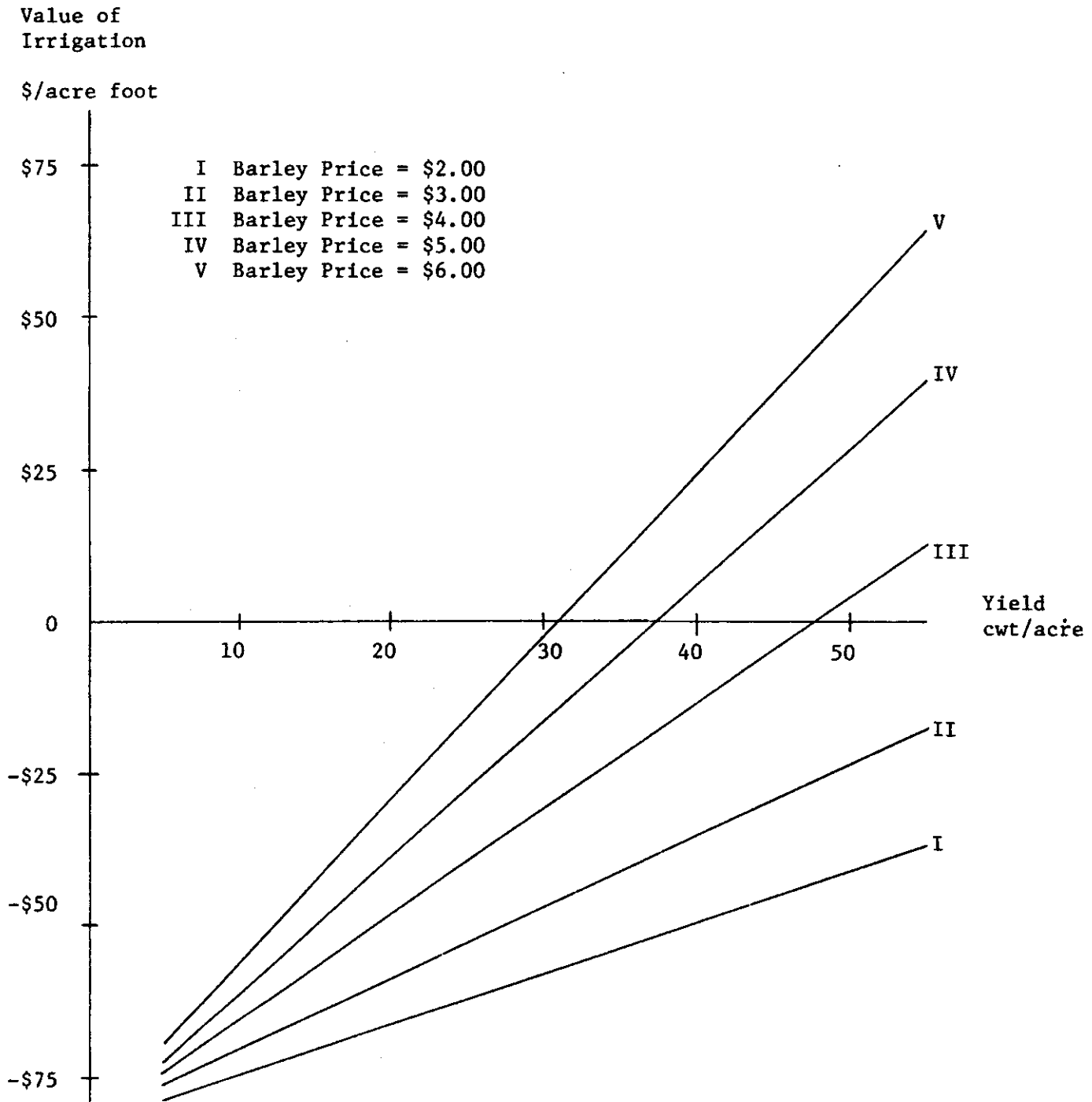


Figure Value of irrigation water applied to Barley in El Paso for alternative Barley prices and yields with expected 1974 costs inflated 10 percent.

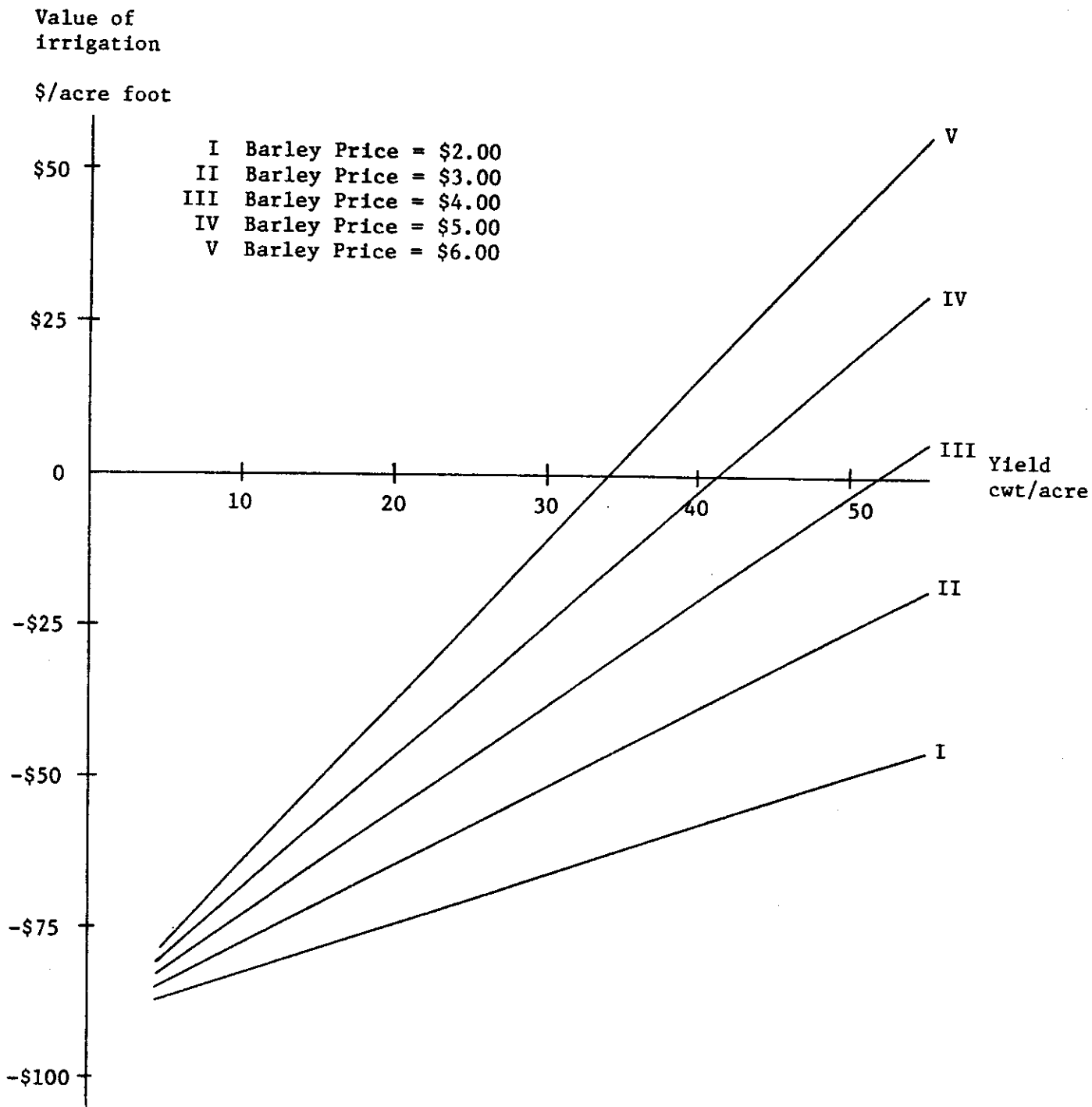


Figure Value of irrigation water applied to Barley in El Paso for alternative Barley prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EL PASO
CORN SILAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		2.0	4.0	6.0	8.0	10.0
PRODUCTION COSTS 1974	*					
PRICES	*					
10.000	*	-66.167	-57.119	-48.071	-39.024	-29.976
20.000	*	-57.119	-39.024	-20.929	-2.833	15.262
30.000	*	-48.071	-20.929	6.214	33.357	60.500
40.000	*	-39.024	-2.833	33.357	69.548	105.738
50.000	*	-29.976	15.262	60.500	105.738	150.976
10% COST INFLATION	*					
PRICES	*					
10.000	*	-73.736	-64.736	-55.736	-46.736	-37.736
20.000	*	-64.736	-46.736	-28.736	-10.736	7.264
30.000	*	-55.736	-28.736	-1.736	25.264	52.264
40.000	*	-46.736	-10.736	25.264	61.264	97.264
50.000	*	-37.736	7.264	52.264	97.264	142.264
20% COST INFLATION	*					
PRICES	*					
10.000	*	-81.305	-72.352	-63.400	-54.448	-45.495
20.000	*	-72.352	-54.448	-36.543	-18.638	-0.733
30.000	*	-63.400	-36.543	-9.686	17.171	44.029
40.000	*	-54.448	-18.638	17.171	52.981	88.790
50.000	*	-45.495	-0.733	44.029	88.790	133.552

A DRYLAND RETURN OF 52.500 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

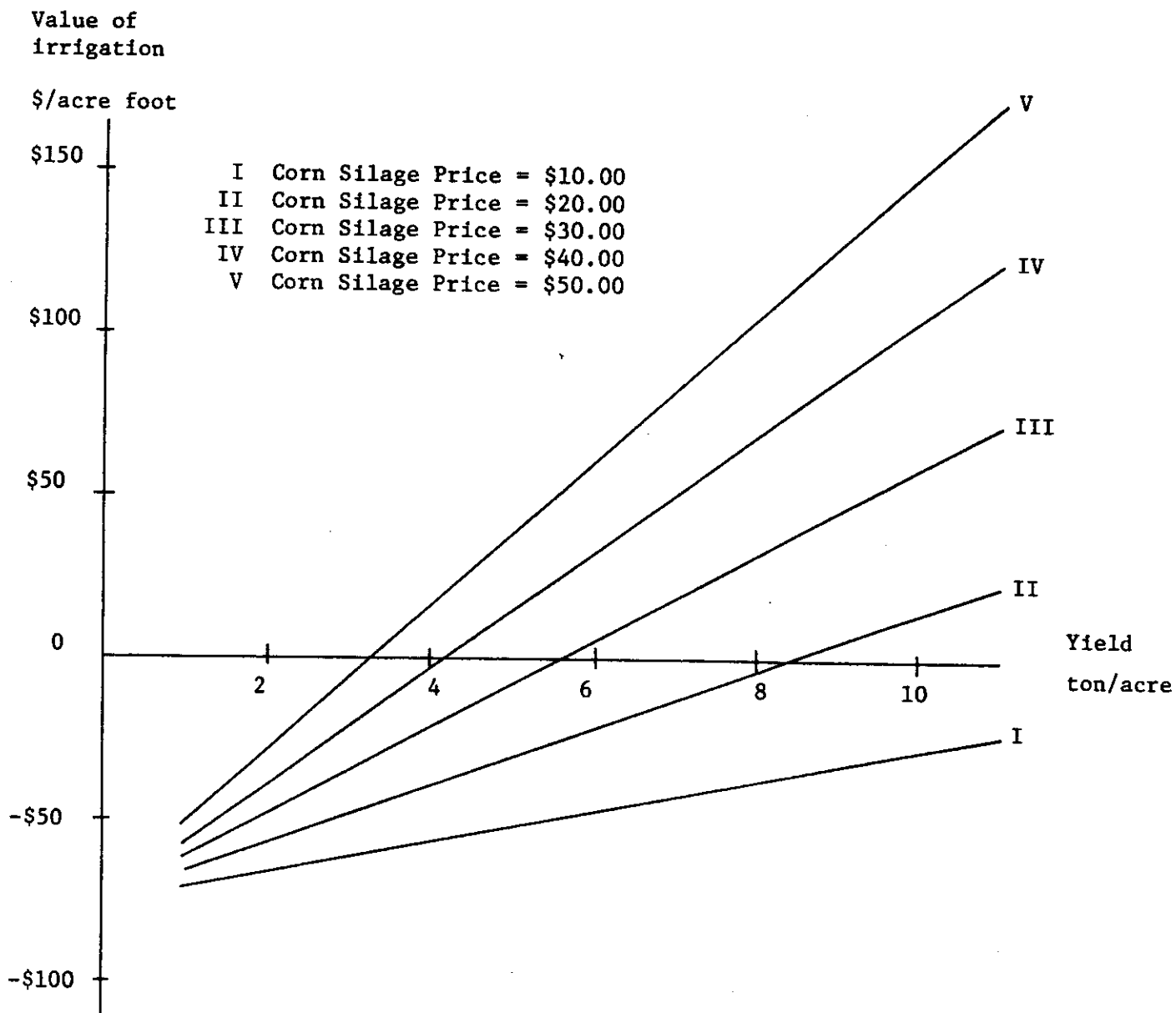


Figure Value of irrigation water applied to Corn Silage in El Paso for alternative Corn Silage prices and yields with expected 1974 costs.

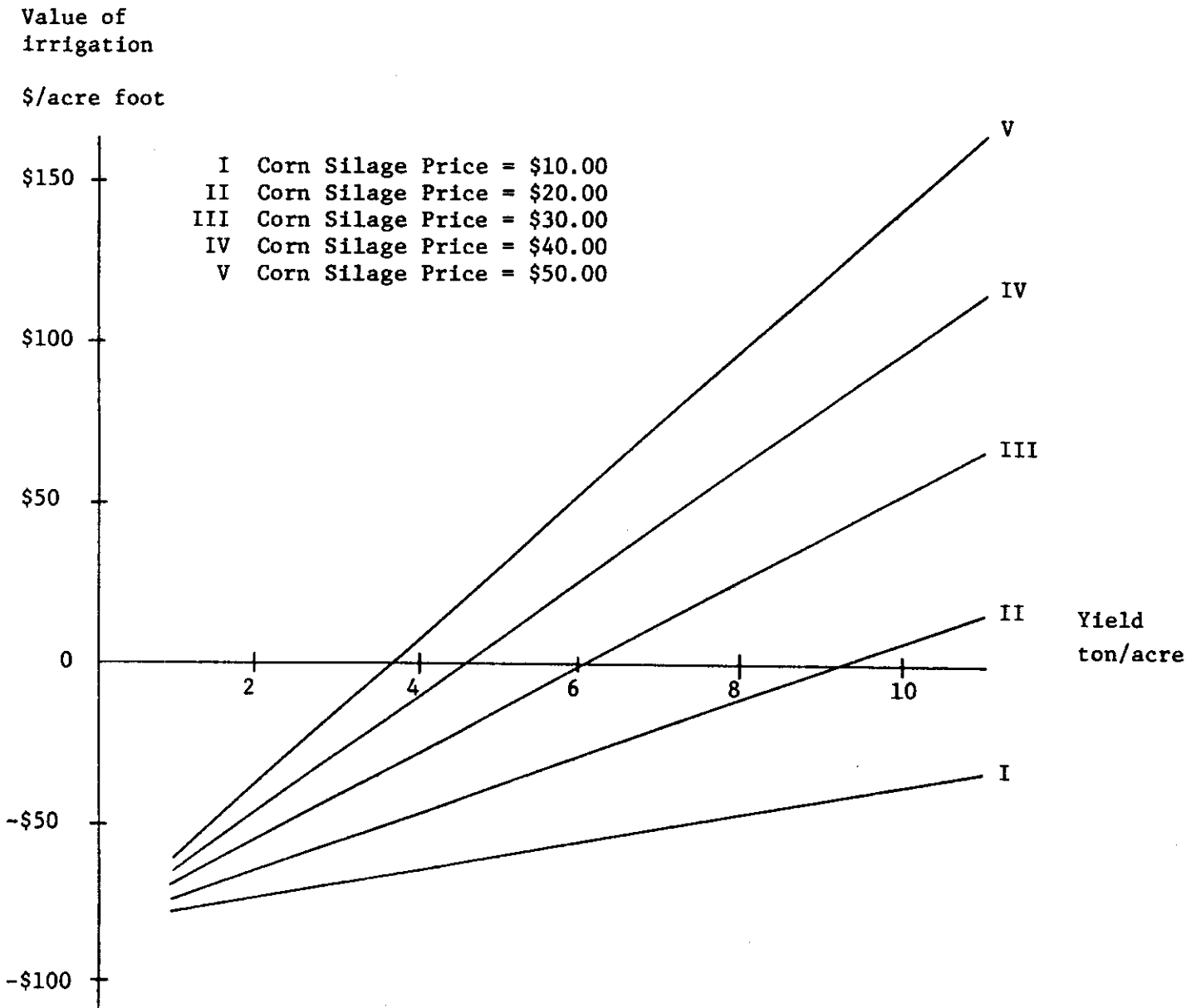


Figure Value of irrigation water applied to Corn Silage in El Paso for alternative Corn Silage prices and yields with expected 1974 costs inflated 10 percent.

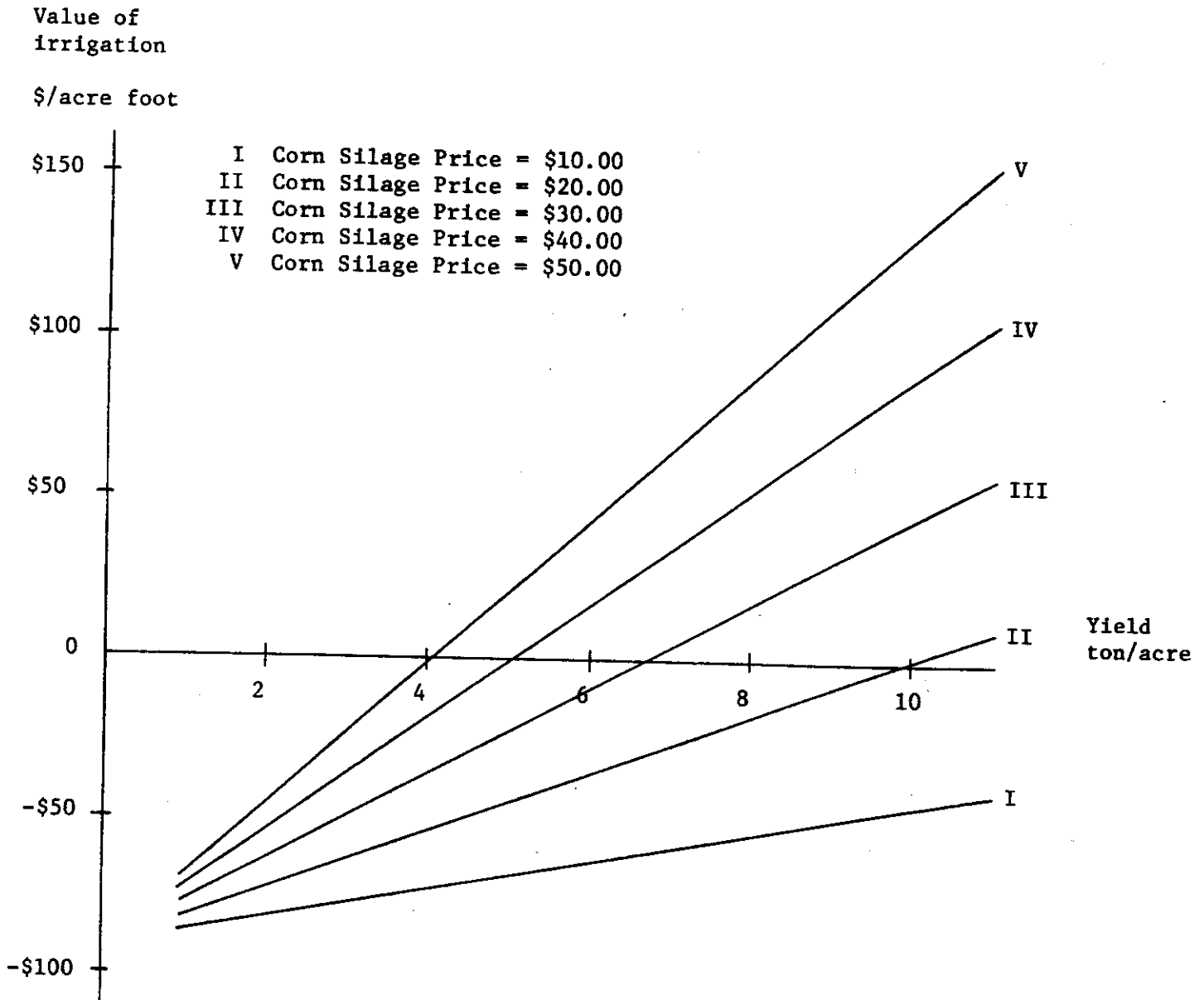


Figure Value of irrigation water applied to Corn Silage in El Paso for alternative Corn Silage prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EL PASO
PIMA COTTON

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		300.0	400.0	500.0	600.0	700.0
PRODUCTION COSTS 1974	*					
PRICES	*					
0.400	*	-56.890	-44.029	-31.167	-18.305	-5.443
0.600	*	-29.748	-7.838	14.071	35.981	57.890
0.800	*	-2.605	28.352	59.309	90.267	121.224
1.000	*	24.538	64.543	104.547	144.552	184.557
1.200	*	51.681	100.733	149.785	198.838	247.890
10% COST INFLATION	*					
PRICES	*					
0.400	*	-68.979	-56.965	-44.950	-32.935	-20.920
0.600	*	-41.979	-20.965	0.050	21.065	42.080
0.800	*	-14.979	15.035	45.050	75.065	105.080
1.000	*	12.020	51.035	90.050	129.065	168.079
1.200	*	39.020	87.035	135.050	183.065	231.079
20% COST INFLATION	*					
PRICES	*					
0.400	*	-81.068	-69.901	-58.733	-47.566	-36.398
0.600	*	-54.211	-34.091	-13.971	6.149	26.269
0.800	*	-27.354	1.718	30.790	59.863	88.935
1.000	*	-0.497	37.528	75.552	113.577	151.602
1.200	*	26.360	73.337	120.314	167.291	214.268

A DRYLAND RETURN OF 52.500 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

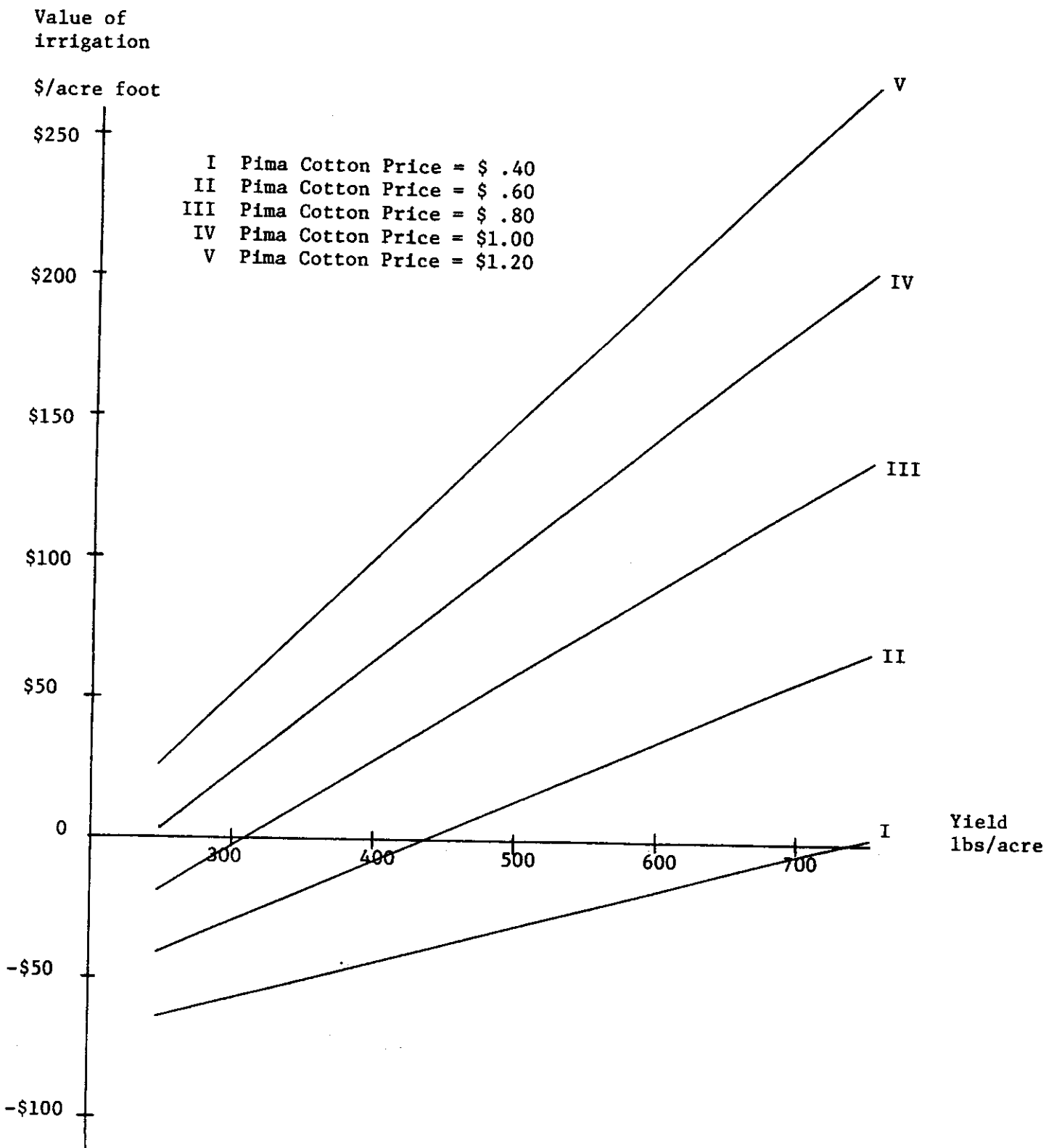


Figure Value of irrigation water applied to Pima Cotton in El Paso for alternative Pima Cotton prices and yields with expected 1974 costs.

Value of
irrigation

\$/acre foot

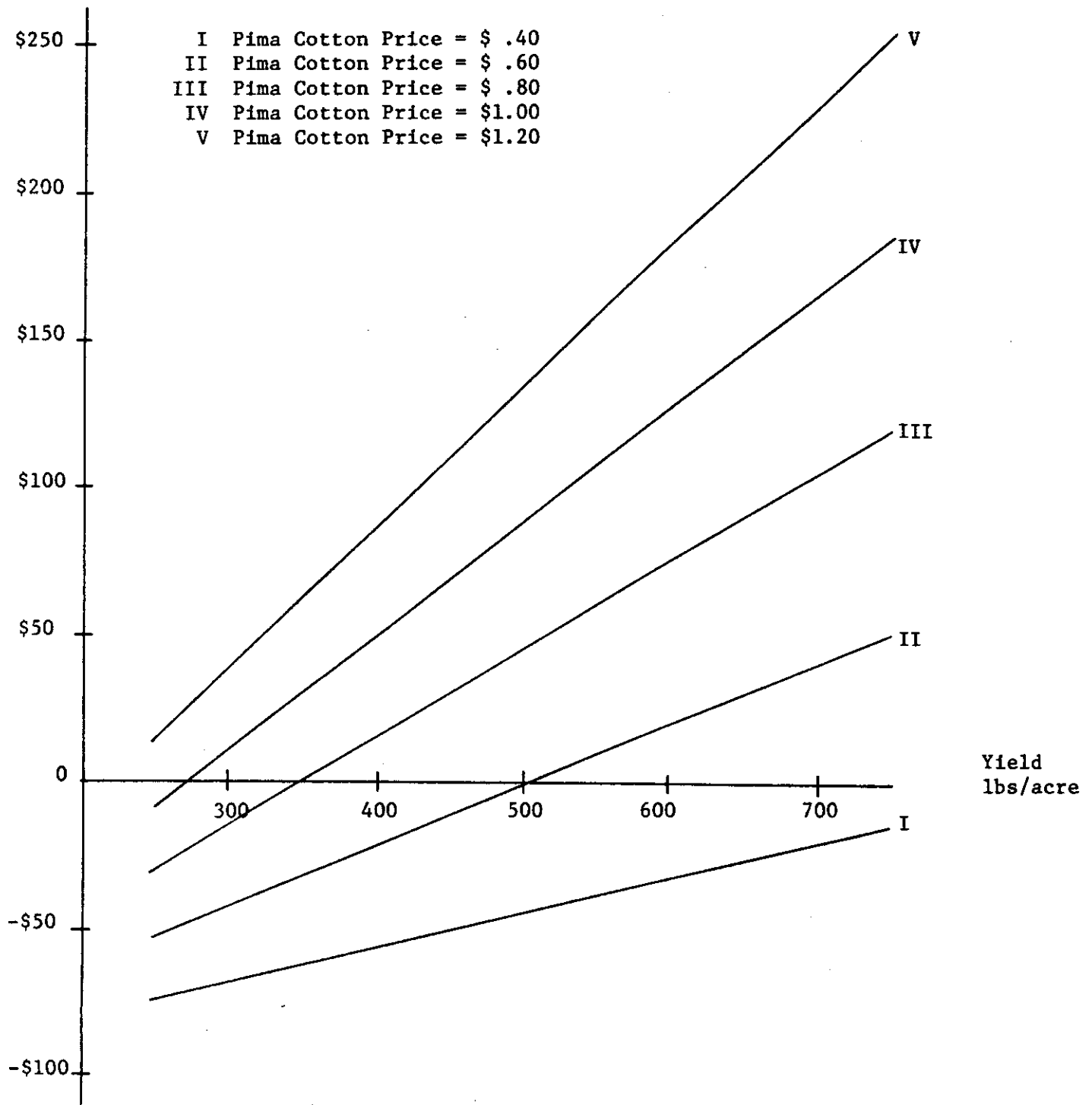


Figure Value of irrigation water applied to Pima Cotton in El Paso for alternative Pima Cotton prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation

\$/acre foot

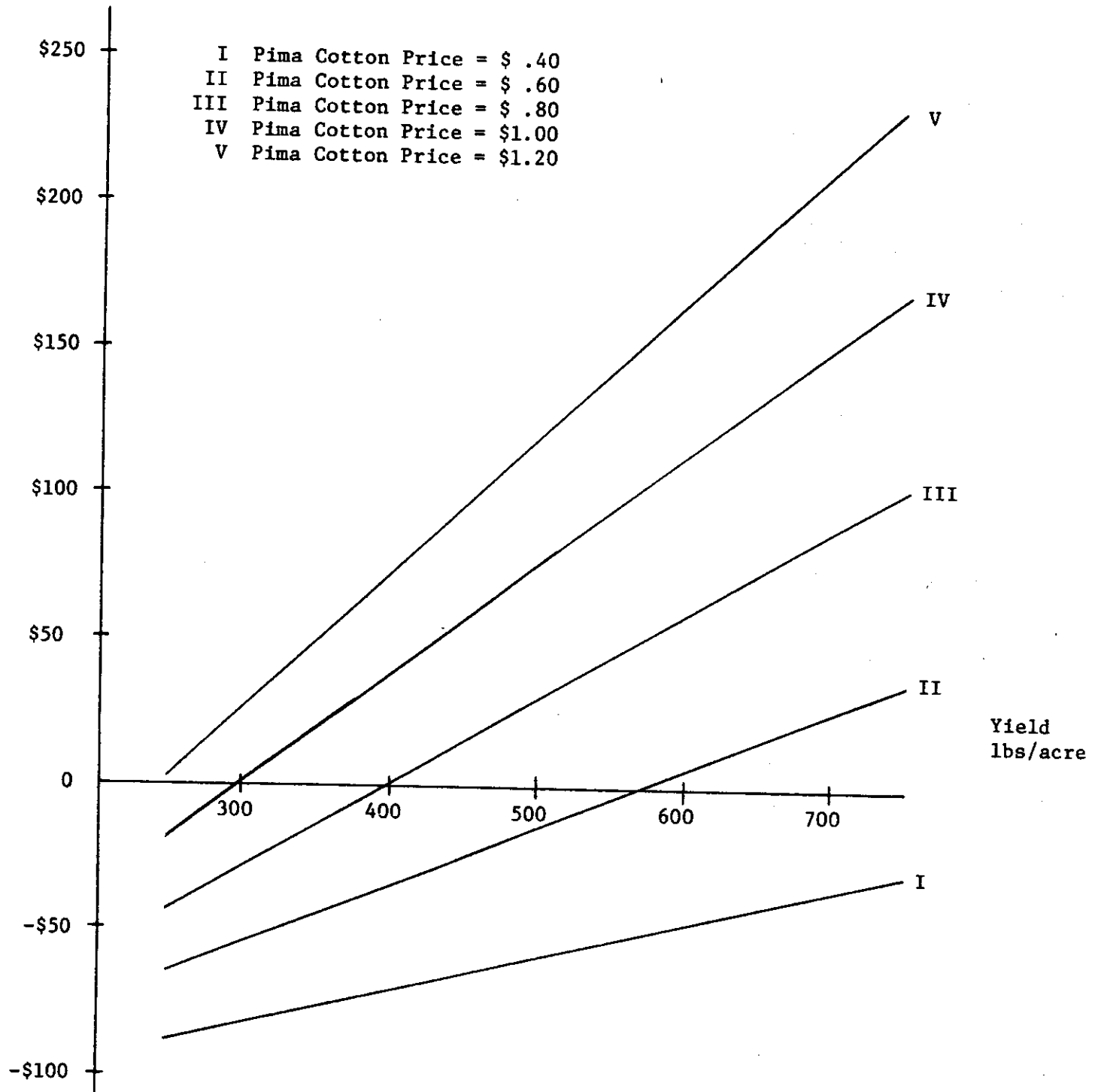


Figure Value of irrigation water applied to Pima Cotton in El Paso for alternative Pima Cotton prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EL PASO
UPLAND COTTON

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		500.0	600.0	700.0	800.0	900.0
PRODUCTION COSTS 1974	*					
PRICES	*					
0.200	*	-71.676	-66.481	-61.286	-56.090	-50.895
0.300	*	-49.057	-39.338	-29.619	-19.900	-10.181
0.400	*	-26.438	-12.195	2.048	16.290	30.533
0.500	*	-3.819	14.948	33.714	52.481	71.248
0.600	*	18.800	42.090	65.381	88.671	111.962
10% COST INFLATION	*					
PRICES	*					
0.200	*	-84.748	-80.215	-75.681	-71.147	-66.613
0.300	*	-62.248	-53.215	-44.181	-35.147	-26.113
0.400	*	-39.748	-26.215	-12.681	0.853	14.387
0.500	*	-17.249	0.785	18.819	36.853	54.887
0.600	*	5.252	27.785	50.319	72.853	95.387
20% COST INFLATION	*					
PRICES	*					
0.200	*	-97.821	-93.948	-90.076	-86.204	-82.331
0.300	*	-75.440	-67.091	-58.743	-50.394	-42.046
0.400	*	-53.059	-40.234	-27.409	-14.585	-1.760
0.500	*	-30.678	-13.377	3.924	21.225	38.526
0.600	*	-8.297	13.480	35.257	57.034	78.812

A DRYLAND RETURN OF 52.500 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

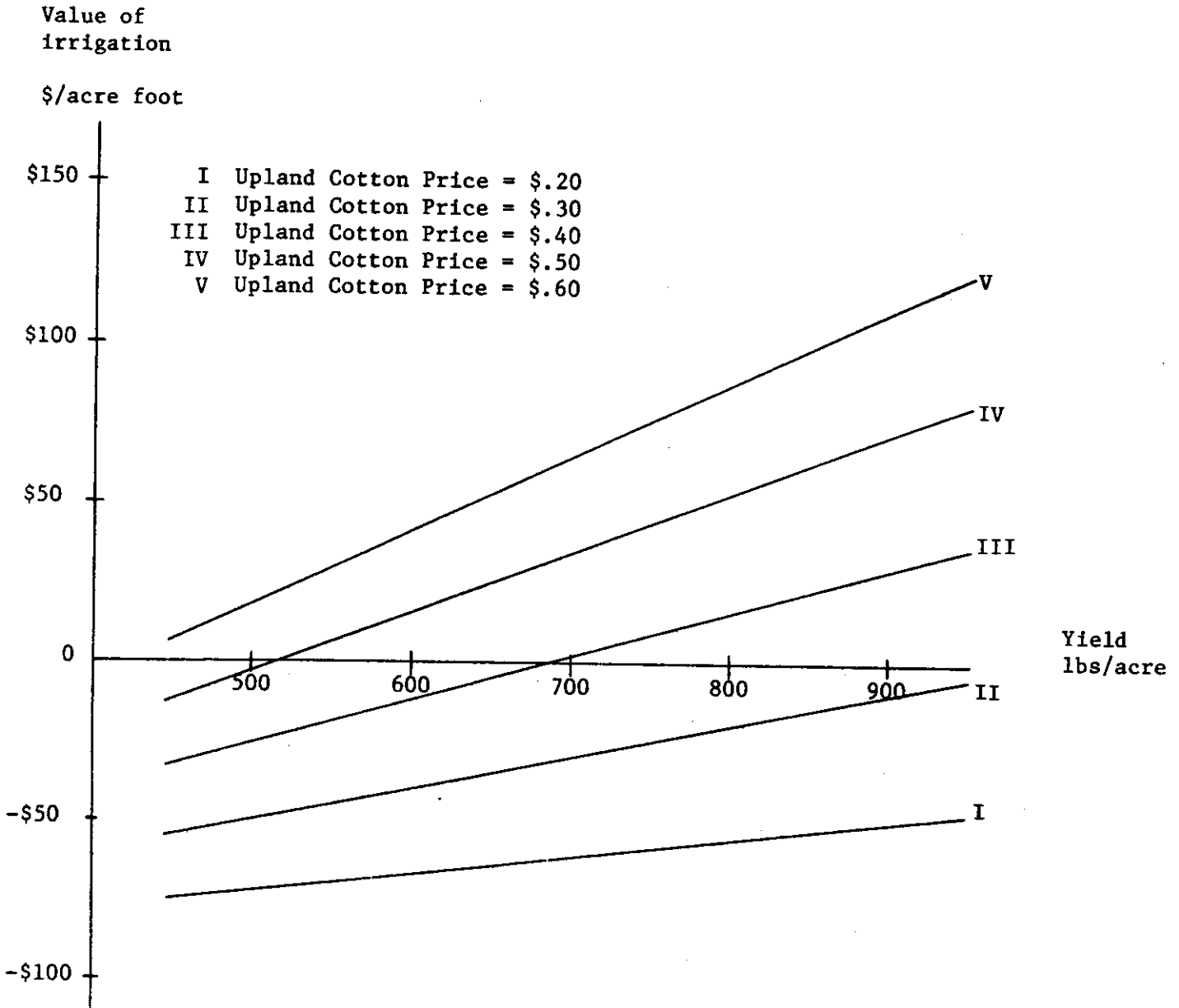


Figure Value of irrigation water applied to Upland Cotton in El Paso for alternative Upland Cotton prices and yields with expected 1974 costs.

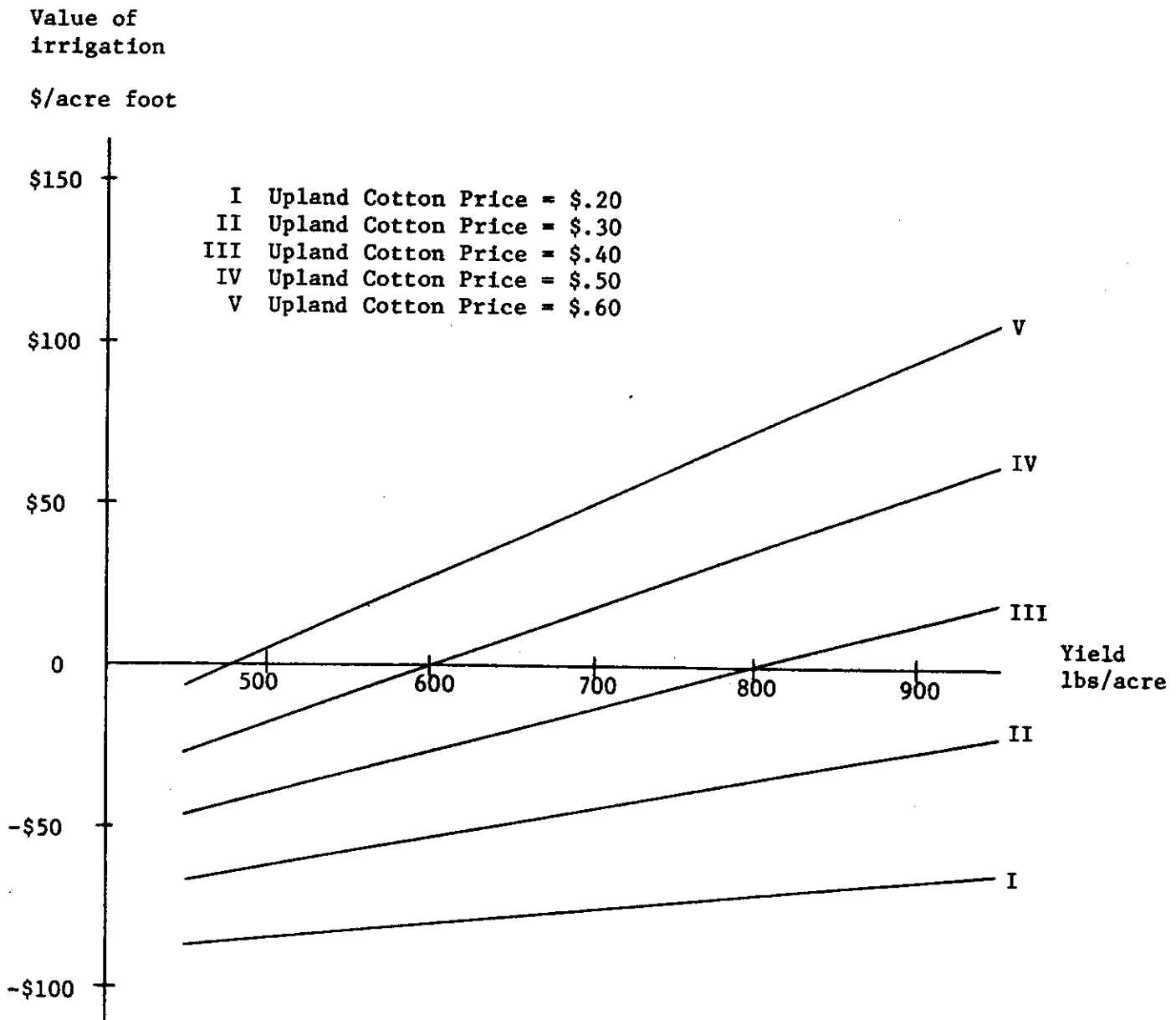


Figure Value of irrigation water applied to Upland Cotton in El Paso for alternative Upland Cotton prices and yields with expected 1974 costs inflated 10 percent.

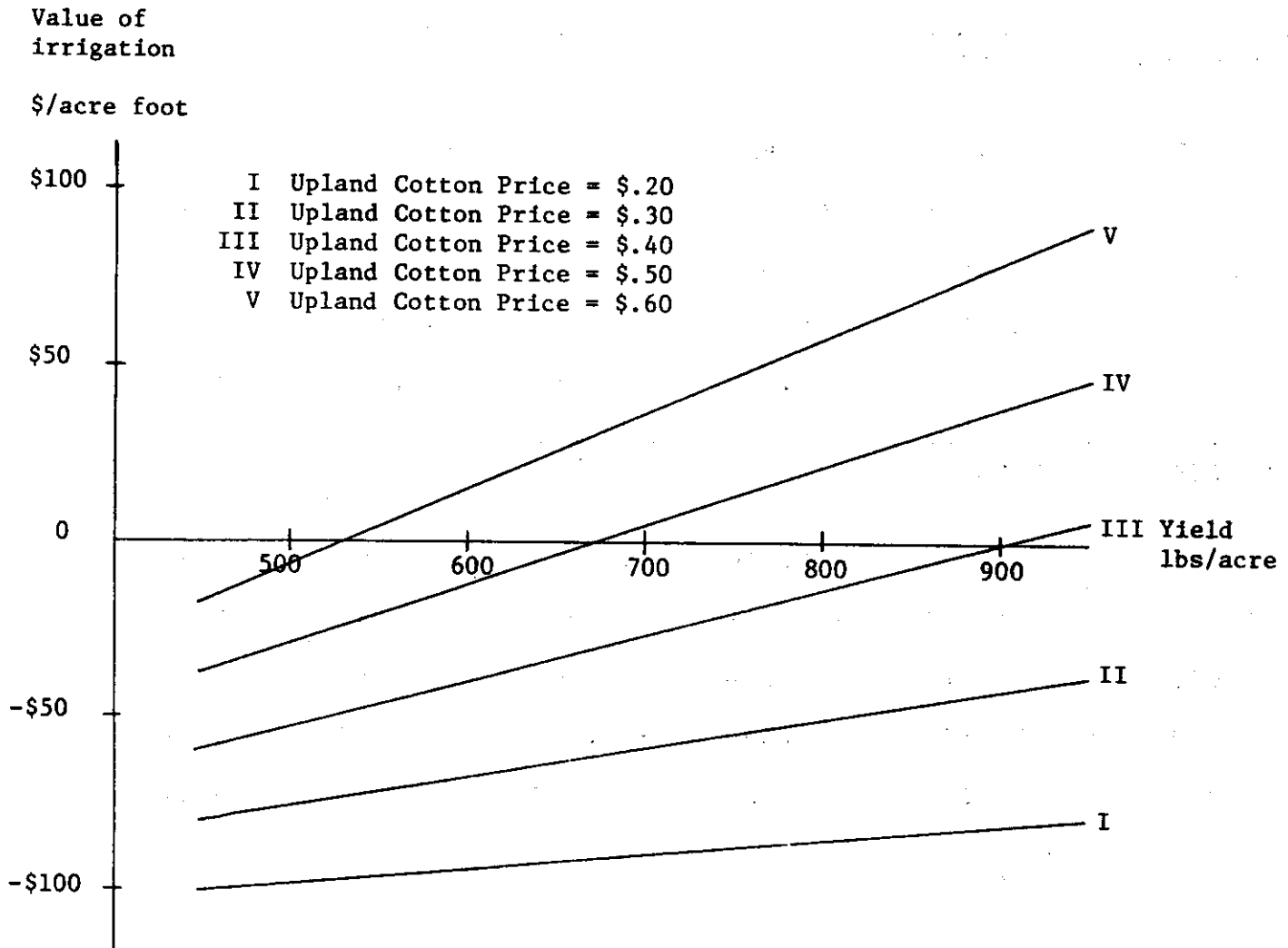


Figure Value of irrigation water applied to Upland Cotton in El Paso for alternative Upland Cotton prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

EL PASO
GRAIN SORGHUM

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		15.0	25.0	35.0	45.0	55.0

PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-61.190	-52.857	-44.524	-36.190	-27.857
	*					
2.500	*	-57.798	-47.202	-36.607	-26.012	-15.417
	*					
3.000	*	-54.405	-41.548	-28.690	-15.833	-2.976
	*					
3.500	*	-51.012	-35.893	-20.774	-5.655	9.464
	*					
4.000	*	-47.619	-30.238	-12.857	4.524	21.905
	*					

10% COST INFLATION	*					
PRICES	*					
2.000	*	-68.738	-60.524	-52.309	-44.095	-35.881
	*					
2.500	*	-65.363	-54.899	-44.434	-33.970	-23.506
	*					
3.000	*	-61.988	-49.274	-36.559	-23.845	-11.131
	*					
3.500	*	-58.613	-43.649	-28.684	-13.720	1.244
	*					
4.000	*	-55.238	-38.024	-20.810	-3.595	13.619
	*					

20% COST INFLATION	*					
PRICES	*					
2.000	*	-76.286	-68.190	-60.095	-52.000	-43.905
	*					
2.500	*	-72.929	-62.595	-52.262	-41.929	-31.595
	*					
3.000	*	-69.571	-57.000	-44.429	-31.857	-19.286
	*					
3.500	*	-66.214	-51.405	-36.595	-21.786	-6.976
	*					
4.000	*	-62.857	-45.809	-28.762	-11.714	5.333
	*					

A DRYLAND RETURN OF 52.500 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

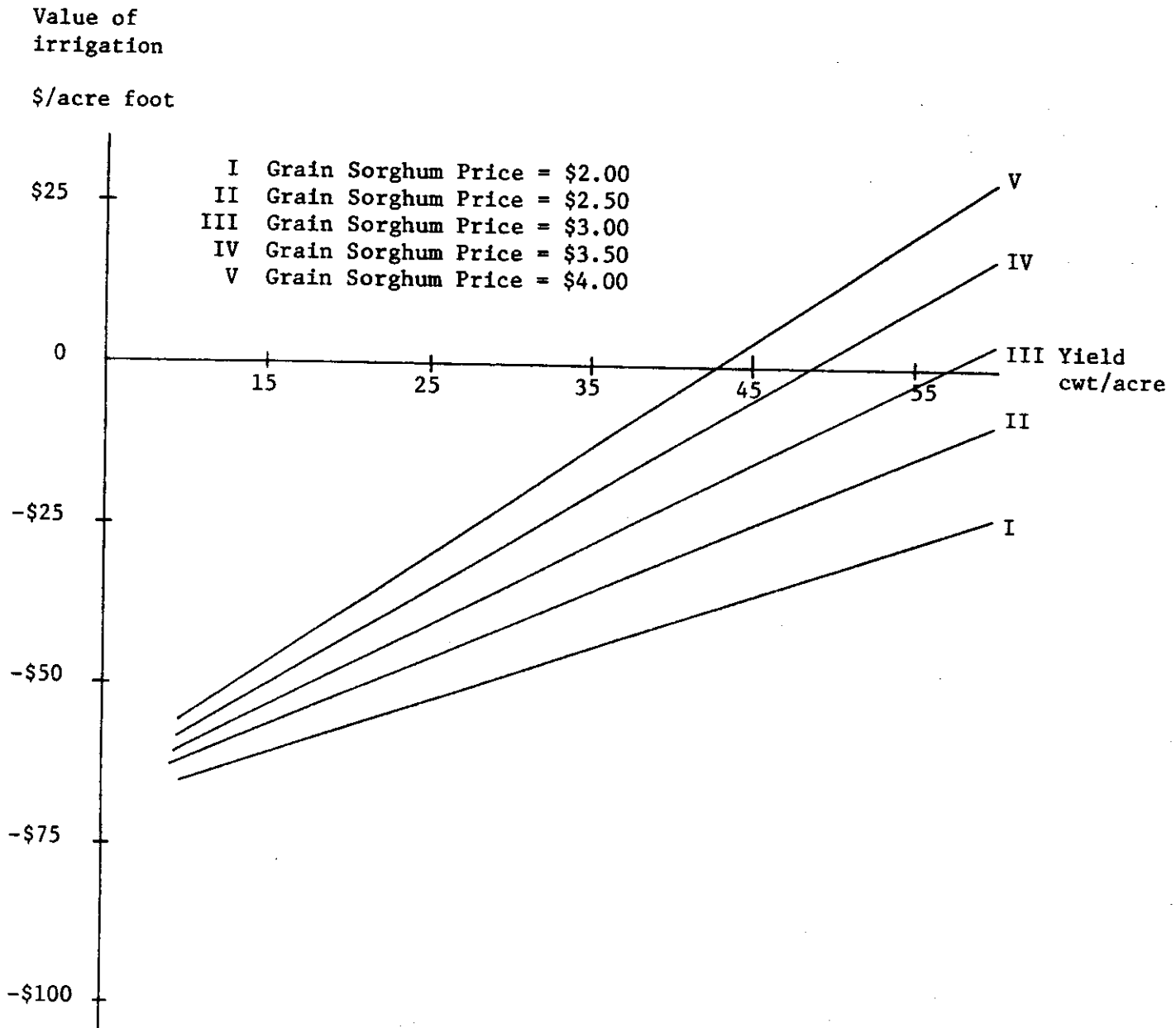


Figure Value of irrigation water applied to Grain Sorghum in El Paso for alternative Grain Sorghum prices and yields with expected 1974 costs.

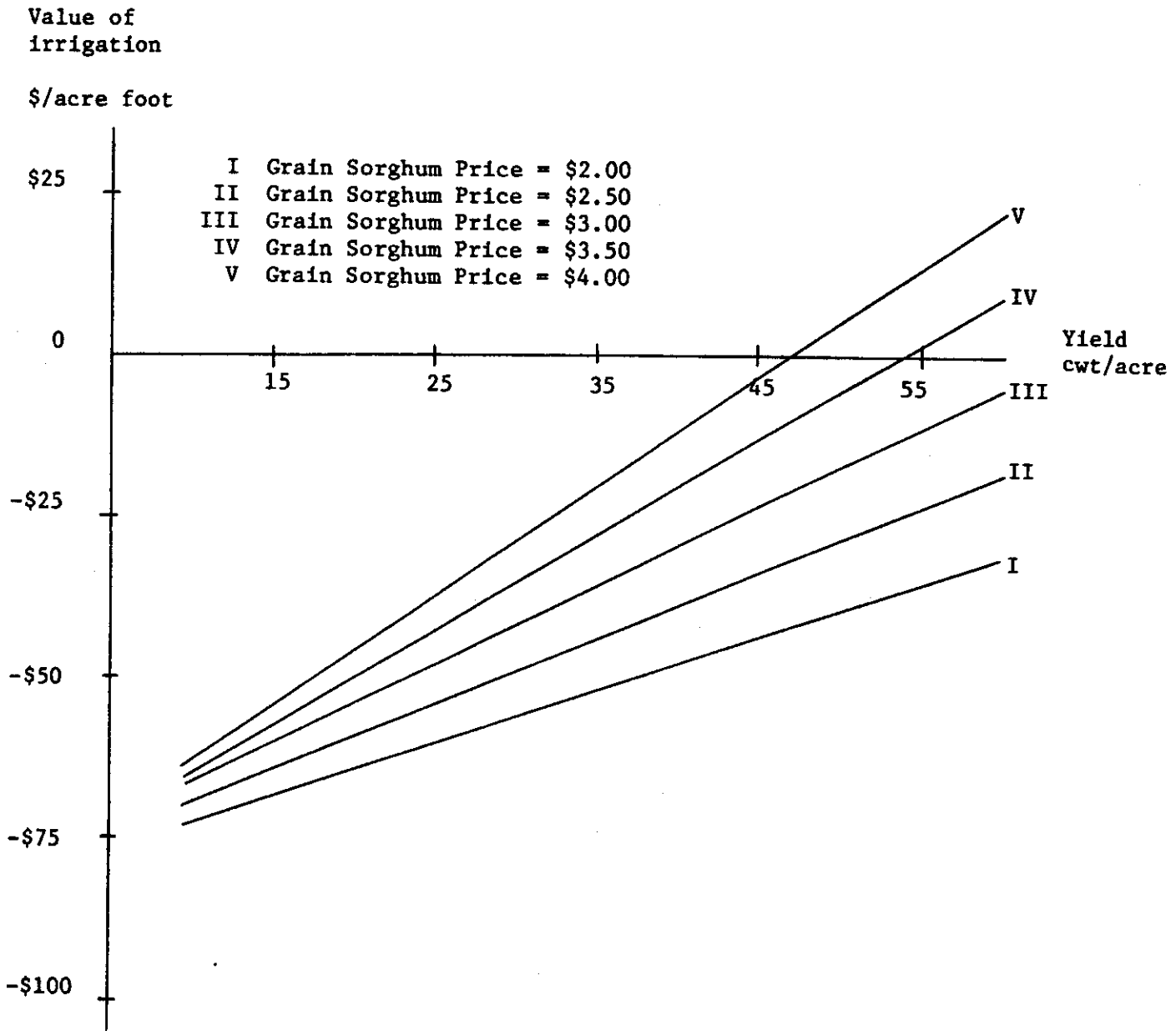


Figure Value of irrigation water applied to Grain Sorghum in El Paso for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 10 percent.

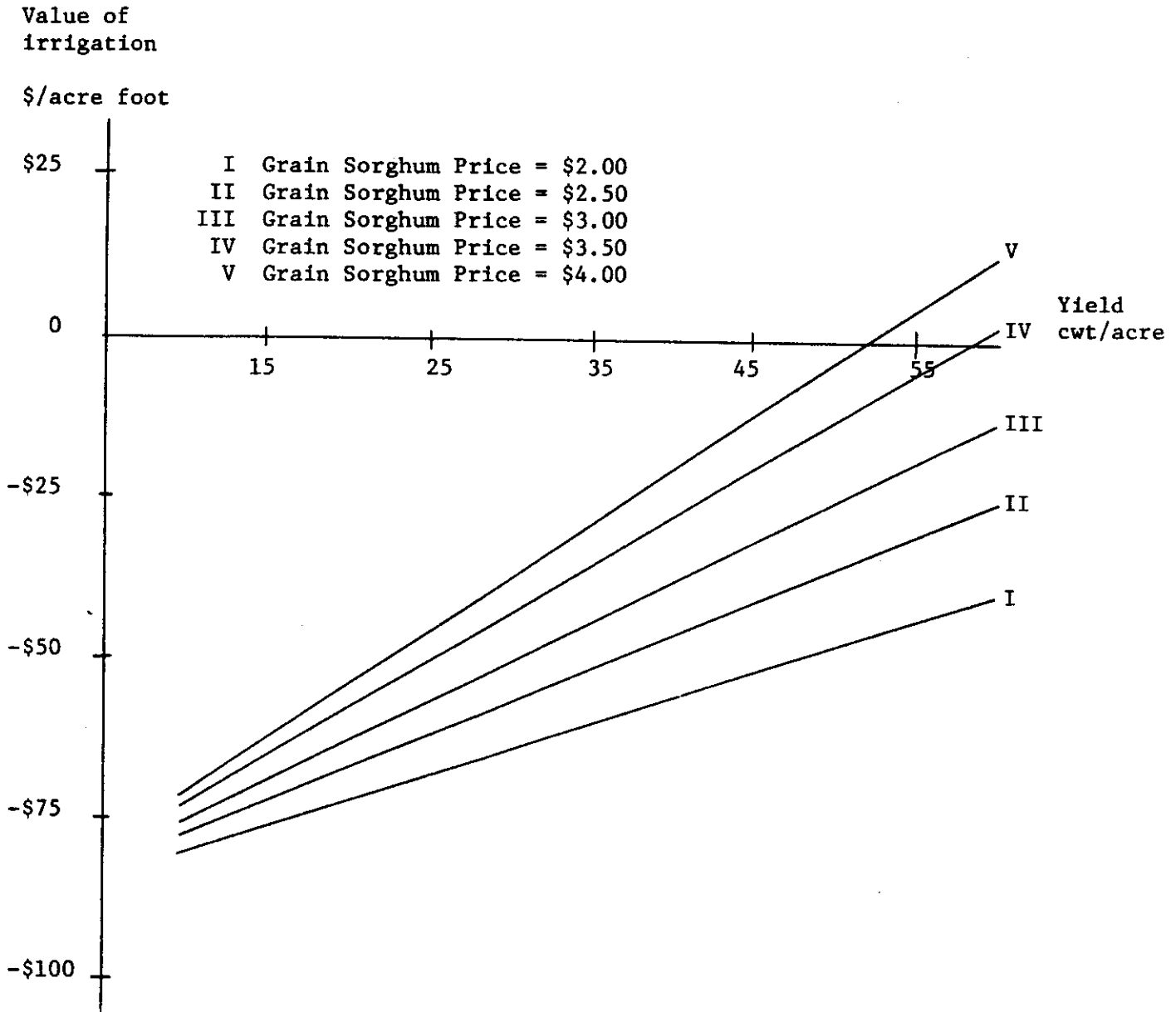


Figure Value of irrigation water applied to Grain Sorghum in El Paso for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

LOWER GULF COAST
RICE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		35.0	40.0	45.0	50.0	55.0

PRODUCTION COSTS 1974	*					
PRICES	*					
6.500	*	-21.035	-13.535	-6.035	1.465	8.965
8.500	*	-2.511	7.635	17.781	27.928	38.074
10.500	*	16.013	28.805	41.598	54.390	67.182
12.500	*	34.536	49.975	65.414	80.852	96.291
14.500	*	53.060	71.145	89.230	107.315	125.400

10% COST INFLATION	*					
PRICES	*					
6.500	*	-29.475	-22.131	-14.786	-7.441	-0.097
8.500	*	-11.049	-1.072	8.905	18.882	28.859
10.500	*	7.377	19.986	32.596	45.205	57.814
12.500	*	25.803	41.045	56.287	71.528	86.770
14.500	*	44.229	62.103	79.977	97.851	115.725

20% COST INFLATION	*					
PRICES	*					
6.500	*	-37.916	-30.726	-23.537	-16.348	-9.158
8.500	*	-19.587	-9.779	0.028	9.836	19.644
10.500	*	-1.258	11.168	23.594	36.020	48.446
12.500	*	17.070	32.115	47.159	62.204	77.249
14.500	*	35.399	53.062	70.725	88.388	106.051

A DRYLAND RETURN OF 10.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

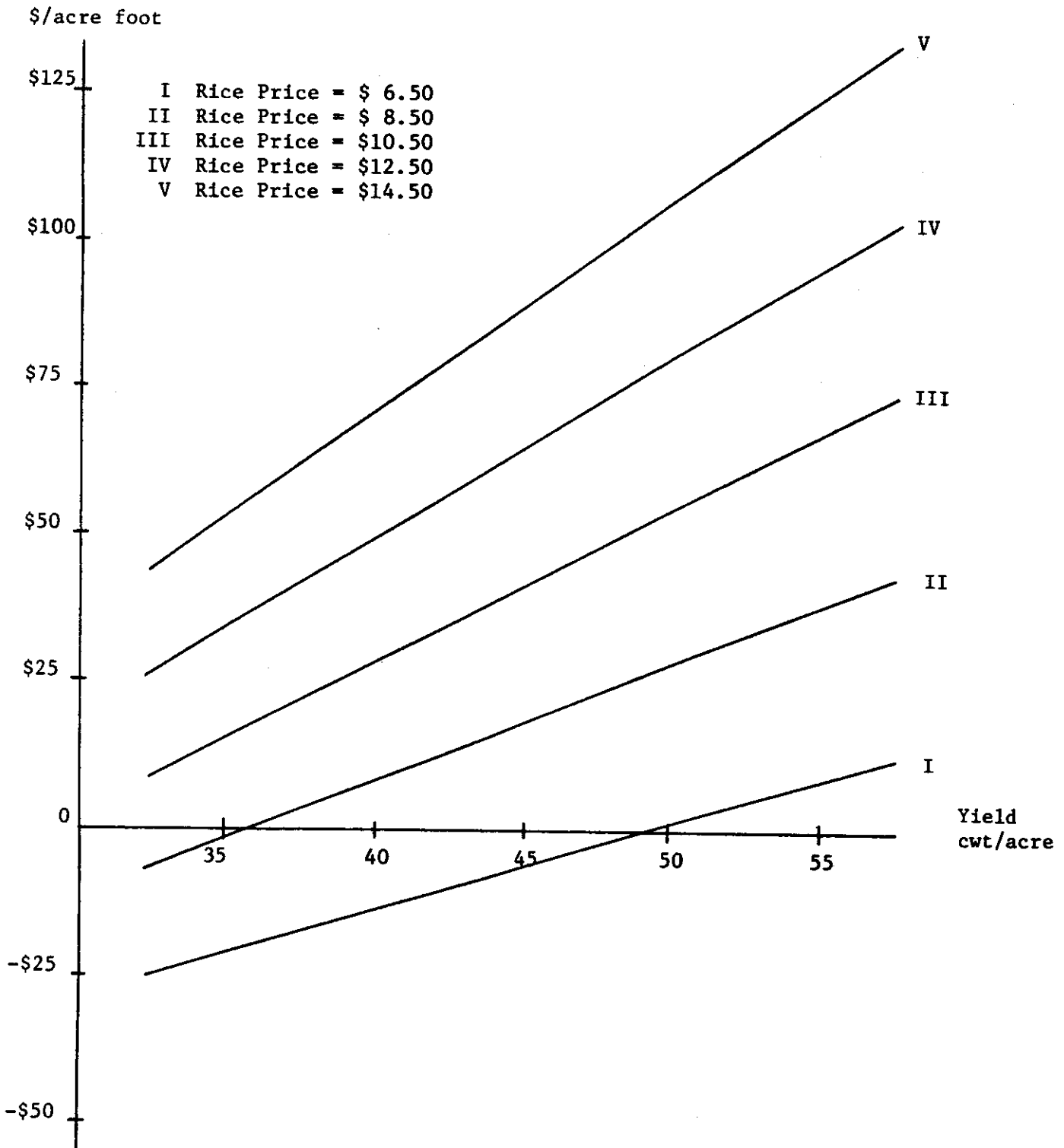


Figure Value of irrigation water applied to Rice in Lower Gulf Coast for alternative Rice prices and yields with expected 1974 costs.

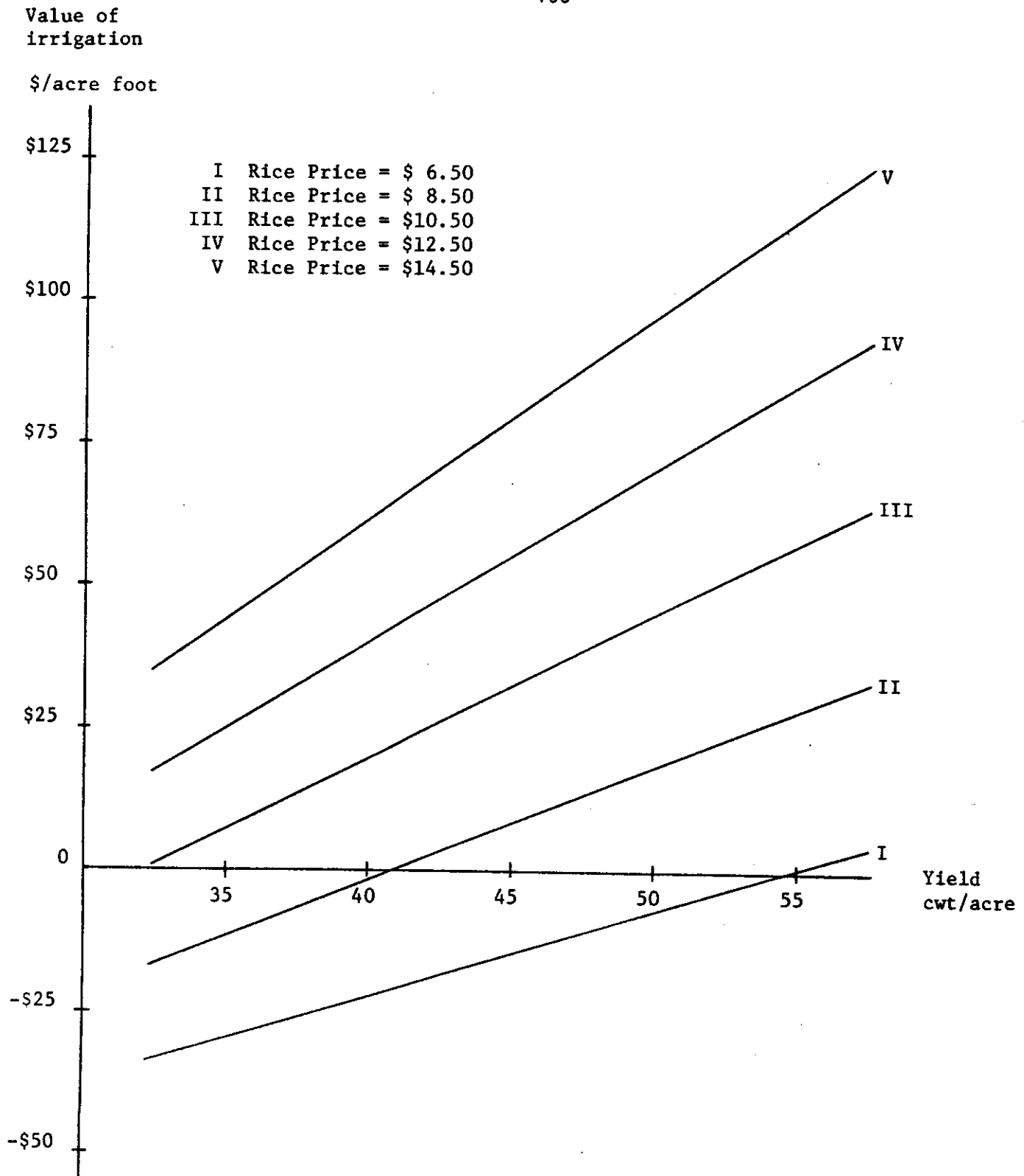


Figure Value of irrigation water applied to Rice in Lower Gulf Coast for alternative Rice prices and yields with expected 1974 costs inflated 10 percent.

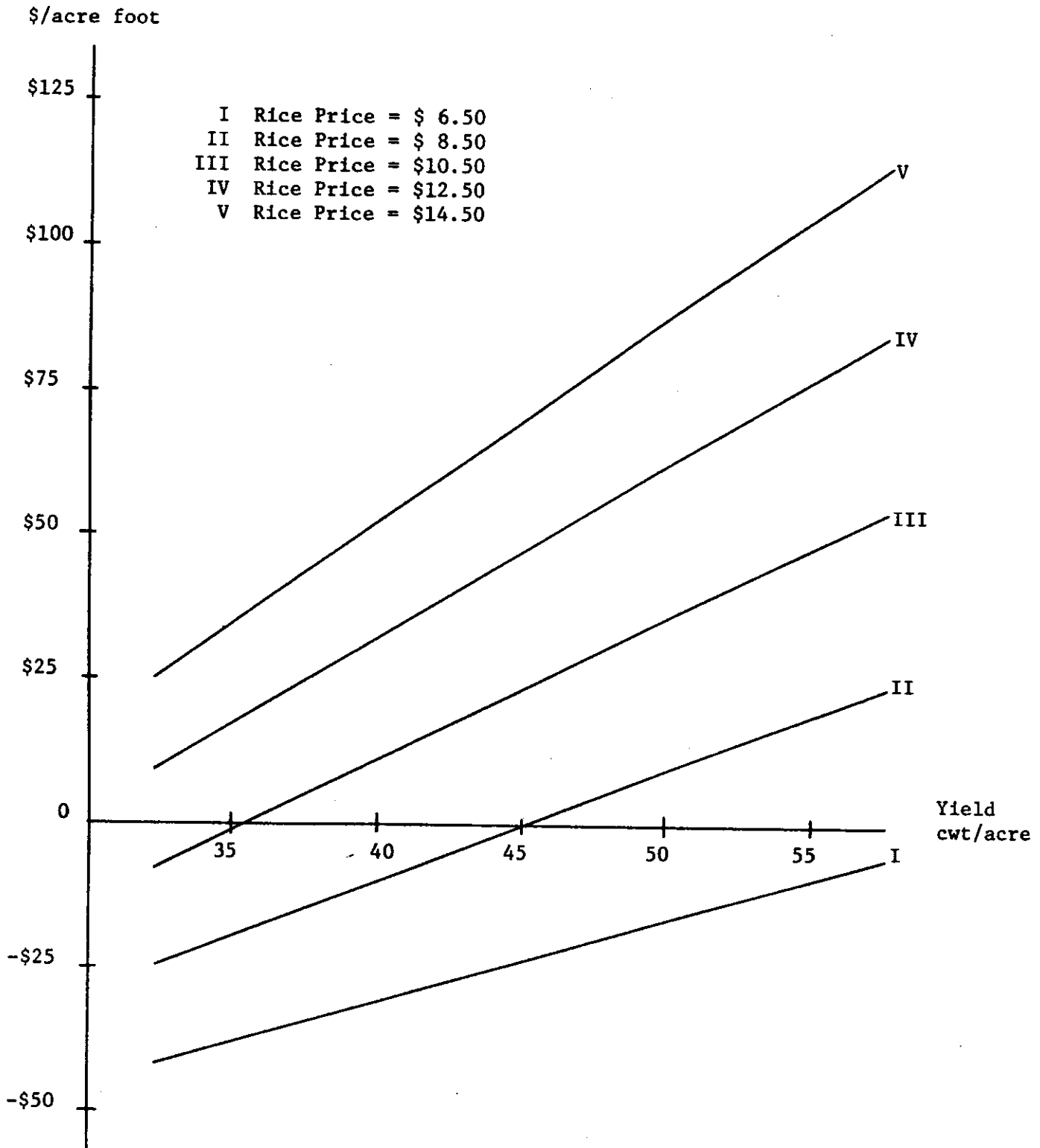


Figure Value of irrigation water applied to Rice in Lower Gulf Coast for alternative Rice prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

UPPER GULF COAST
RICE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		35.0	40.0	45.0	50.0	55.0
PRODUCTION COSTS 1974	*					
PRICES	*					
6.500	*	-20.943	-13.359	-5.776	1.808	9.391
8.500	*	-2.419	7.811	18.040	28.270	38.500
10.500	*	16.105	28.980	41.857	54.733	67.609
12.500	*	34.628	50.150	65.673	81.195	96.717
14.500	*	53.152	71.320	89.489	107.657	125.826
10% COST INFLATION	*					
PRICES	*					
6.500	*	-29.374	-21.938	-14.501	-7.064	0.372
8.500	*	-10.948	-0.879	9.190	19.259	29.328
10.500	*	7.478	20.179	32.881	45.582	58.283
12.500	*	25.904	41.238	56.572	71.905	87.239
14.500	*	44.331	62.296	80.262	98.228	116.194
20% COST INFLATION	*					
PRICES	*					
6.500	*	-37.805	-30.516	-23.226	-15.936	-8.647
8.500	*	-19.477	-9.569	0.339	10.247	20.155
10.500	*	-1.148	11.378	23.905	36.431	48.958
12.500	*	17.181	32.325	47.470	62.615	77.760
14.500	*	35.509	53.272	71.036	88.799	106.562

A DRYLAND RETURN OF 10.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

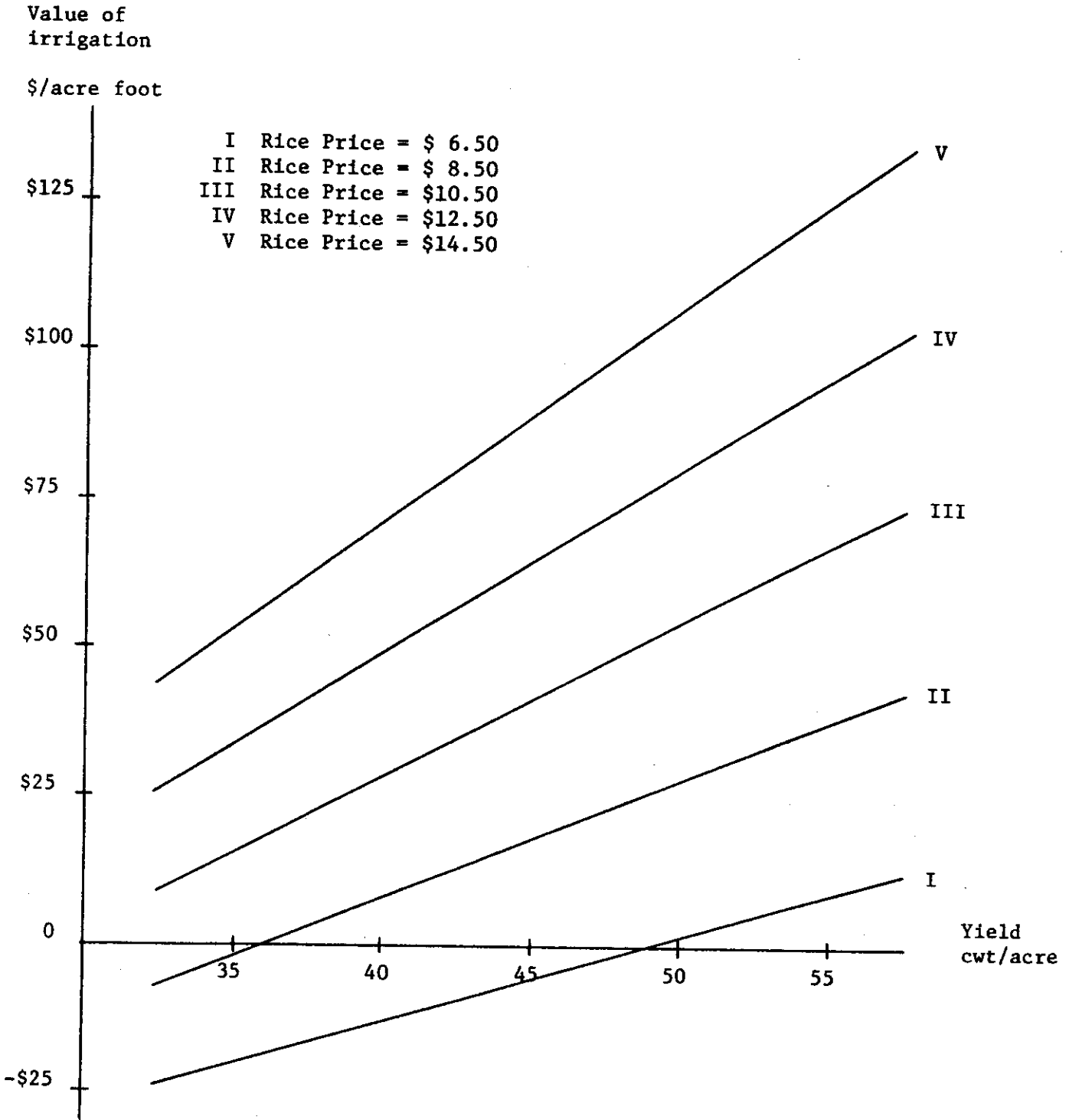


Figure Value of irrigation water applied to Rice in Upper Gulf Coast for alternative Rice prices and yields with expected 1974 costs.

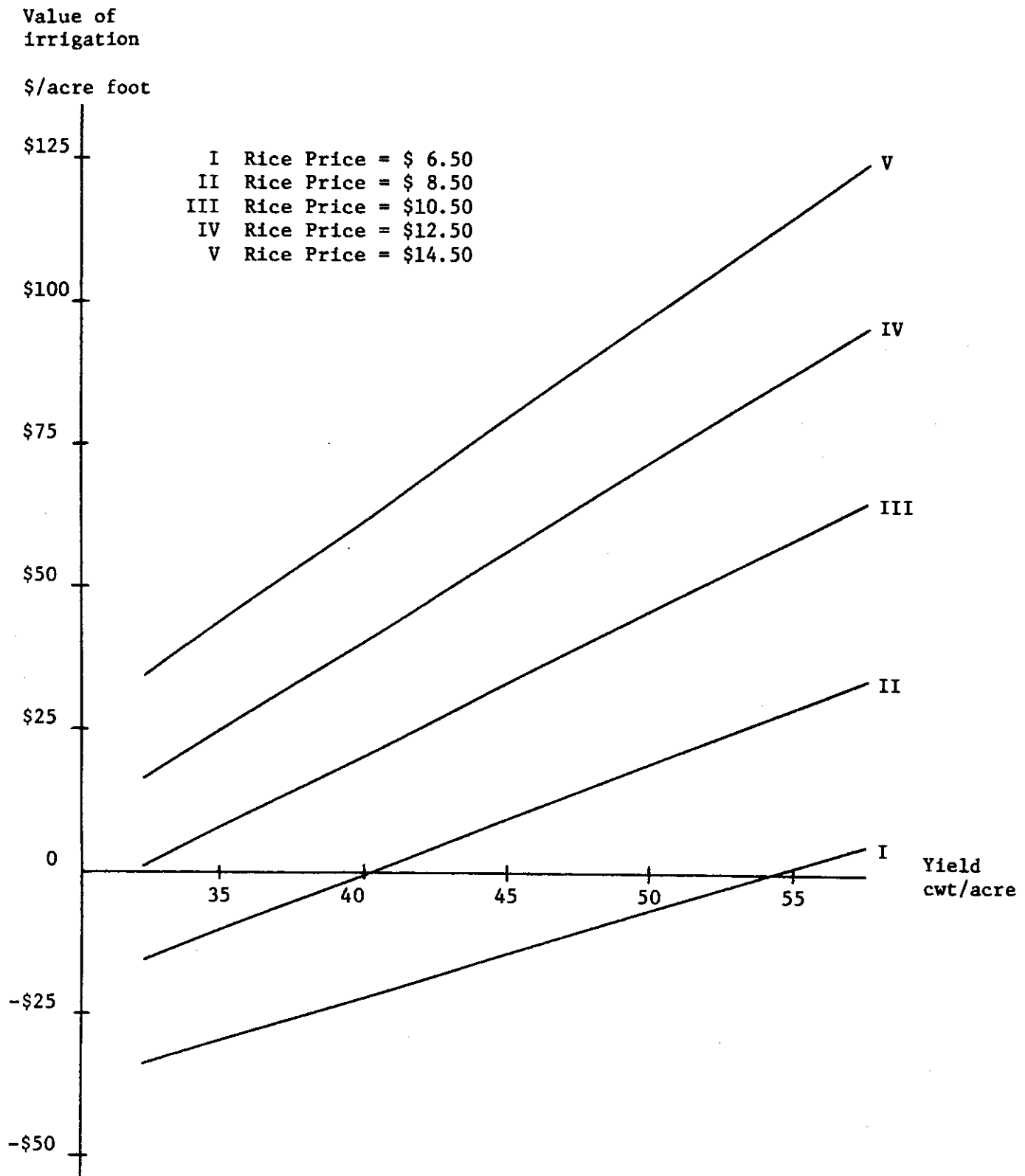


Figure Value of irrigation water applied to Rice in Upper Gulf Coast for alternative Rice prices and yields with expected 1974 costs inflated 10 percent.

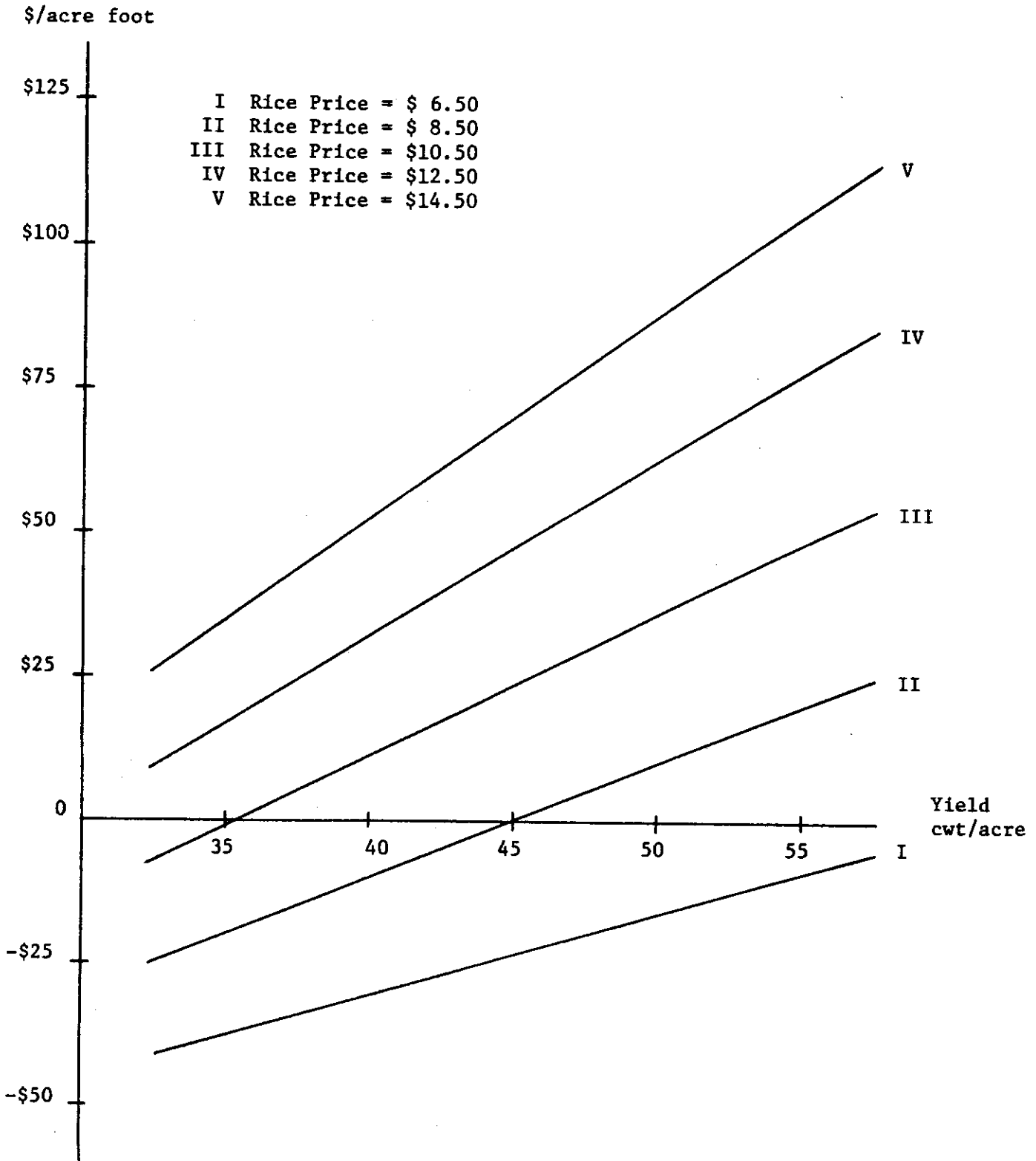


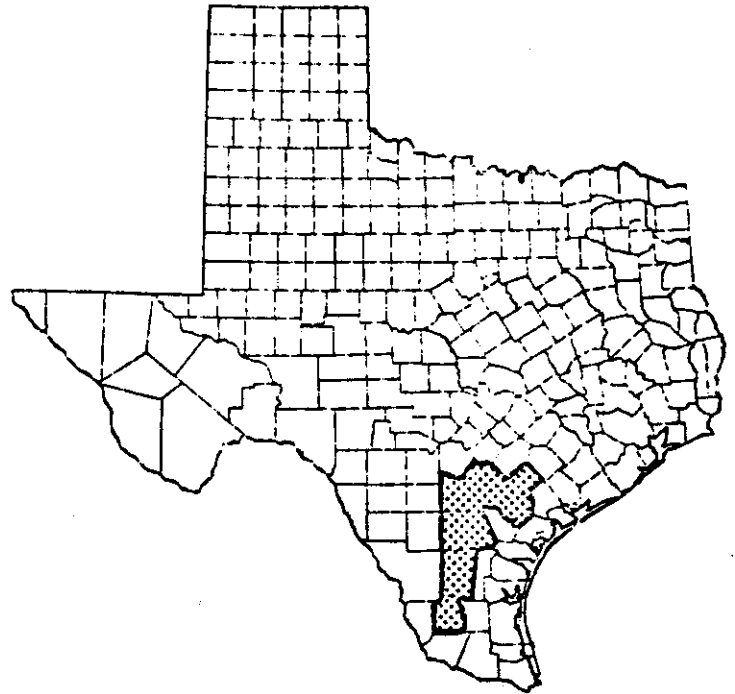
Figure Value of irrigation water applied to Rice in Upper Gulf Coast for alternative Rice prices and yields with expected 1974 costs inflated 20 percent.

Texas Lower South Central

This area encompasses the crop production in Atascosa, Wilson, Dewitt, Goliad, Live Oak, McMullen, Duval and Jim Hogg counties. Irrigated budgets apply specifically to water from the Carrizo Sands. The side roll sprinkler system is considered typical.

A land charge of \$10.00 per acre was assessed based on dryland rent, as reported by the Texas Agricultural Extension Service.

The alternative yields per acre and prices used in this analysis are presented in the following table.



Crop	Unit	Yields				Prices				
		25	35	45	55	2.00	2.50	3.00	3.50	4.00
Grain sorghum	cwt	25	35	45	55	2.00	2.50	3.00	3.50	4.00
Peanuts	lbs	2000	2500	3000	3300	.12	.14	.16	.18	.20
Strawberry	flats	200	300	400	500	1.50	2.50	3.50	4.50	5.50
Watermelon	cwt	100	200	300	400	1.00	2.00	3.00	4.00	5.00

RETURNS PER ACRE FOOT OF IRRIGATION WATER

LOWER SOUTH CENTRAL
GRAIN SORGHUM

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		25.0	35.0	45.0	55.0	65.0
PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-80.373	-68.707	-57.040	-45.373	-33.707
2.500	*	-72.457	-57.623	-42.790	-27.957	-13.123
3.000	*	-64.540	-46.540	-28.540	-10.540	7.460
3.500	*	-56.623	-35.457	-14.290	6.877	28.043
4.000	*	-48.707	-24.373	-0.040	24.293	48.627
10% COST INFLATION	*					
PRICES	*					
2.000	*	-91.744	-80.244	-68.744	-57.244	-45.744
2.500	*	-83.869	-69.219	-54.569	-39.919	-25.269
3.000	*	-75.994	-58.194	-40.394	-22.594	-4.794
3.500	*	-68.119	-47.169	-26.219	-5.269	15.681
4.000	*	-60.244	-36.144	-12.044	12.056	36.156
20% COST INFLATION	*					
PRICES	*					
2.000	*	-103.115	-91.781	-80.448	-69.115	-57.781
2.500	*	-95.281	-80.815	-66.348	-51.881	-37.415
3.000	*	-87.448	-69.848	-52.248	-34.648	-17.048
3.500	*	-79.615	-58.881	-38.148	-17.415	3.319
4.000	*	-71.781	-47.915	-24.048	-0.181	23.685

A DRYLAND RETURN OF 10.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

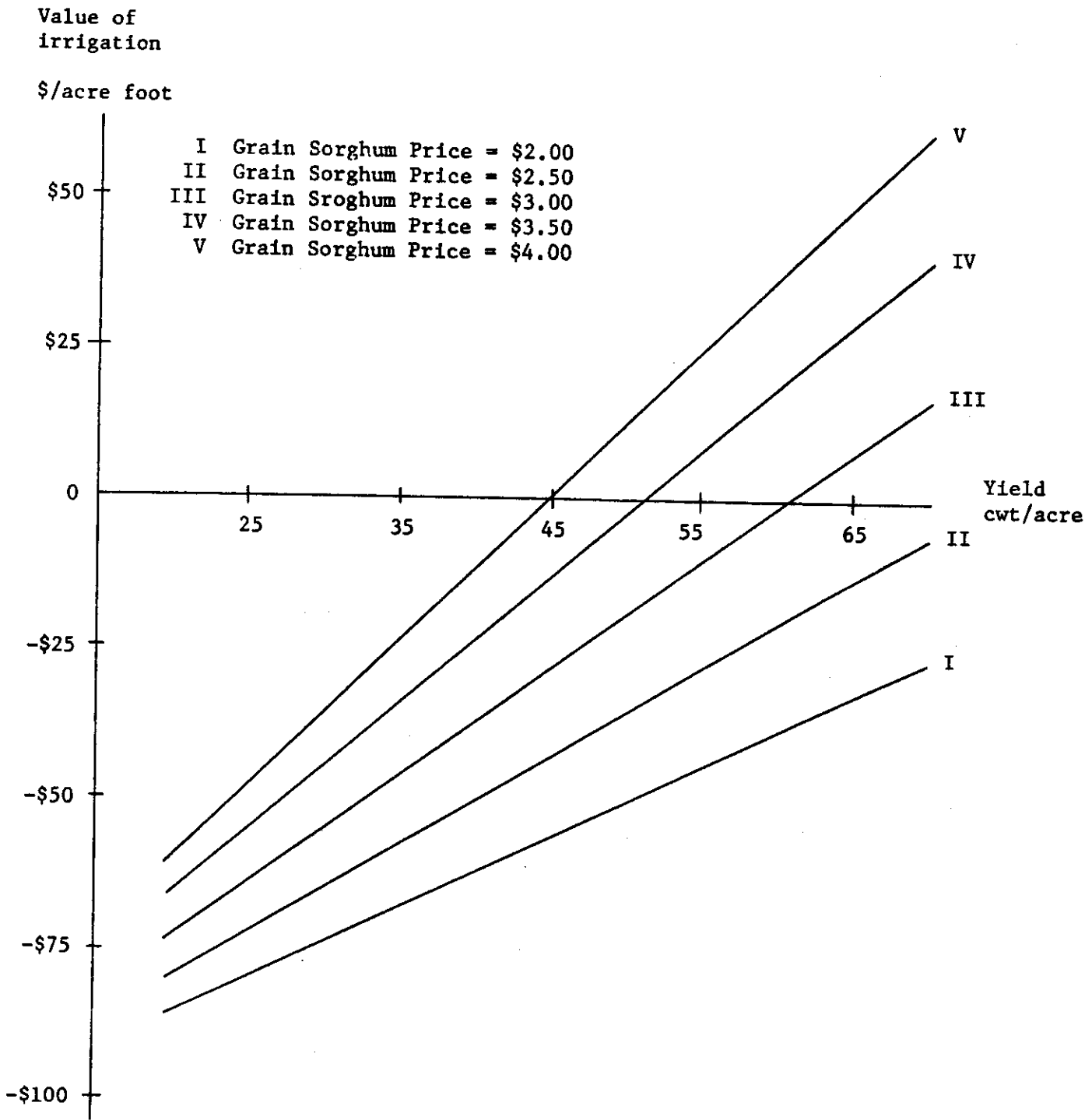


Figure Value of irrigation water applied to Grain Sorghum in Lower South Central for alternative Grain Sorghum prices and yields with expected 1974 costs.

Value of
irrigation

\$/acre foot

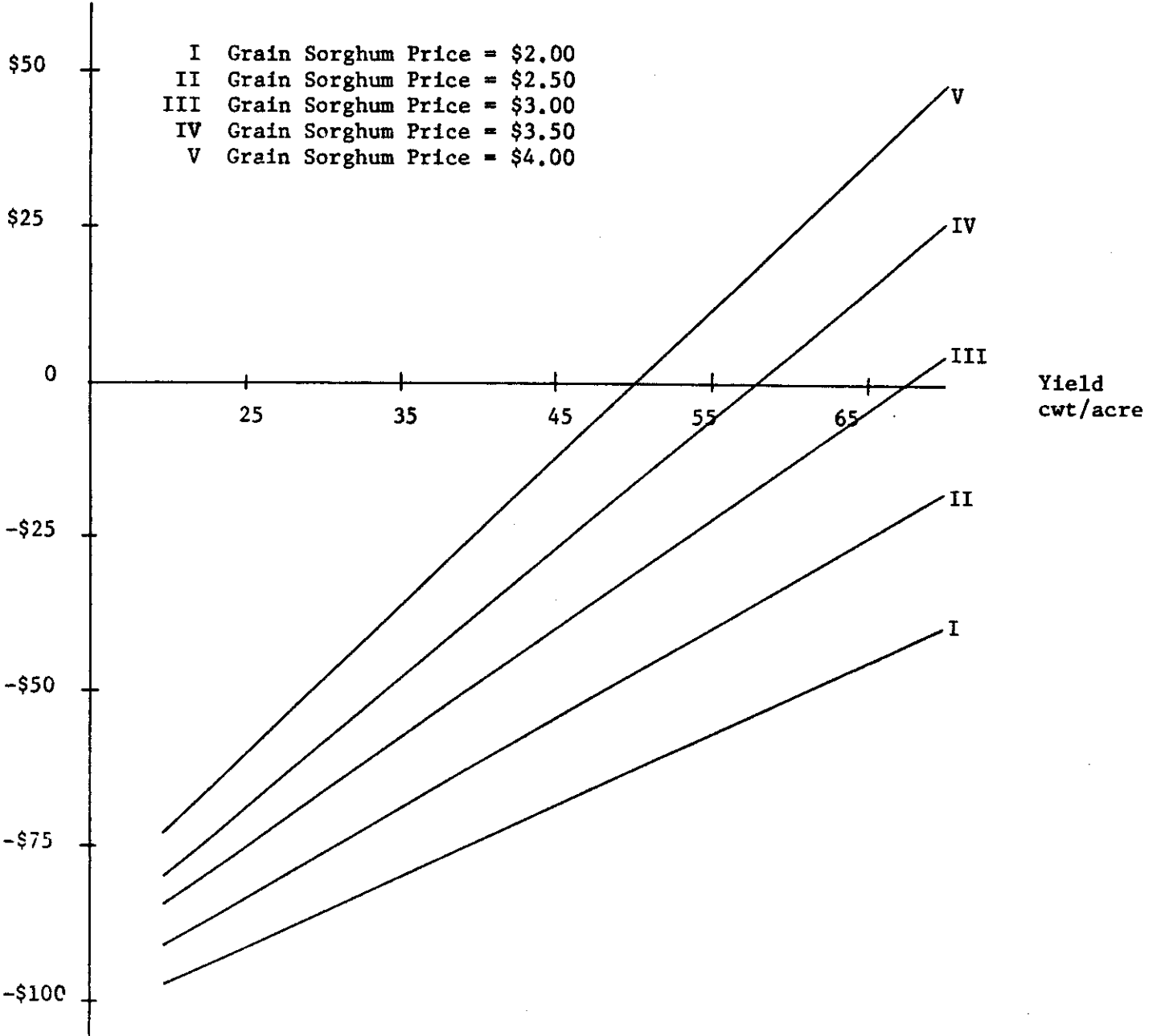


Figure Value of irrigation water applied to Grain Sorghum in Lower South Central for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 10 percent.

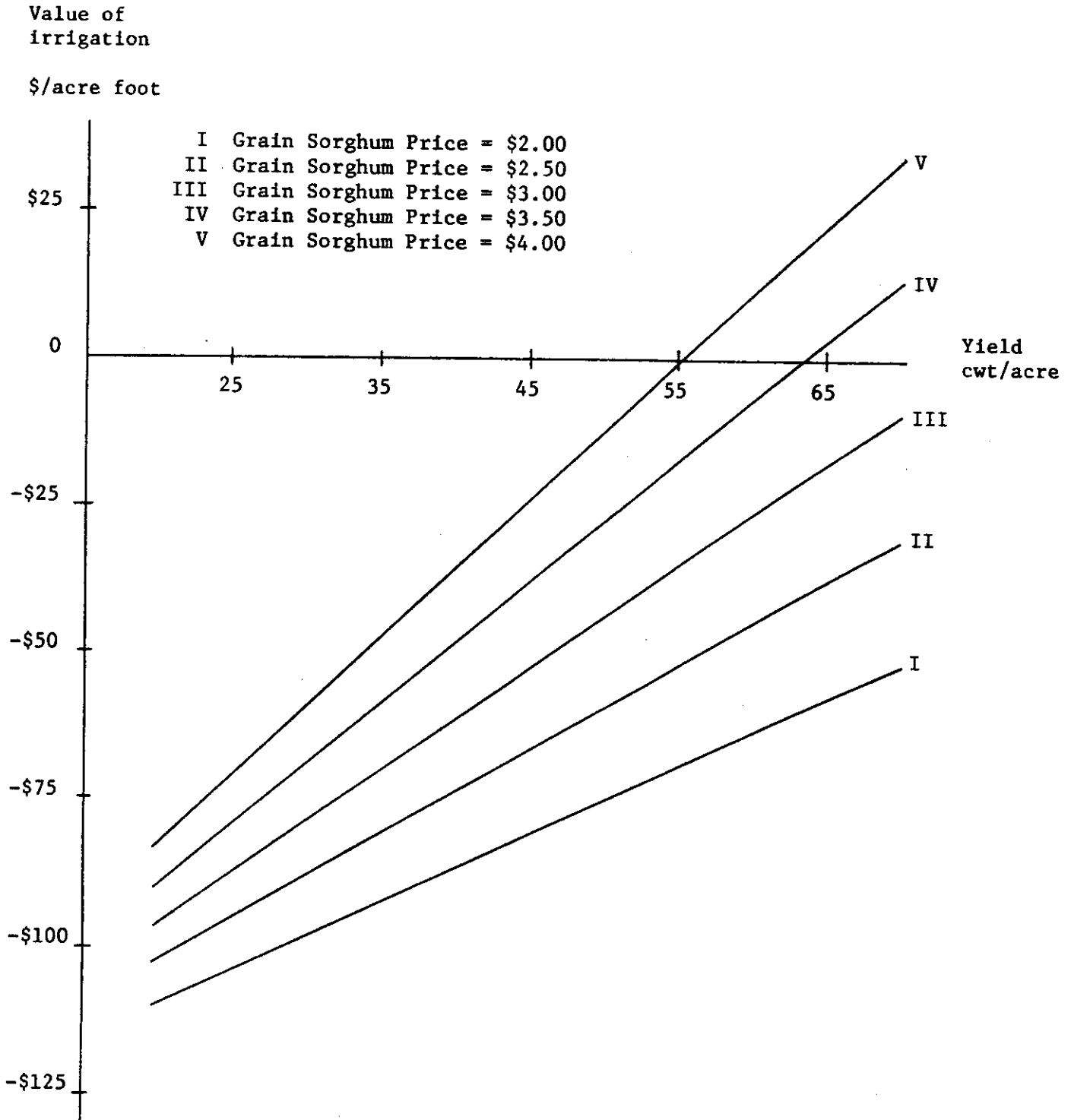


Figure Value of irrigation water applied to Grain Sorghum in Lower South Central for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

LOWER SOUTH CENTRAL
PEANUTS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION LBS PER ACRE				
		2000.0	2500.0	3000.0	3500.0	4000.0

PRODUCTION COSTS 1974	*					
PRICES	*					
0.120	*	-54.040	-27.790	-1.540	24.710	50.960
	*					
0.140	*	-35.040	-4.040	26.960	57.960	88.960
	*					
0.160	*	-16.040	19.710	55.460	91.210	126.960
	*					
0.180	*	2.960	43.460	83.960	124.460	164.960
	*					
0.200	*	21.960	67.210	112.460	157.710	202.960
	*					

10% COST INFLATION	*					
PRICES	*					
0.120	*	-71.444	-45.569	-19.694	6.181	32.056
	*					
0.140	*	-52.544	-21.944	8.656	39.256	69.856
	*					
0.160	*	-33.644	1.681	37.006	72.331	107.656
	*					
0.180	*	-14.744	25.306	65.356	105.406	145.456
	*					
0.200	*	4.156	48.931	93.706	138.481	183.256
	*					

20% COST INFLATION	*					
PRICES	*					
0.120	*	-88.848	-63.348	-37.848	-12.348	13.152
	*					
0.140	*	-70.048	-39.848	-9.648	20.552	50.752
	*					
0.160	*	-51.248	-16.348	18.552	53.452	88.352
	*					
0.180	*	-32.448	7.152	46.752	86.352	125.952
	*					
0.200	*	-13.648	30.652	74.952	119.252	163.552
	*					

A DRYLAND RETURN OF 10.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

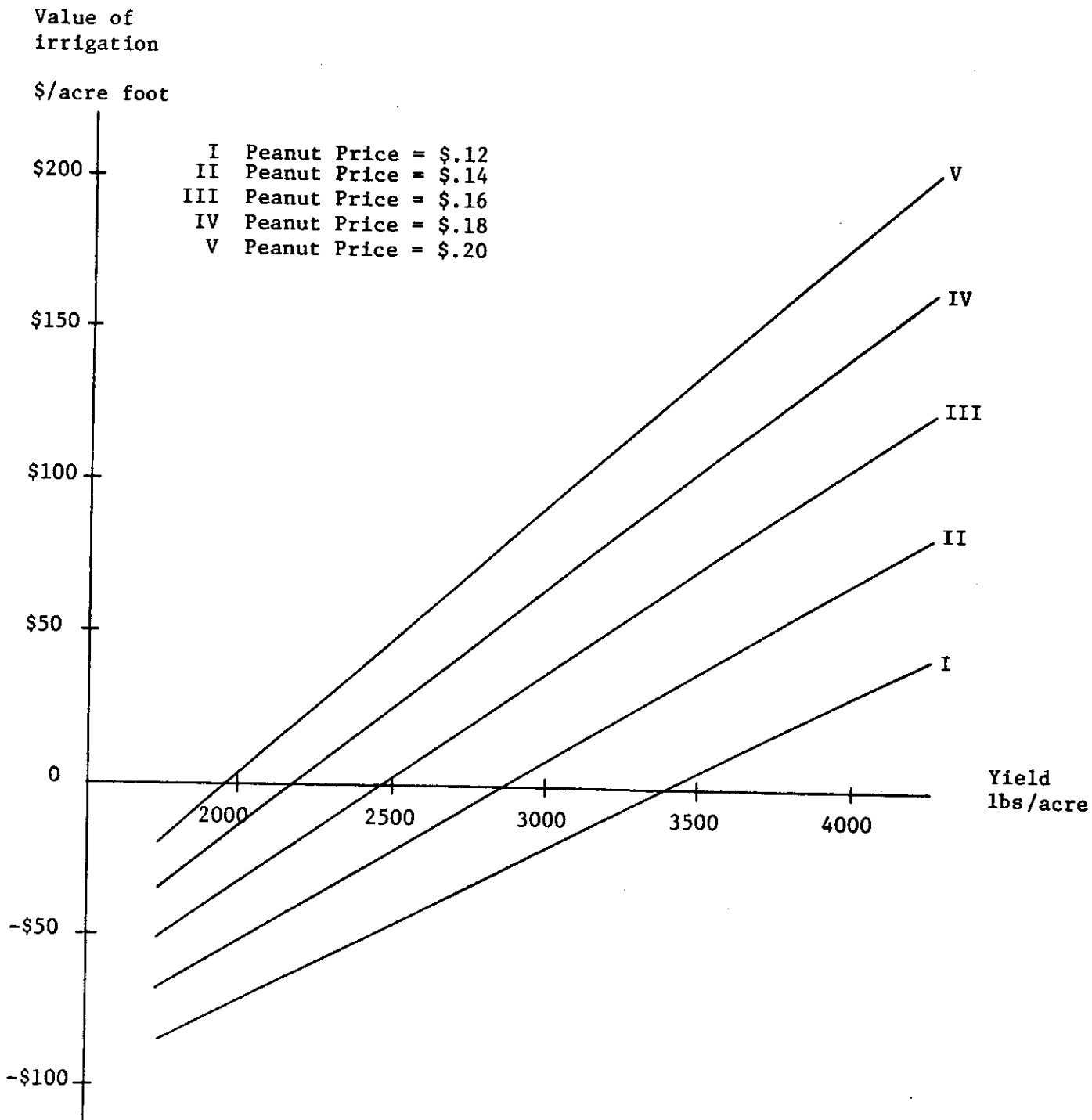


Figure Value of irrigation water applied to Peanuts in Lower South Central for alternative Peanut prices and yields with expected 1974 costs inflated 10 percent.

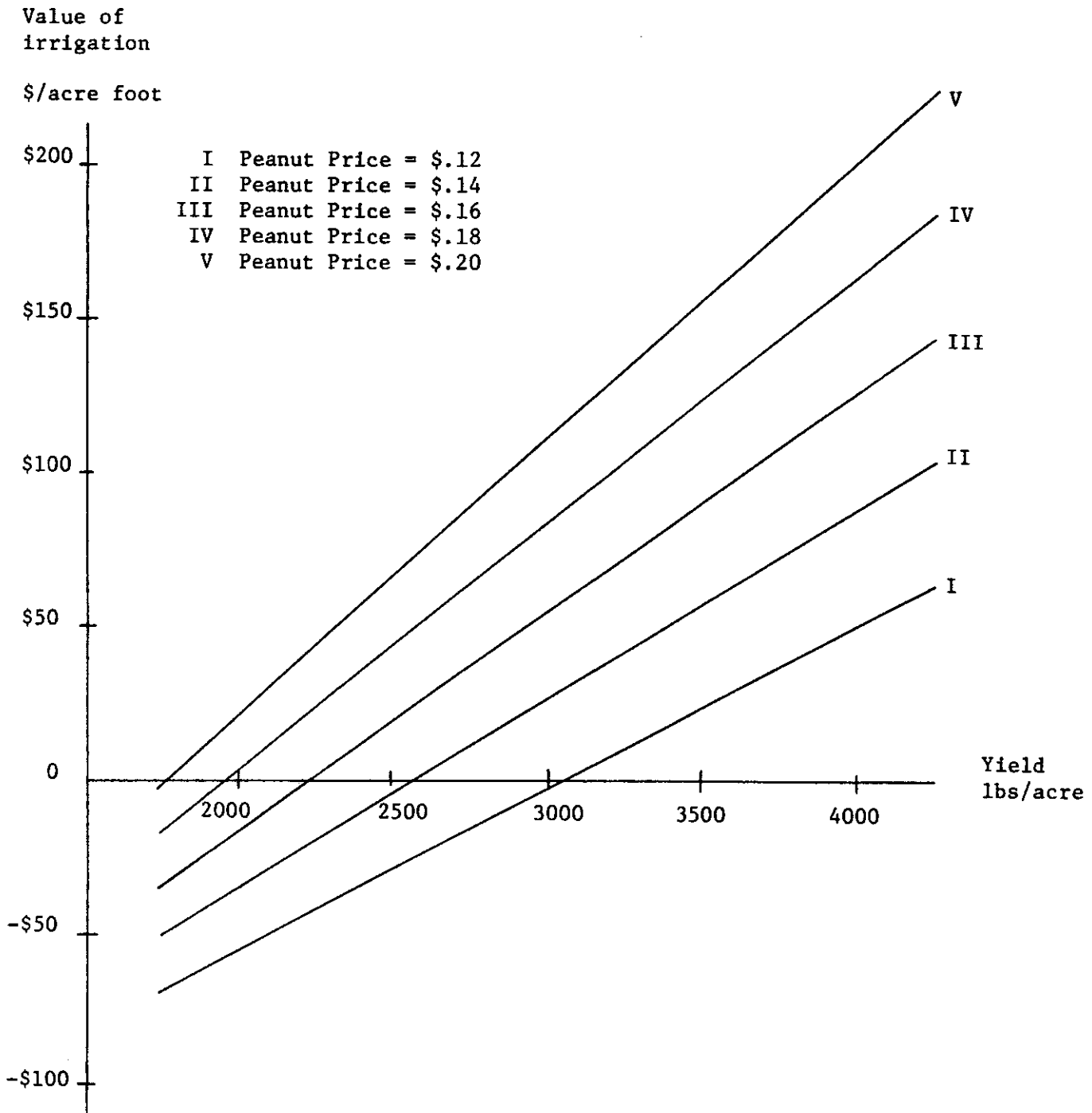


Figure Value of irrigation water applied to Peanuts in the Lower South Central for alternative Peanut prices and yields with expected 1974 costs.

Value of
irrigation
\$/acre foot

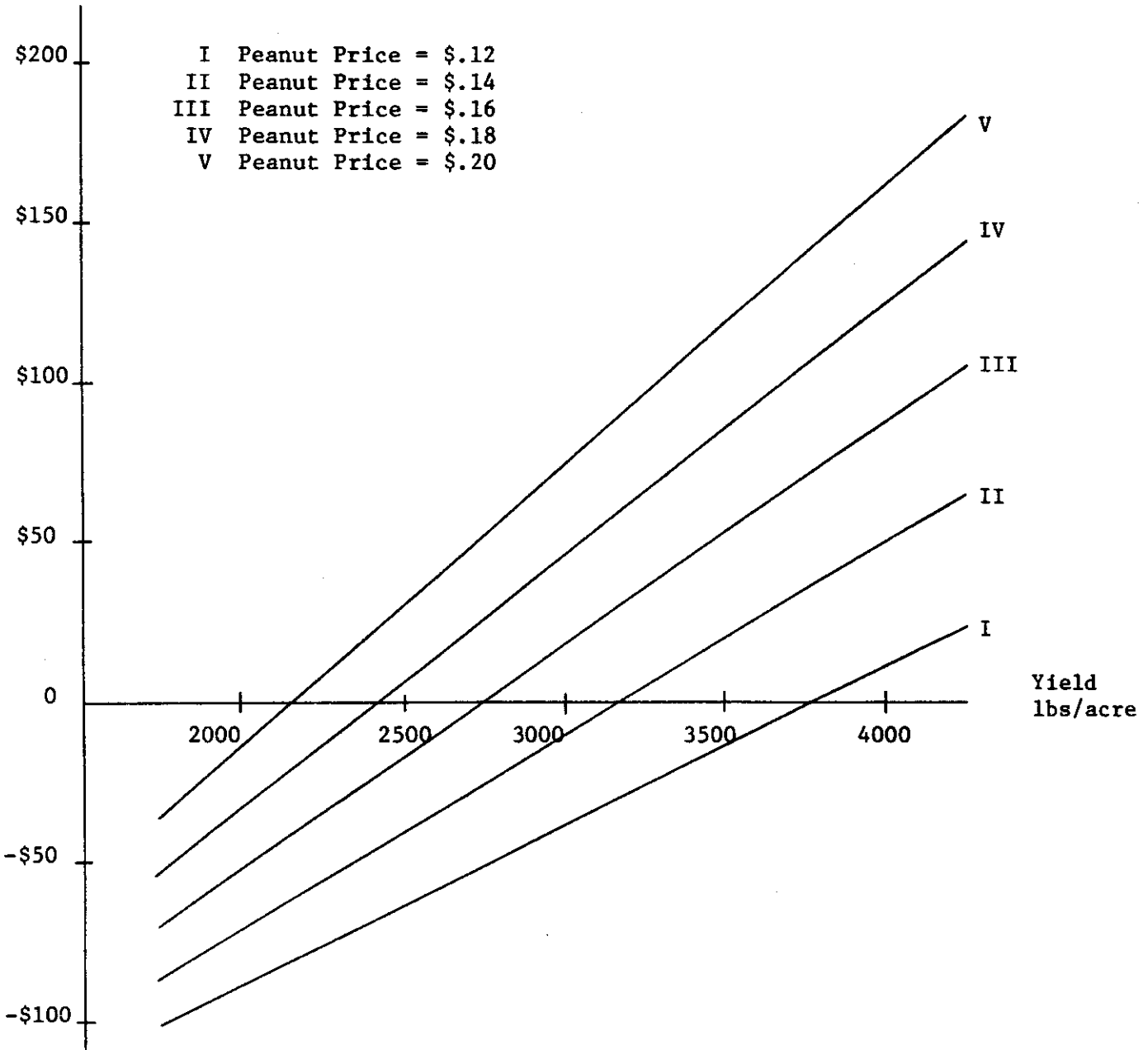


Figure Value of irrigation water applied to Peanuts in Lower South Central for alternative Peanut prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

LOWER SOUTH CENTRAL
STRAWBERRIES

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION FLAT PER ACRE				
		200.0	300.0	400.0	500.0	600.0

PRODUCTION COSTS 1974	*					
PRICES	*					
1.500	*	-407.792	-388.116	-368.440	-348.764	-329.088
	*					
2.500	*	-319.829	-256.171	-192.514	-128.857	-65.199
	*					
3.500	*	-231.866	-124.227	-16.588	91.051	198.690
	*					
4.500	*	-143.903	7.718	159.338	310.958	462.579
	*					
5.500	*	-55.940	139.662	335.264	530.866	726.468
	*					

10% COST INFLATION	*					
PRICES	*					
1.500	*	-462.460	-447.760	-433.062	-418.363	-403.663
	*					
2.500	*	-374.960	-316.510	-258.062	-199.613	-141.163
	*					
3.500	*	-287.460	-185.261	-83.062	19.137	121.337
	*					
4.500	*	-199.960	-54.011	91.938	237.887	383.836
	*					
5.500	*	-112.460	77.239	266.938	456.637	646.336
	*					

20% COST INFLATION	*					
PRICES	*					
1.500	*	-517.128	-507.406	-497.683	-487.961	-478.239
	*					
2.500	*	-430.091	-376.850	-323.609	-270.368	-217.128
	*					
3.500	*	-343.053	-246.294	-149.535	-52.776	43.983
	*					
4.500	*	-256.017	-115.739	24.539	164.817	305.094
	*					
5.500	*	-168.980	14.817	198.613	382.409	566.206
	*					

A DRYLAND RETURN OF 10.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

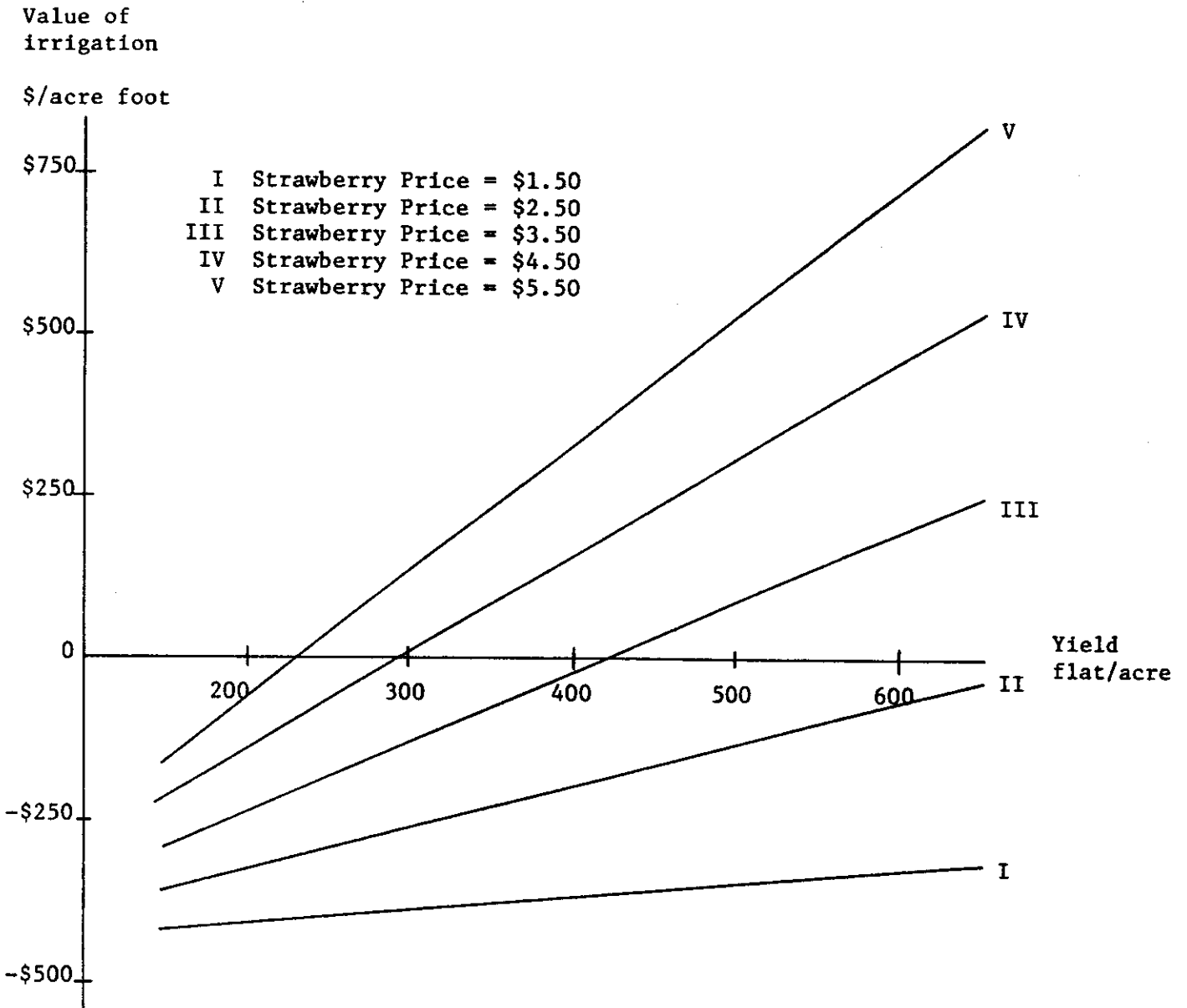


Figure Value of irrigation water applied to Strawberries in Lower South Central for alternative Strawberry prices and yields with expected 1974 costs.

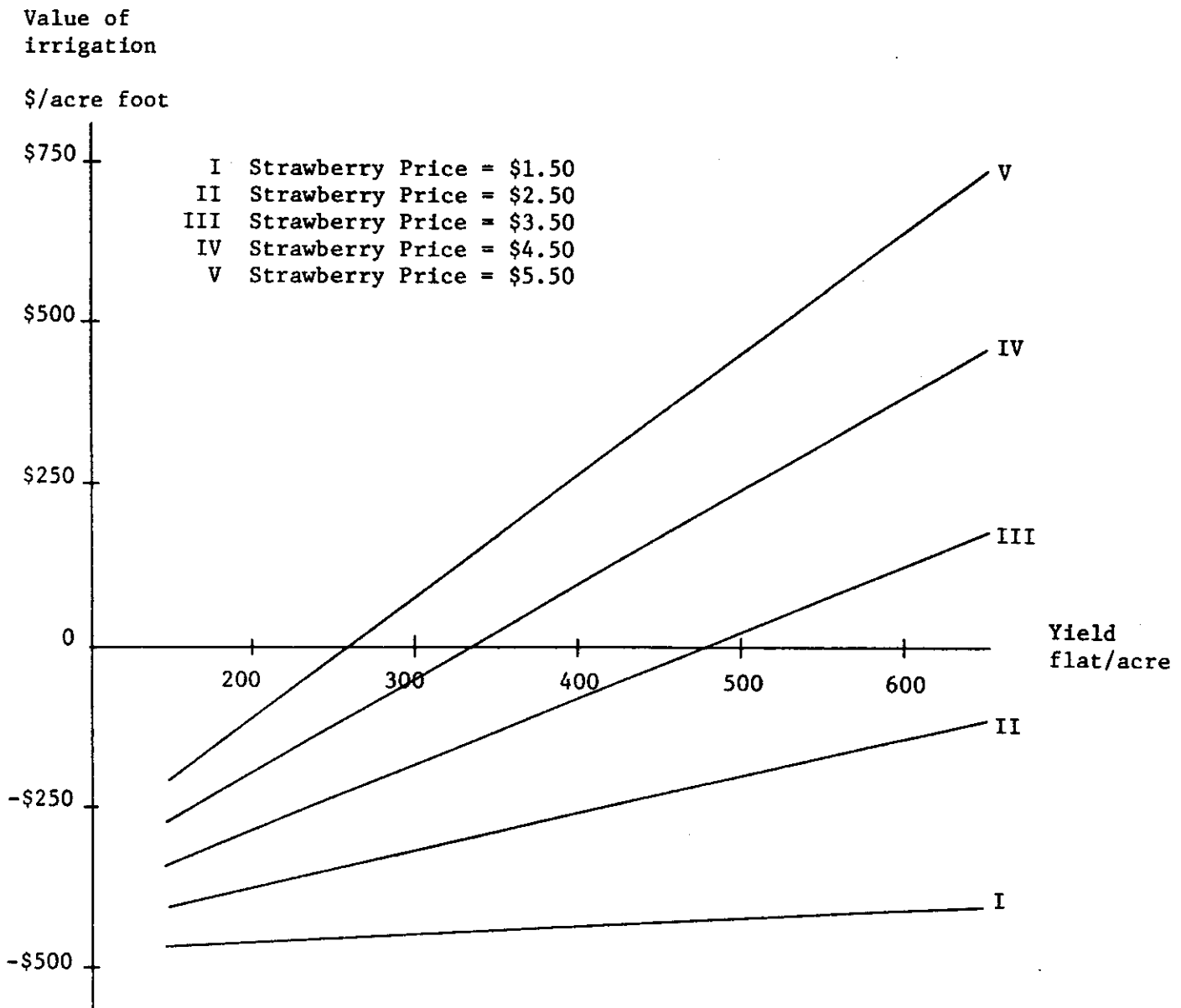


Figure Value of irrigation water applied to Strawberries in Lower South Central for alternative Strawberry prices and yields with expected 1974 costs inflated 10 percent.

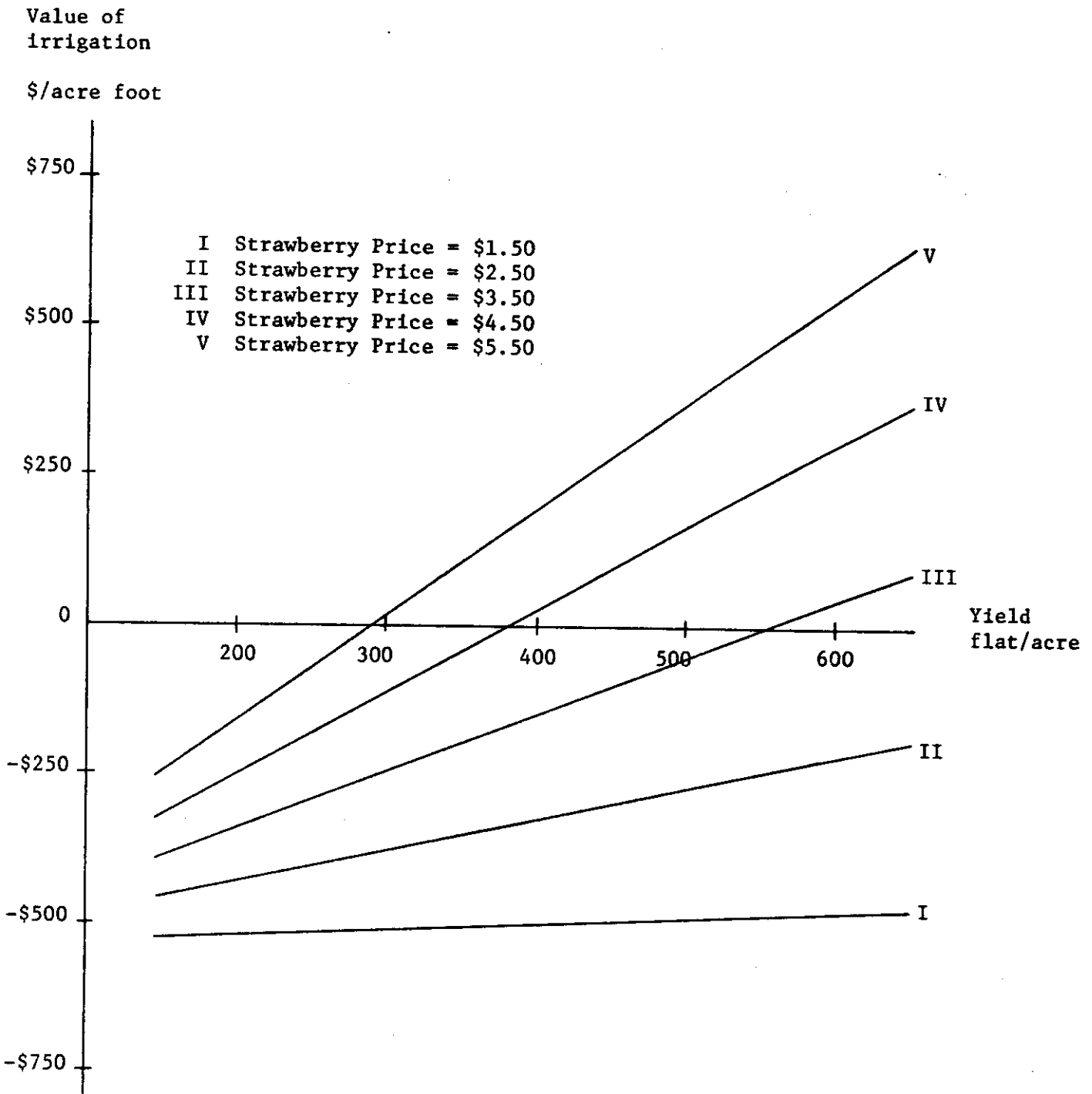


Figure Value of irrigation water applied to Strawberries in Lower South Central for alternative Strawberry prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

LOWER SOUTH CENTRAL
WATERMELONS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		100.0	150.0	200.0	250.0	300.0
PRODUCTION COSTS 1974	*					
PRICES	*					
1.000	*	-159.390	-149.390	-139.390	-129.390	-119.390
2.000	*	-64.390	-6.890	50.610	108.110	165.610
3.000	*	30.610	135.610	240.610	345.610	450.610
4.000	*	125.610	278.110	430.610	583.110	735.610
5.000	*	220.610	420.610	620.610	820.610	1020.610
10% COST INFLATION	*					
PRICES	*					
1.000	*	-185.329	-179.329	-173.329	-167.329	-161.329
2.000	*	-90.829	-37.579	15.671	68.921	122.171
3.000	*	3.671	104.171	204.671	305.171	405.671
4.000	*	98.171	245.921	393.671	541.421	689.171
5.000	*	192.671	387.671	582.671	777.671	972.671
20% COST INFLATION	*					
PRICES	*					
1.000	*	-211.268	-209.268	-207.268	-205.268	-203.268
2.000	*	-117.268	-68.268	-19.268	29.732	78.732
3.000	*	-23.268	72.732	168.732	264.732	360.732
4.000	*	70.732	213.732	356.732	499.732	642.732
5.000	*	164.732	354.732	544.732	734.732	924.732

A DRYLAND RETURN OF 10.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

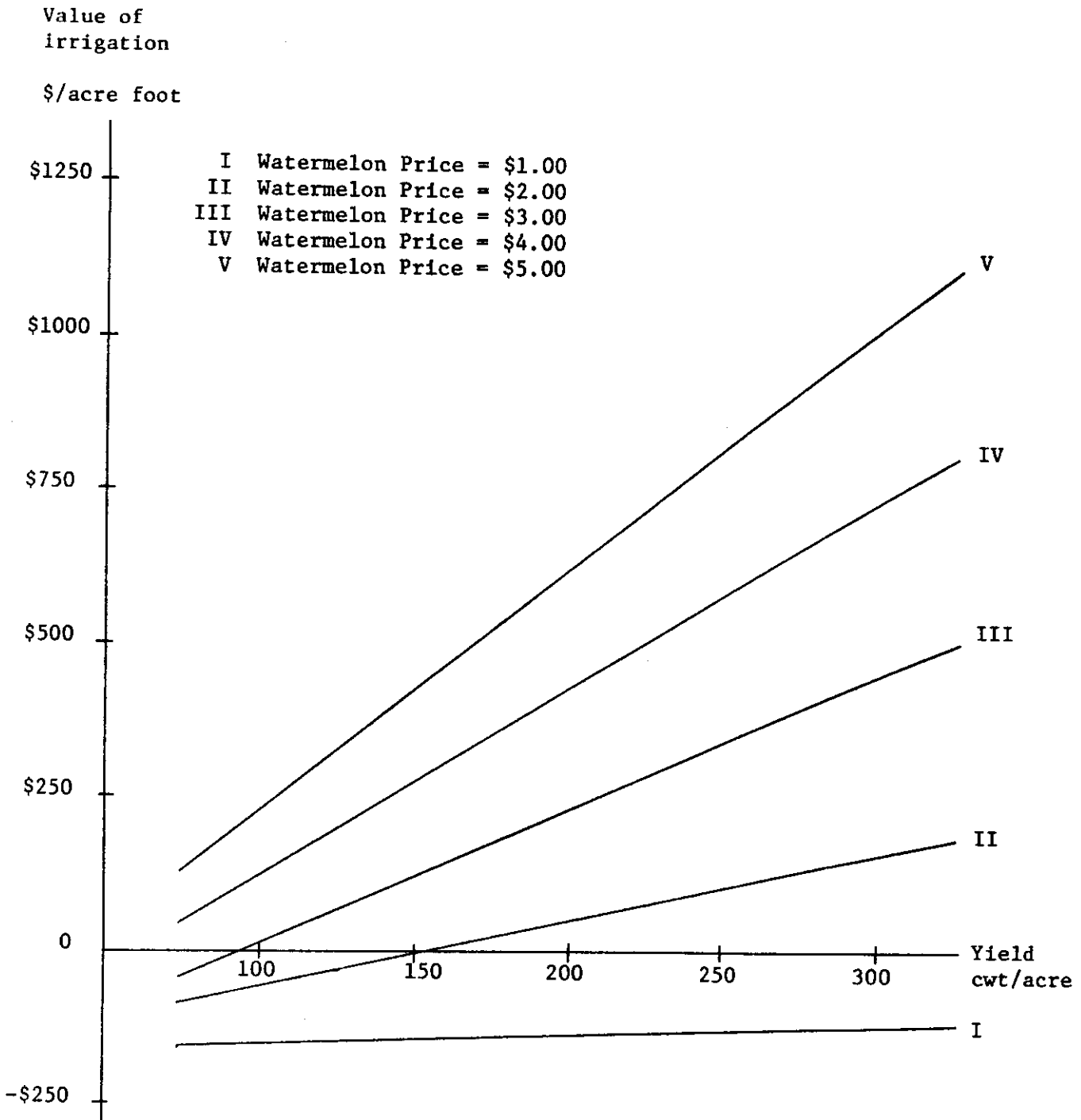


Figure Value of irrigation water applied to Watermelons in Lower South Central for alternative Watermelon prices and yields with expected 1974 costs.

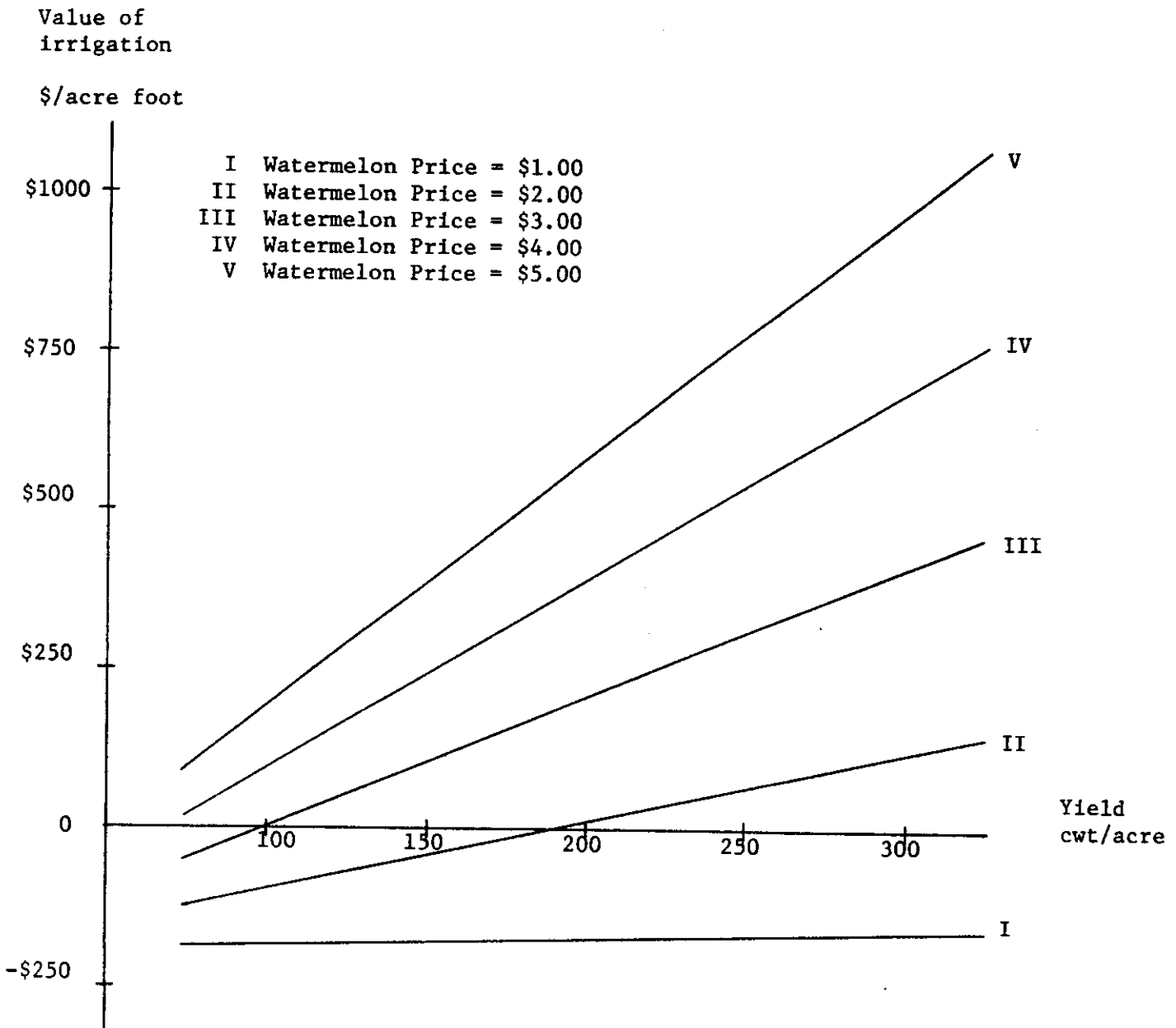


Figure Value of irrigation water applied to Watermelons in Lower South Central for alternative Watermelon prices and yields at expected 1974 costs inflated 10 percent.

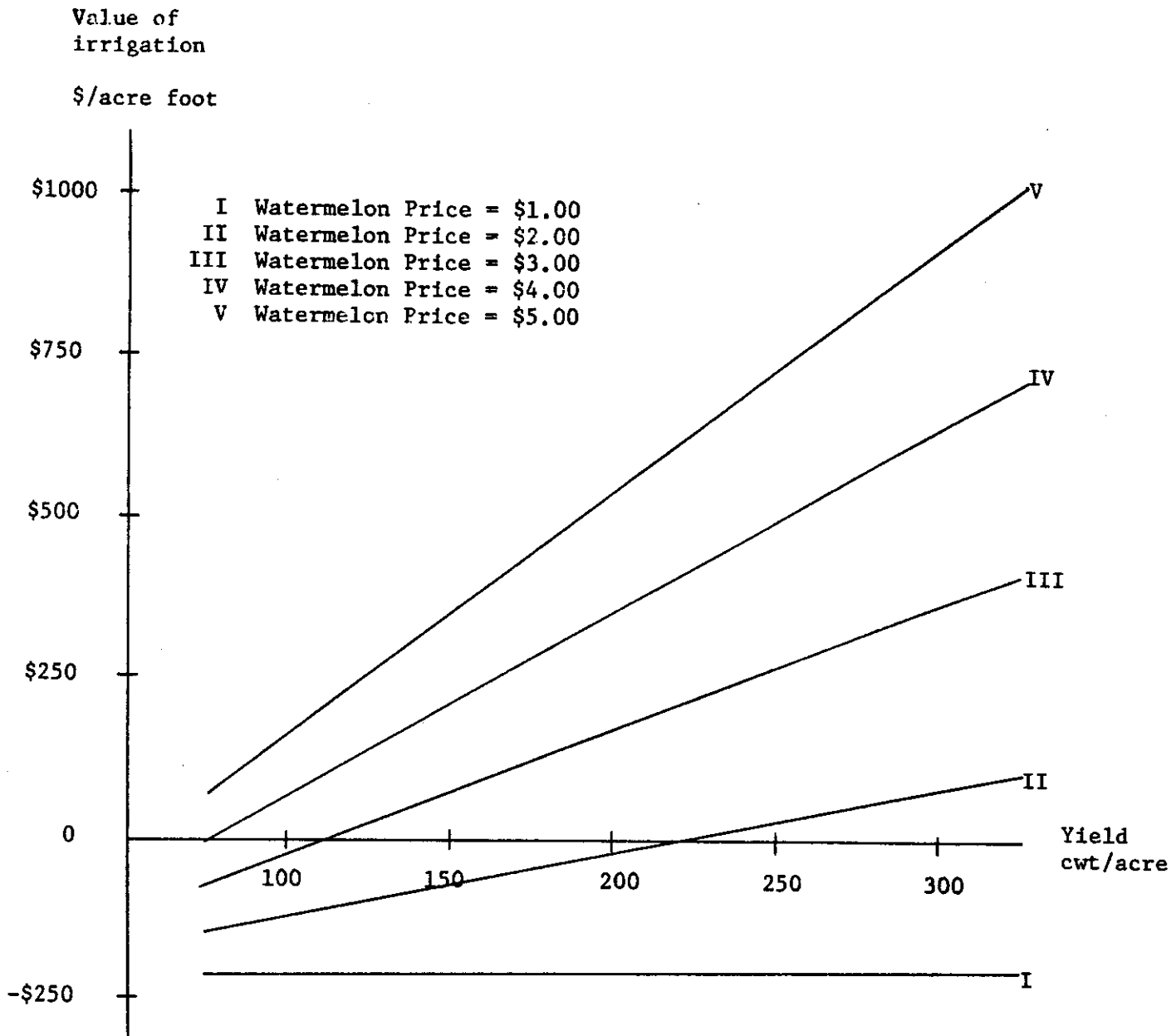
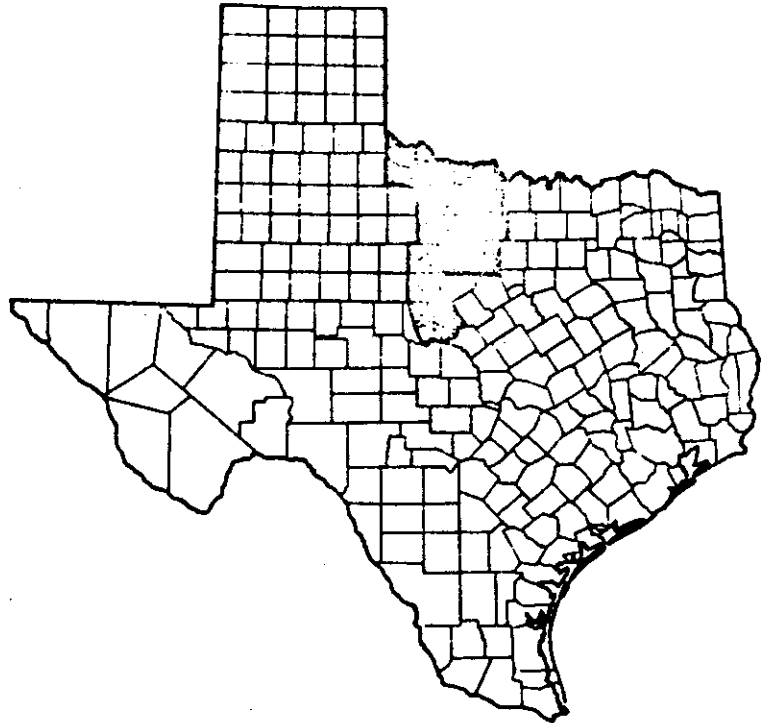


Figure Value of irrigation water applied to Watermelons in the Lower South Central for alternative Watermelon prices and yields at expected 1974 costs inflated 20 percent.

Texas Rolling Plains I

This area is characterized by mildly rolling terrain with several large ranches specializing in live-stock production. However, there is significant crop production in the area.



Although several crops are produced in the area including cotton, grain sorghum, guar, wheat, alfalfa, forage sorghum and sudan, only alfalfa and coastal bermudagrass are irrigated. Alfalfa receives 85-90 percent of the irrigation water applied at the present time [1]. For this reason, only these two crops are considered in this analysis.

A land charge of \$15 per acre for this area was applied. This charge is based on work published by the Texas Agricultural Extension Service

The alternative yields and prices used in this analysis are presented in the following table.

Crop	Unit	Yields					Prices				
		4.5	5.5	6.5	7.5	8.5	20.00	30.00	40.00	50.00	60.00
Alfalfa	ton	4.5	5.5	6.5	7.5	8.5	20.00	30.00	40.00	50.00	60.00
Coastal bermudagrass	ton	5	6	7	8	9	17.00	22.00	27.00	32.00	37.00

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS 1
ALFALFA

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		4.5	5.5	6.5	7.5	8.5

PRODUCTION COSTS 1974	*					
PRICES	*					
20.000	*	-45.310	-44.270	-43.230	-42.190	-41.150
	*					
30.000	*	-31.060	-26.853	-22.647	-18.440	-14.233
	*					
40.000	*	-16.810	-9.437	-2.063	5.310	12.683
	*					
50.000	*	-2.560	7.980	18.520	29.060	39.600
	*					
60.000	*	11.690	25.397	39.103	52.810	66.517
	*					

10% COST INFLATION	*					
PRICES	*					
20.000	*	-52.841	-52.364	-51.886	-51.409	-50.932
	*					
30.000	*	-38.666	-35.039	-31.411	-27.784	-24.157
	*					
40.000	*	-24.491	-17.714	-10.936	-4.159	2.618
	*					
50.000	*	-10.316	-0.389	9.539	19.466	29.393
	*					
60.000	*	3.859	16.936	30.014	43.091	55.168
	*					

20% COST INFLATION	*					
PRICES	*					
20.000	*	-60.372	-60.457	-60.543	-60.628	-60.713
	*					
30.000	*	-46.272	-43.224	-40.176	-37.129	-34.080
	*					
40.000	*	-32.172	-25.991	-19.809	-13.628	-7.447
	*					
50.000	*	-18.072	-8.757	0.557	9.872	19.187
	*					
60.000	*	-3.972	8.476	20.924	33.372	45.320
	*					

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
\$/acre foot

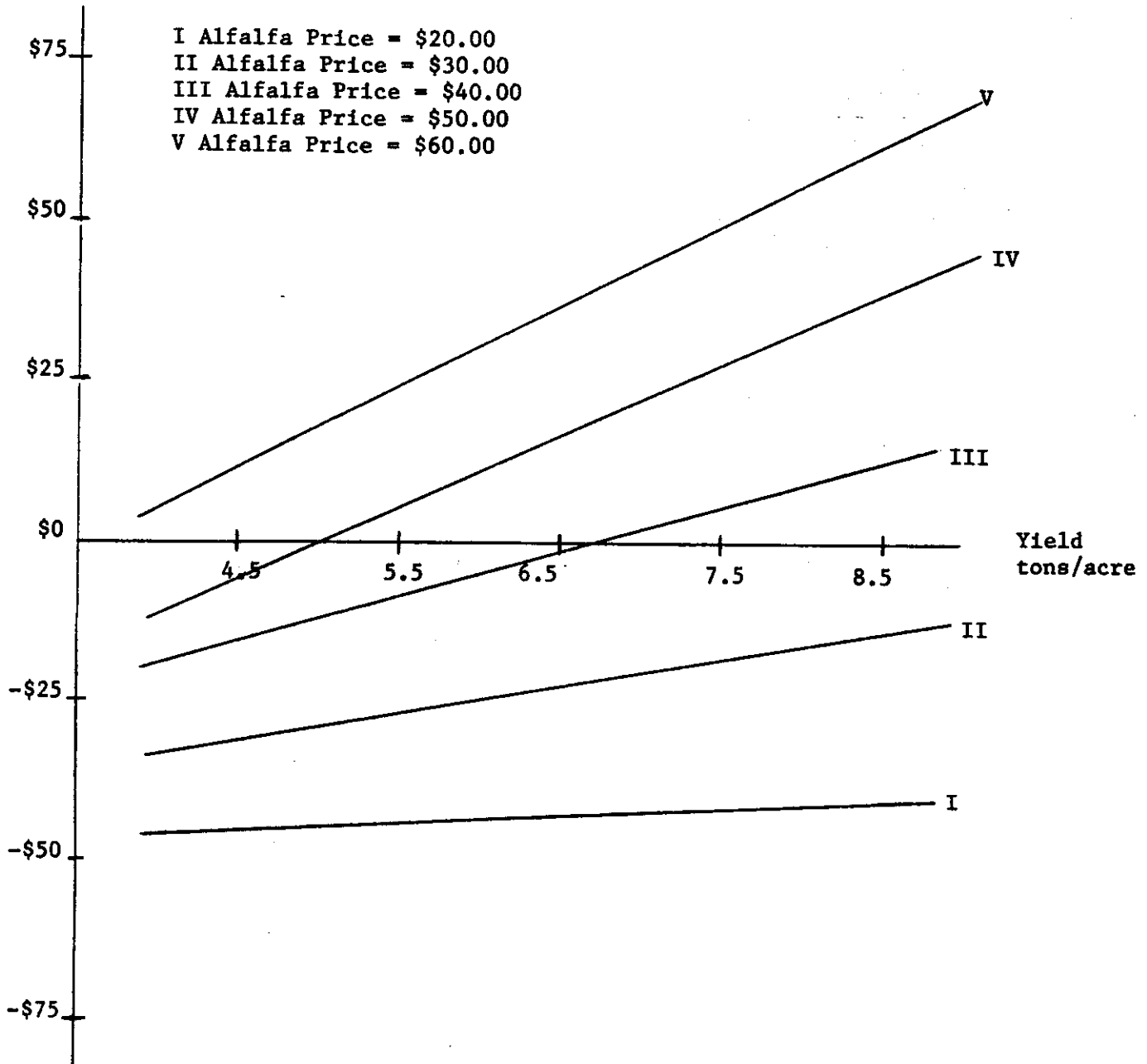


Figure Value of irrigation water applied to Alfalfa in Rolling Plains I for alternative Alfalfa prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

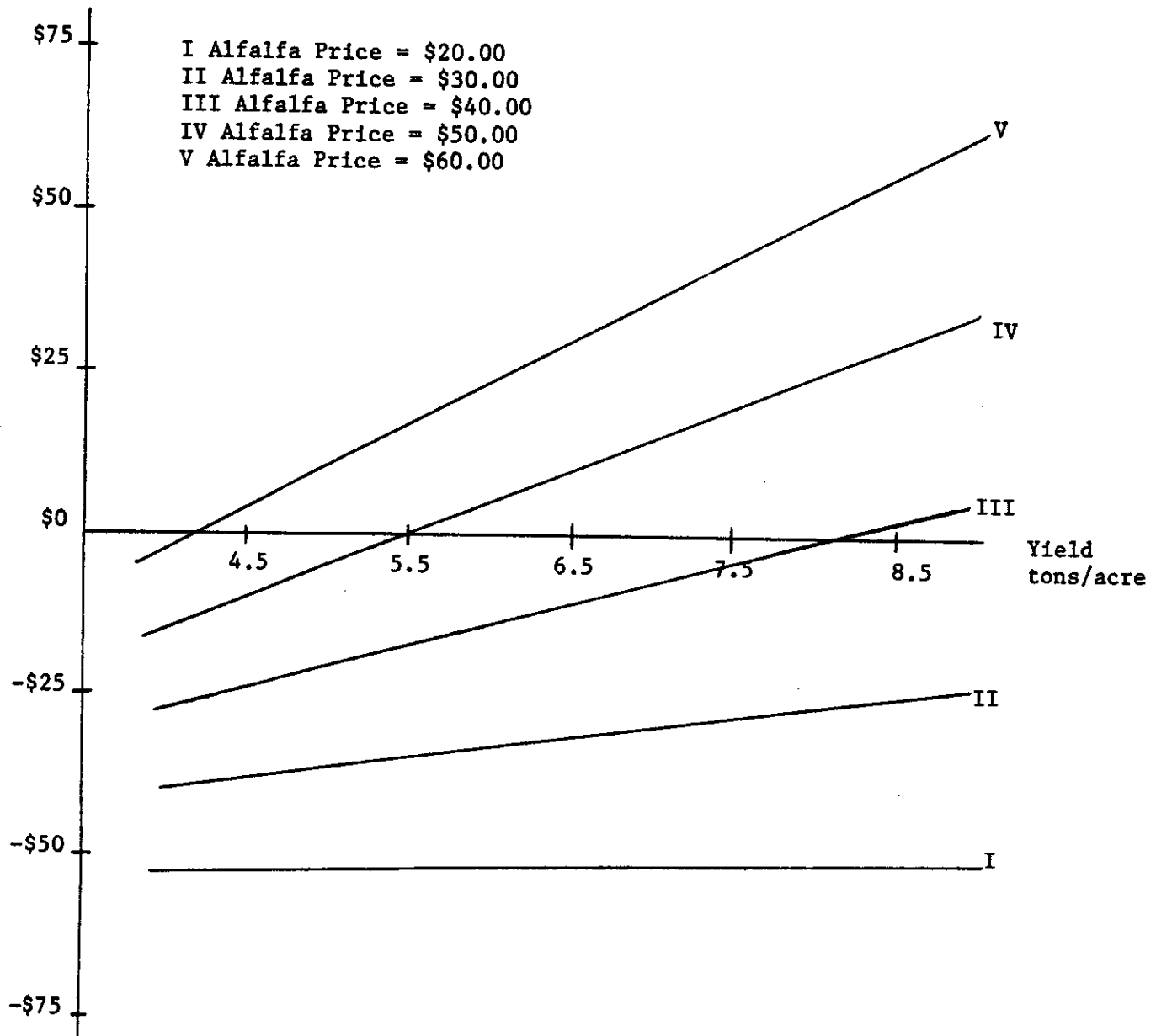


Figure Value of irrigation water applied to Alfalfa in Rolling Plains I for alternative Alfalfa prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

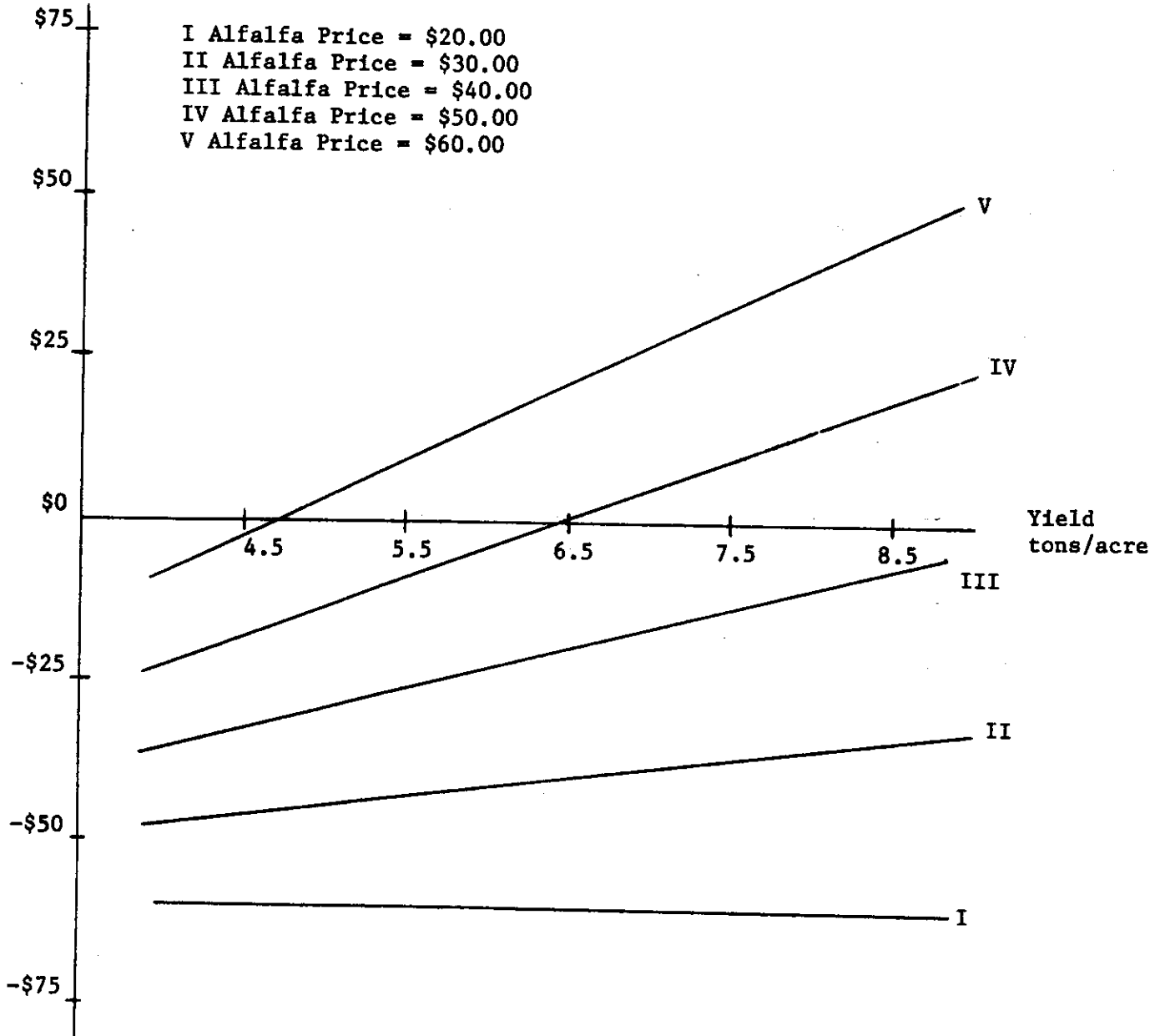


Figure Value of irrigation water applied to Alfalfa in Rolling Plains I for alternative Alfalfa prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS 1
COASTAL BERMUDAGRASS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION TON PER ACRE				
		5.0	6.0	7.0	8.0	9.0

PRODUCTION COSTS 1974	*					
PRICES	*					
17.000	*	-74.141	-73.979	-73.818	-73.656	-73.495
22.000	*	-61.771	-59.135	-56.500	-53.865	-51.229
27.000	*	-49.401	-44.292	-39.182	-34.073	-28.963
32.000	*	-37.031	-29.448	-21.865	-14.281	-6.698
37.000	*	-24.661	-14.604	-4.547	5.510	15.568
	*					

10% COST INFLATION	*					
PRICES	*					
17.000	*	-85.982	-86.689	-87.397	-88.105	-88.813
22.000	*	-73.677	-71.924	-70.171	-68.418	-66.664
27.000	*	-61.372	-57.153	-52.944	-48.730	-44.516
32.000	*	-49.068	-42.393	-35.718	-29.043	-22.368
37.000	*	-36.763	-27.627	-18.491	-9.355	-0.219
	*					

20% COST INFLATION	*					
PRICES	*					
17.000	*	-97.823	-99.400	-100.977	-102.554	-104.131
22.000	*	-85.583	-84.712	-83.842	-82.971	-82.100
27.000	*	-73.344	-70.025	-66.706	-63.387	-60.069
32.000	*	-61.104	-55.337	-49.571	-43.804	-38.037
37.000	*	-48.864	-40.650	-32.435	-24.221	-16.006
	*					

A DRYLAND RETURN OF 15.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
\$/acre foot

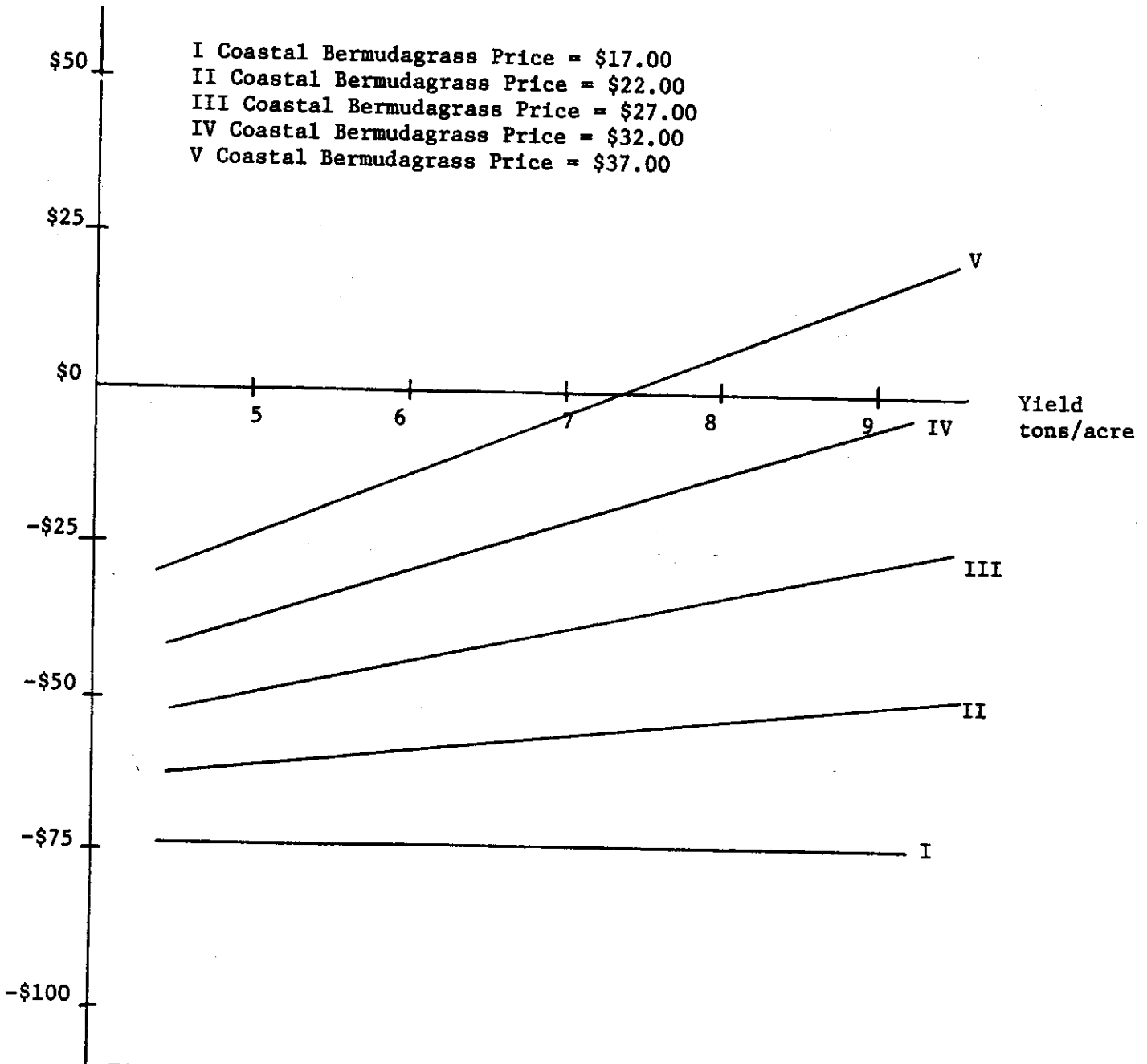


Figure Value of irrigation water applied to Coastal Bermudagrass in Rolling Plains I for alternative Coastal Bermudagrass prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

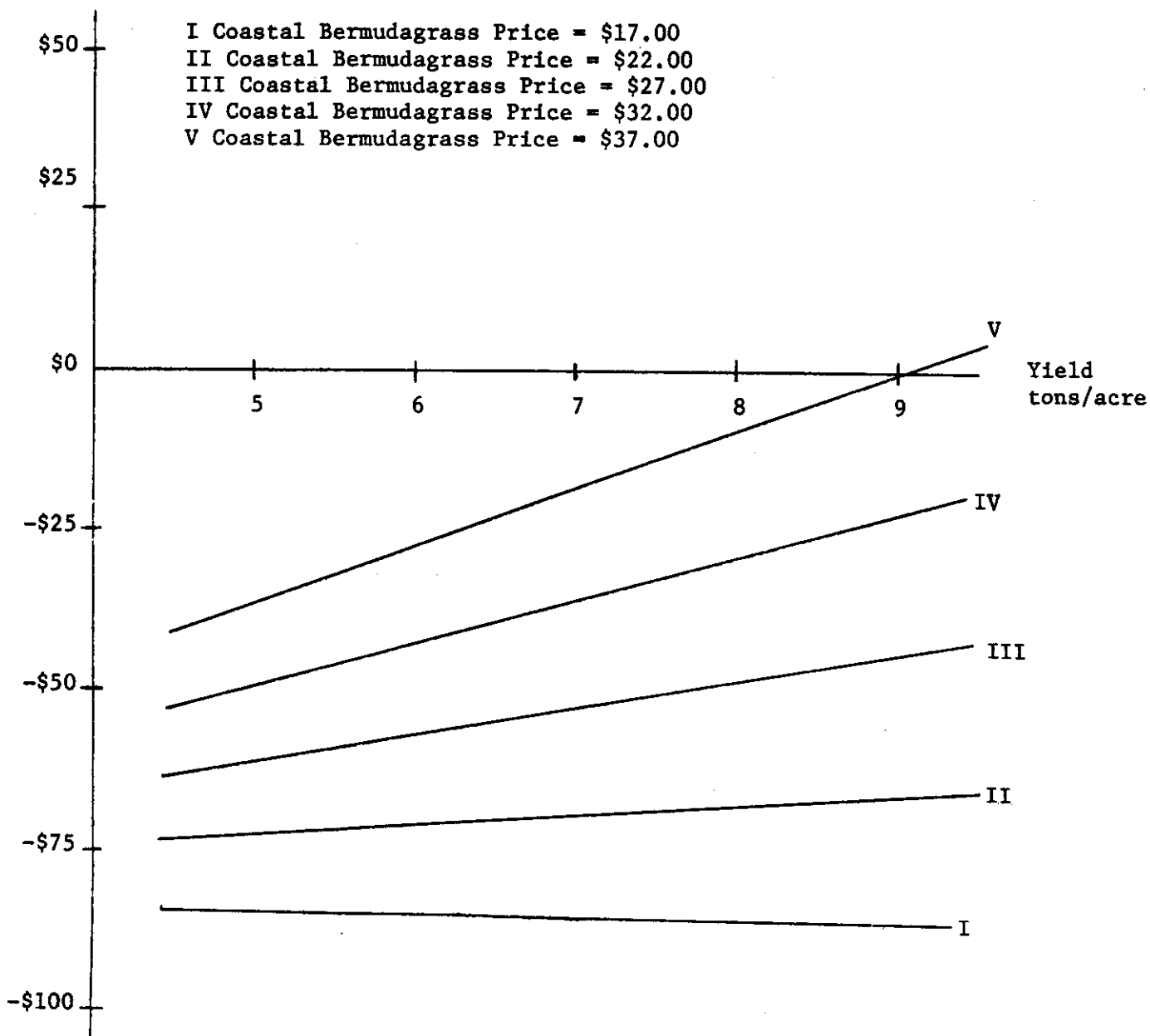


Figure Value of irrigation water applied to Coastal Bermudagrass in Rolling Plains I for alternative Coastal Bermudagrass prices and yields with expected 1974 costs inflated 10 percent.

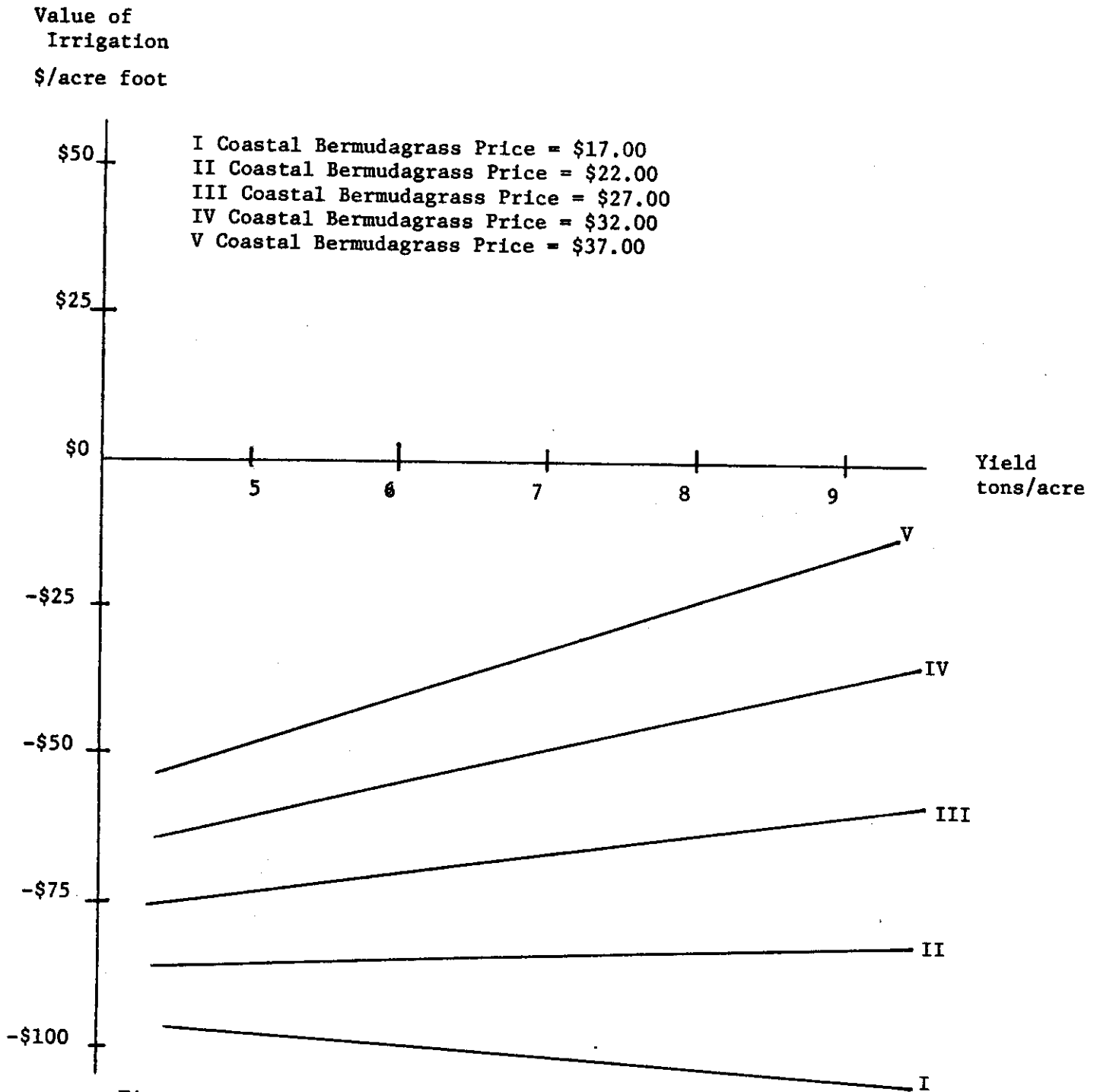


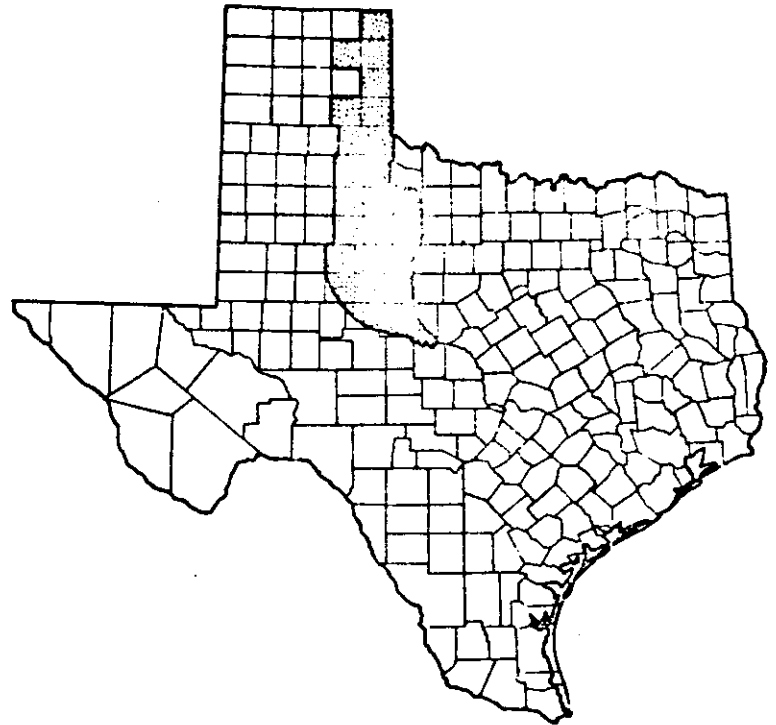
Figure Value of irrigation water applied to Coastal Bermudagrass in Rolling Plains I for alternative Coastal Bermudagrass prices and yields with expected 1974 costs inflated 20 percent.

This area is characterized by moderately rolling terrain with large rouches in the north and significant farming in the central and southern sections.

Limited rainfall in the region places a premium on irrigation of cropland. Dry-land cropping includes all crops which are irrigated except coastal bermudagrass, alfalfa and Irish potatoes.

A land charge of \$12.00 per acre was used based on published work by the Texas Agricultural Extension Service [1].

The alternative yields per acre and prices used in this analysis are presented in the following table.



Crop	Unit	Yields				Prices				
		4	5	6	8	20.00	30.00	40.00	50.00	60.00
Alfalfa	ton	4	5	6	8	20.00	30.00	40.00	50.00	60.00
Coastal Bermuda-grass	ton	3	5	7	11	20.00	24.00	28.00	32.00	36.00
Cotton	lb	200	350	500	800	.15	.25	.35	.45	.55
Grain Sorghum	cwt	20	30	40	60	1.75	2.50	3.25	4.00	4.75
Guar	cwt	9	12	15	21	3.00	5.00	7.00	9.00	11.00
Hybrid forage hay	ton	2	4	6	10	20.00	25.00	30.00	35.00	40.00
Irish Potatoes	cwt	50	100	150	250	4.00	5.00	6.00	7.00	8.00
Sorghum silage	ton	13	17	21	29	6.00	7.00	8.00	9.00	10.00
Wheat	bu	25	35	45	65	1.00	2.00	3.00	4.00	5.00

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
ALFALFA

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		4.0	5.0	6.0	7.0	8.0
PRODUCTION COSTS 1974						
PRICES	*					
20.000	*	-45.353	-43.098	-40.842	-38.586	-36.331
30.000	*	-16.782	-7.383	2.015	11.414	20.812
40.000	*	11.789	28.331	44.872	61.414	77.955
50.000	*	40.361	64.045	87.729	111.414	135.098
60.000	*	68.932	99.759	130.586	161.414	192.241
10% COST INFLATION						
PRICES	*					
20.000	*	-55.904	-54.926	-53.949	-52.971	-51.994
30.000	*	-27.483	-19.400	-11.317	-3.235	4.848
40.000	*	0.938	16.126	31.314	46.502	61.690
50.000	*	29.359	51.653	73.946	96.239	118.532
60.000	*	57.780	87.179	116.577	145.976	175.374
20% COST INFLATION						
PRICES	*					
20.000	*	-66.454	-66.755	-67.056	-67.356	-67.657
30.000	*	-38.183	-31.417	-24.650	-17.883	-11.116
40.000	*	-9.913	3.922	17.756	31.591	45.426
50.000	*	18.358	39.260	60.162	81.065	101.967
60.000	*	46.629	74.598	102.568	130.538	158.508

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

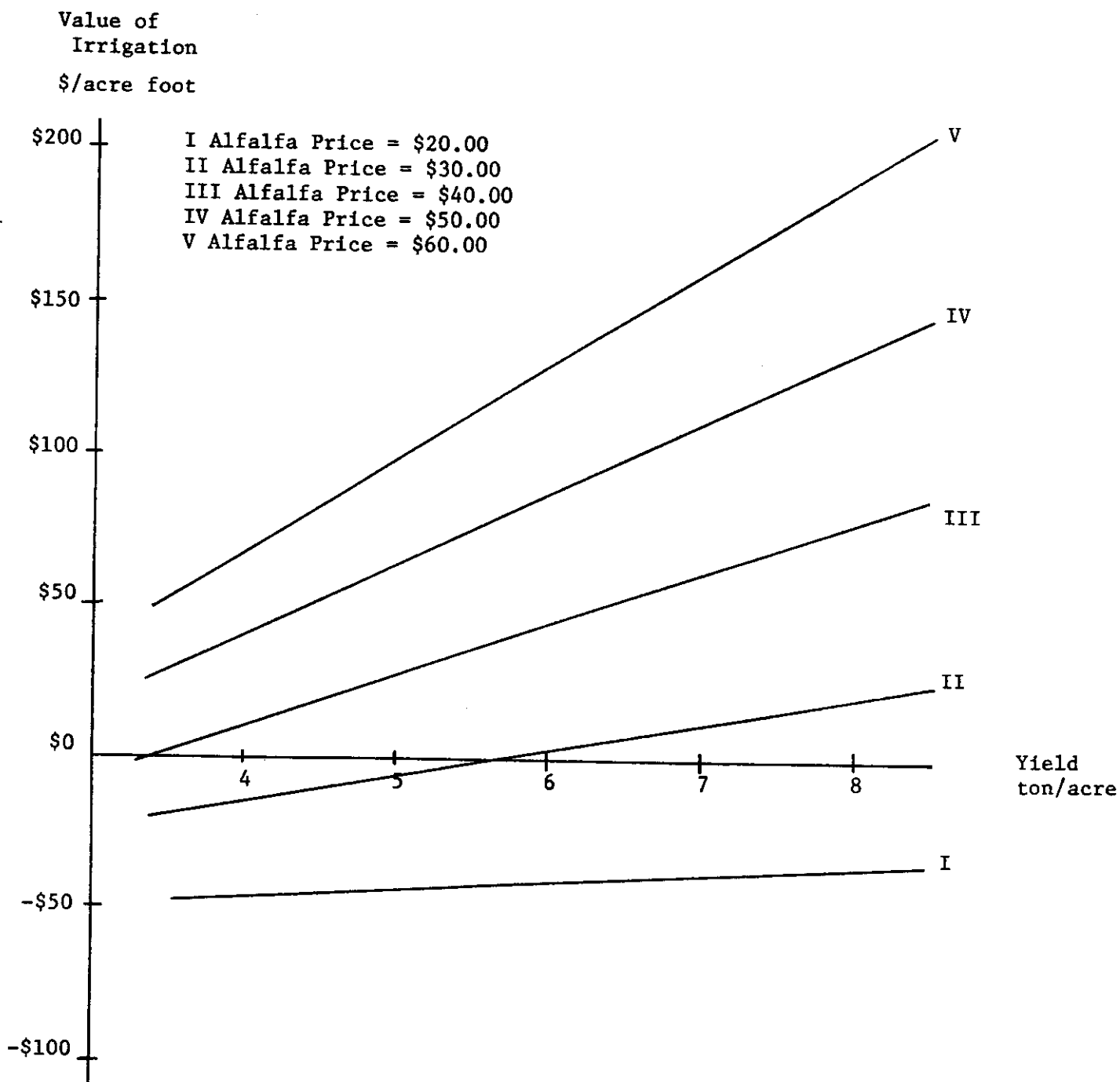


Figure Value of irrigation water applied to Alfalfa in Rolling Plains II for alternative Alfalfa prices and yields with expected 1974 costs.

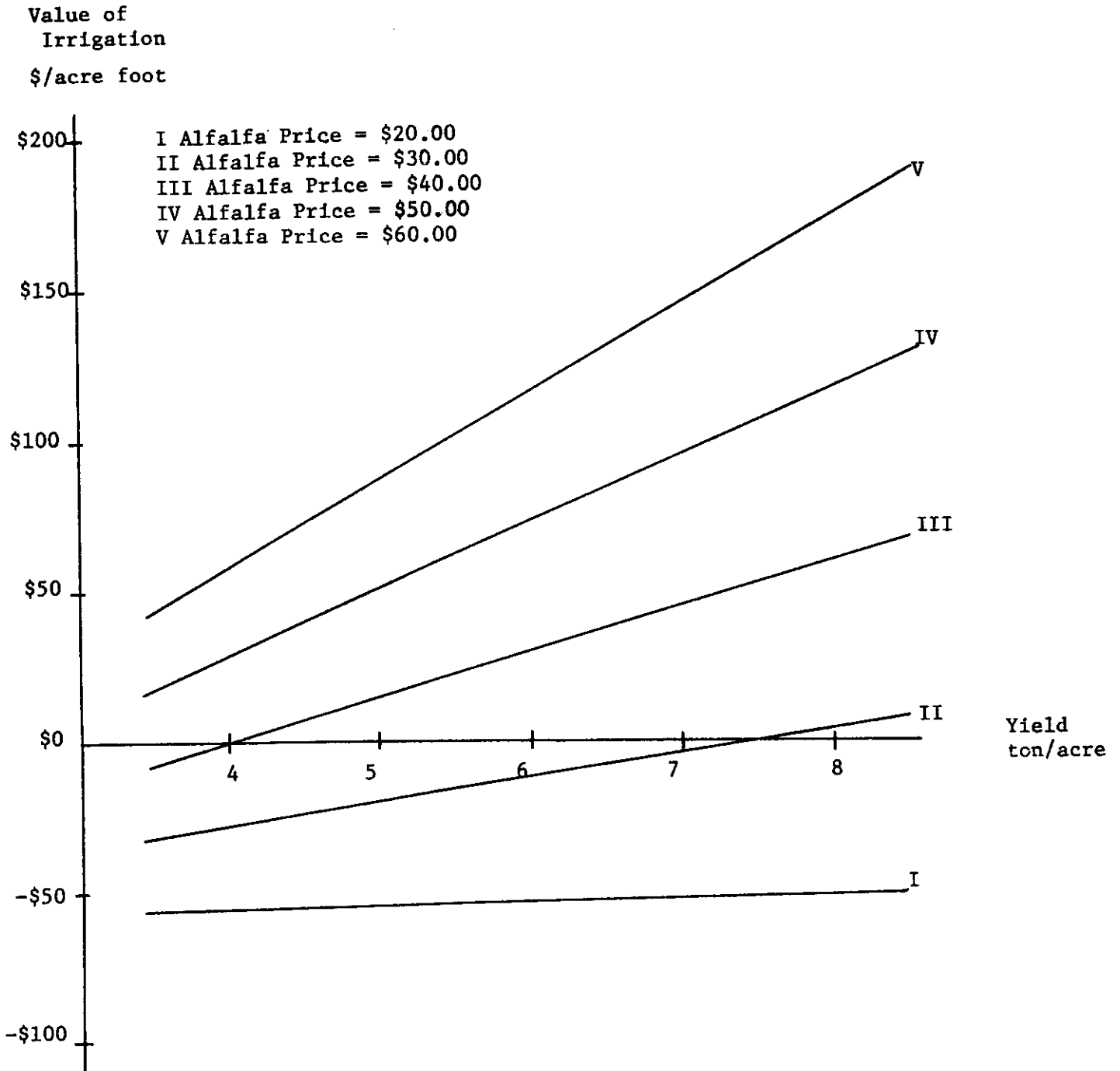


Figure Value of irrigation water applied to Alfalfa in Rolling Plains II for alternative Alfalfa prices and yields with expected 1974 costs inflated 10 percent.

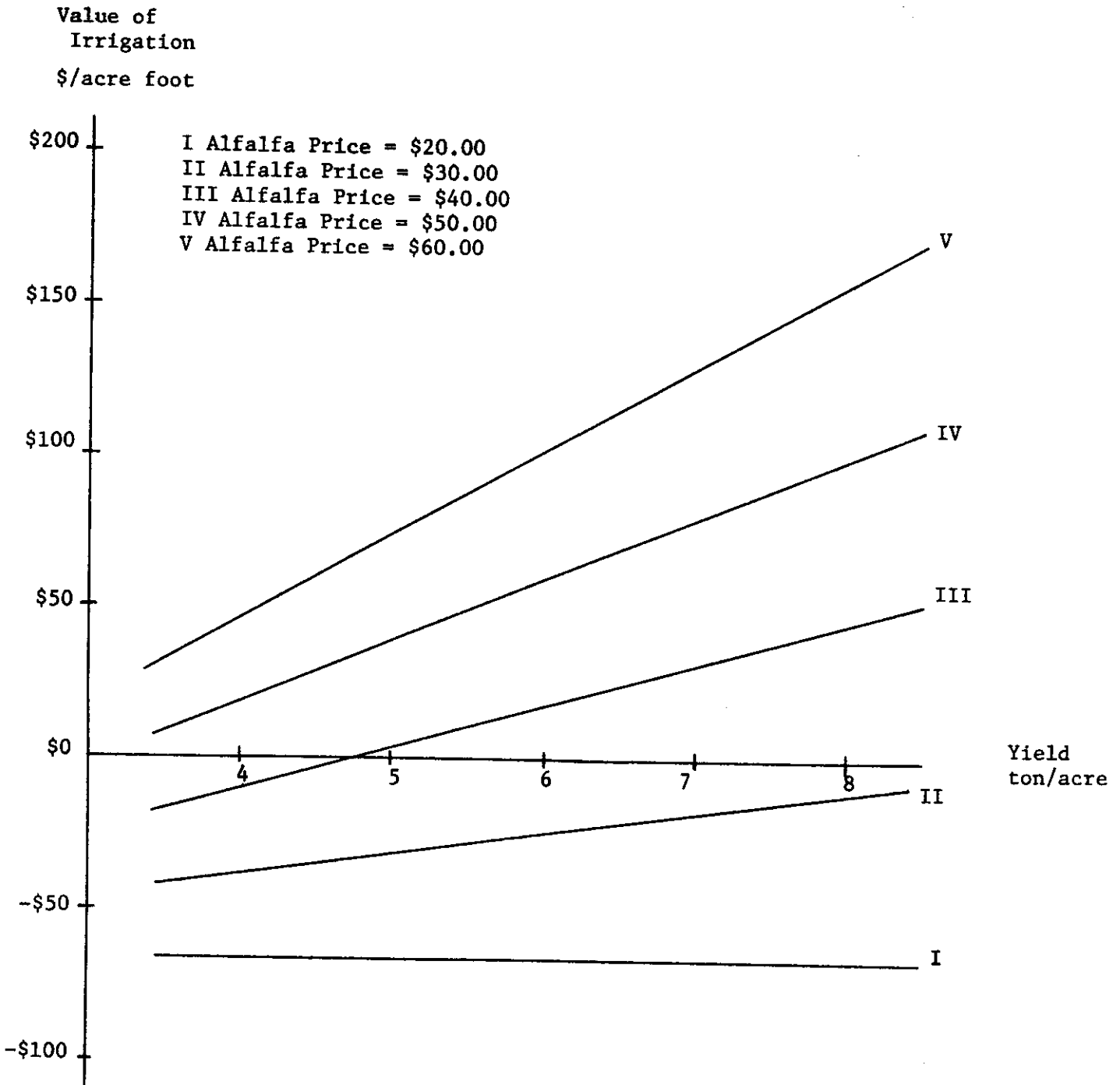


Figure Value of irrigation water applied to Alfalfa in Rolling Plains II for alternative Alfalfa prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
COASTAL BERMUDAGRASS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		3.0	5.0	7.0	9.0	11.0
PRODUCTION COSTS 1974	*					
PRICES	*					
20.000	*	-65.955	-61.203	-56.451	-51.699	-46.947
24.000	*	-57.383	-46.917	-36.451	-25.985	-15.519
28.000	*	-48.812	-32.632	-16.451	-0.271	15.910
32.000	*	-40.241	-18.346	3.549	25.444	47.339
36.000	*	-31.669	-4.060	23.549	51.158	78.767
10% COST INFLATION	*					
PRICES	*					
20.000	*	-77.062	-74.842	-72.623	-70.403	-68.183
24.000	*	-68.535	-60.632	-52.728	-44.824	-36.920
28.000	*	-60.009	-46.421	-32.833	-19.245	-5.657
32.000	*	-51.483	-32.211	-12.938	6.334	25.606
36.000	*	-42.956	-18.000	6.956	31.913	56.870
20% COST INFLATION	*					
PRICES	*					
20.000	*	-88.168	-88.481	-88.794	-89.107	-89.419
24.000	*	-79.687	-74.346	-69.004	-63.663	-58.322
28.000	*	-71.206	-60.211	-49.215	-38.219	-27.224
32.000	*	-62.725	-46.075	-29.425	-12.776	3.874
36.000	*	-54.244	-31.940	-9.636	12.668	34.972

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

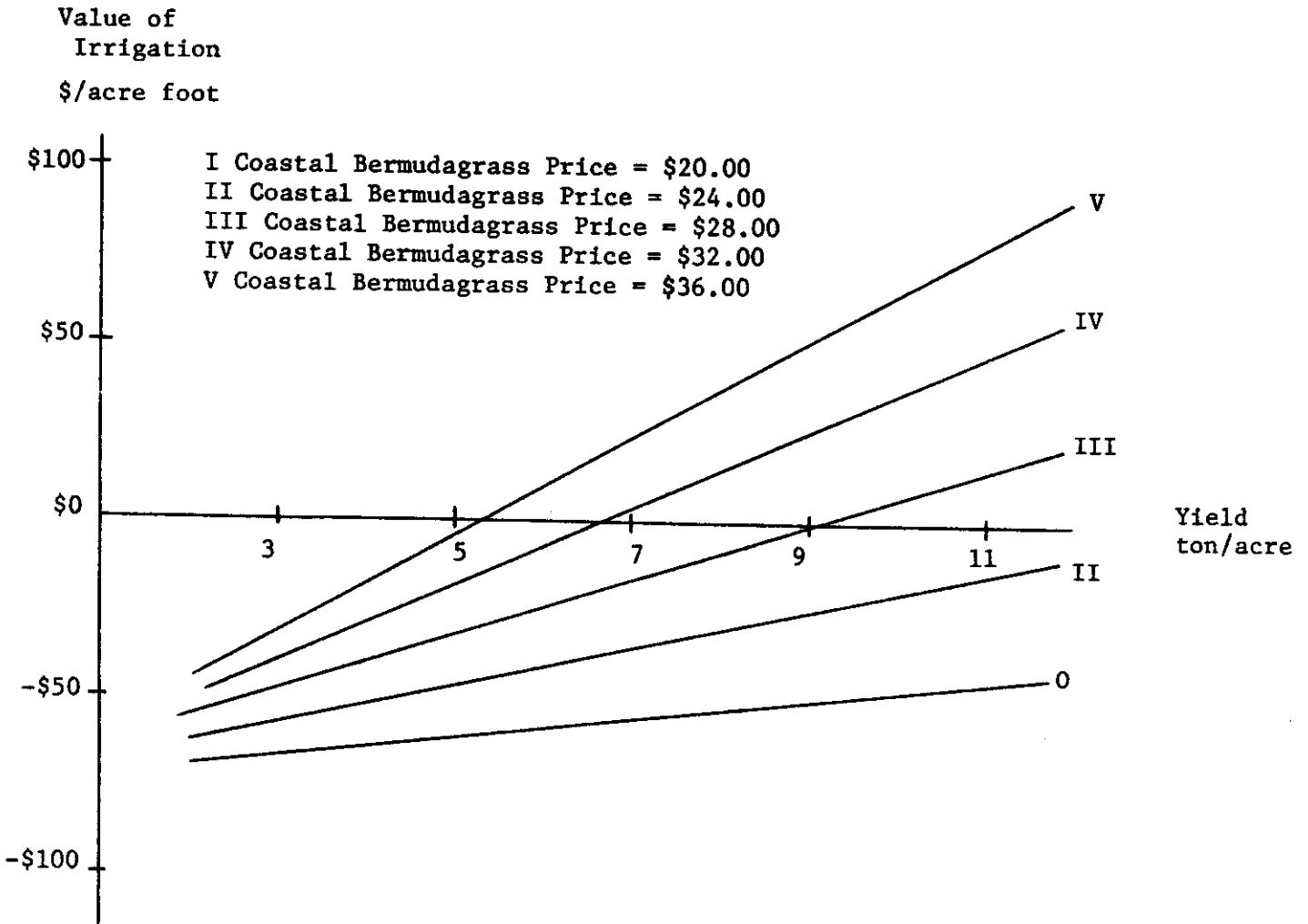


Figure Value of irrigation water applied to Coastal Bermudagrass in Rolling Plains II for alternative Coastal Bermudagrass prices and yields with expected 1974 costs.

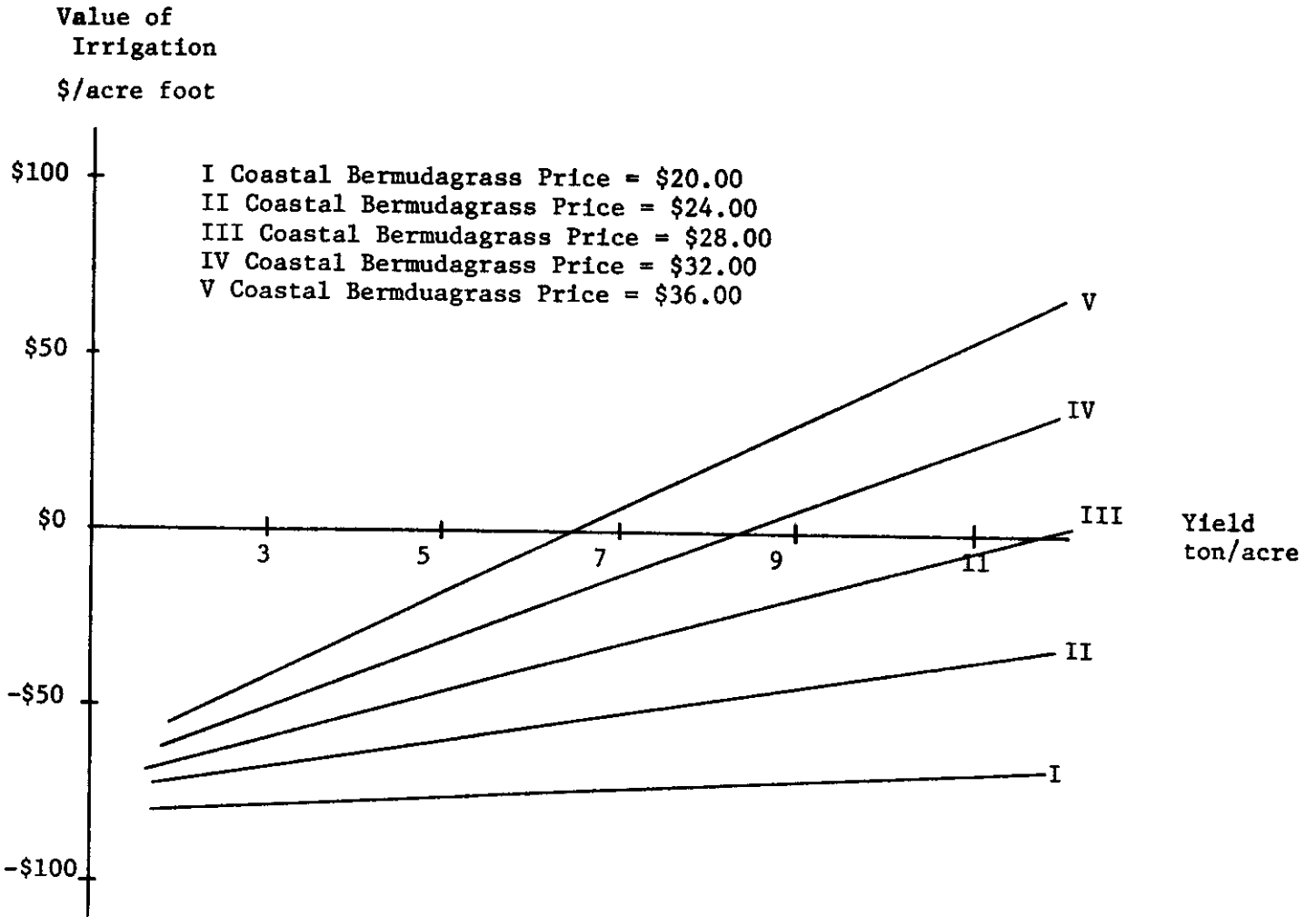


Figure Value of irrigation water applied to Coastal Bermudagrass in Rolling Plains II for alternative Coastal Bermudagrass prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

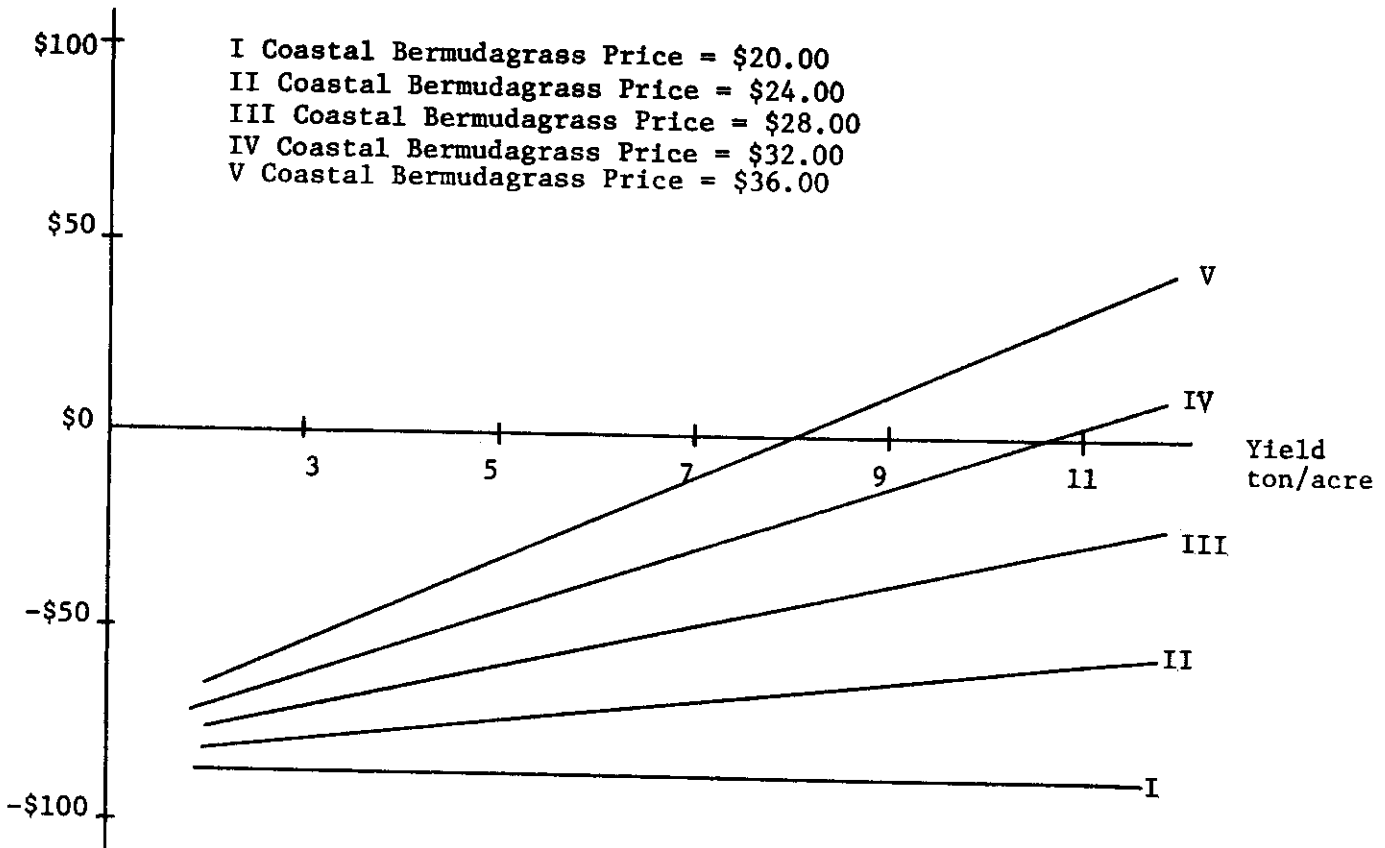


Figure Value of irrigation water applied to Coastal Bermudagrass in Rolling Plains II for alternative Coastal Bermudagrass prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
COTTON

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		200.0	350.0	500.0	650.0	800.0
PRODUCTION COSTS 1974						
PRICES	*					
0.150	*	-59.410	-42.218	-25.026	-7.833	9.359
0.250	*	-43.171	-13.799	15.573	44.944	74.316
0.350	*	-26.932	14.620	56.171	97.722	139.273
0.450	*	-10.692	43.038	96.769	150.500	204.231
0.550	*	5.547	71.457	137.367	203.278	269.188
10% COST INFLATION						
PRICES	*					
0.150	*	-68.736	-52.363	-35.990	-19.617	-3.244
0.250	*	-52.582	-24.094	4.395	32.883	61.372
0.350	*	-36.428	4.176	44.779	85.383	125.987
0.450	*	-20.274	32.445	85.164	137.883	190.602
0.550	*	-4.120	60.714	125.549	190.383	255.218
20% COST INFLATION						
PRICES	*					
0.150	*	-78.062	-62.508	-46.954	-31.400	-15.846
0.250	*	-61.993	-34.388	-6.783	20.822	48.427
0.350	*	-45.925	-6.268	33.388	73.044	112.701
0.450	*	-29.856	21.851	73.559	125.267	176.974
0.550	*	-13.788	49.971	113.730	177.489	241.248

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation
/acre foot

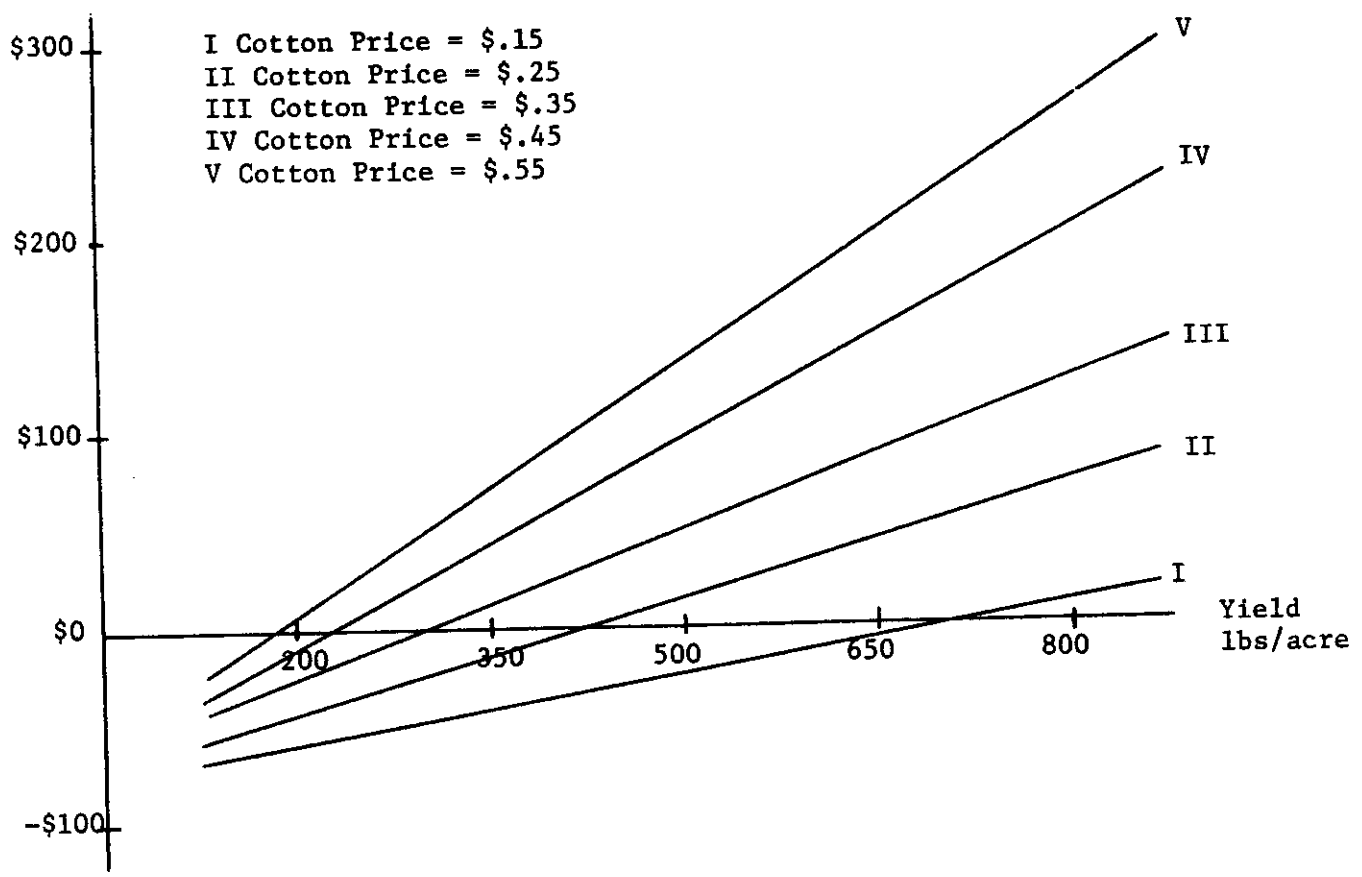


Figure Value of irrigation water applied to Cotton in Rolling Plains II for alternative Cotton prices and yields with expected 1974 costs.

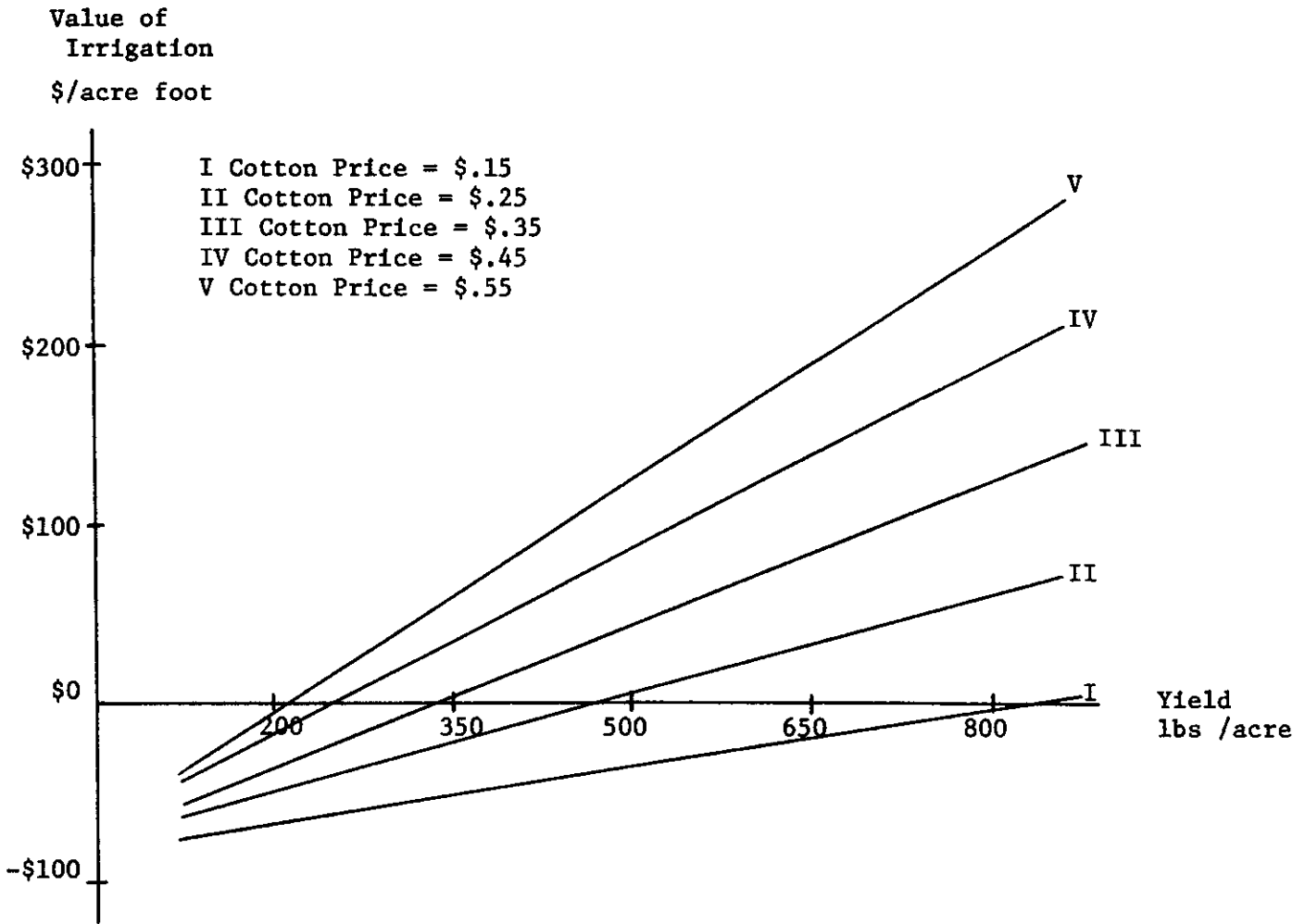


Figure Value of irrigation water applied to Cotton in Rolling Plains II for alternative prices and yields with expected 1974 costs inflated 10 percent.

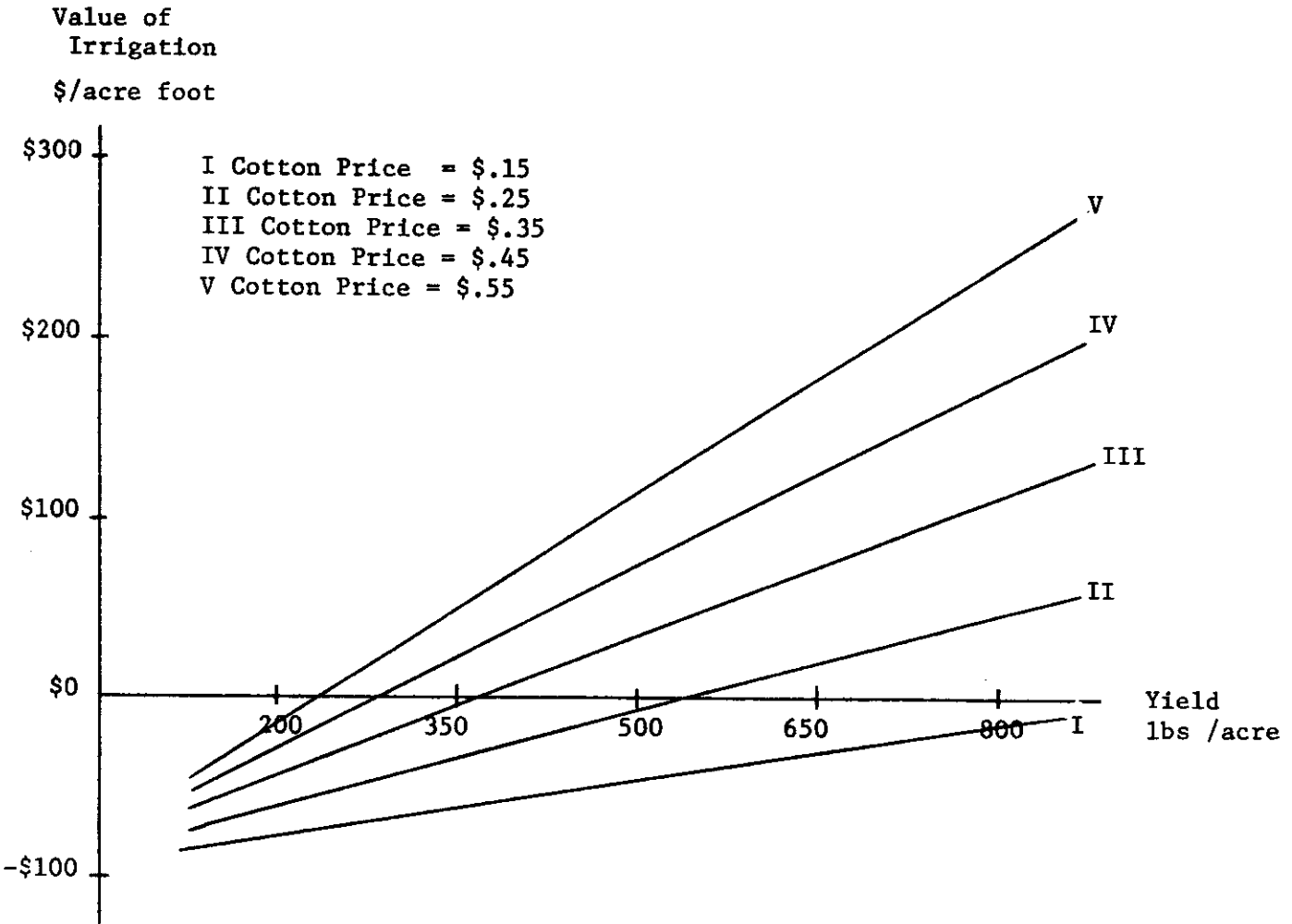


Figure Value of irrigation water applied to Cotton in Rolling Plains II for alternative Cotton prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
GRAIN SORGHUM

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		20.0	30.0	40.0	50.0	60.0
PRODUCTION COSTS 1974	*					
PRICES	*					
1.750	*	-45.171	-32.244	-19.316	-6.389	6.538
2.500	*	-32.991	-13.974	5.043	24.060	43.077
3.250	*	-20.812	4.295	29.402	54.509	79.615
4.000	*	-8.632	22.564	53.761	84.957	116.154
4.750	*	3.547	40.833	78.120	115.406	152.692
10% COST INFLATION	*					
PRICES	*					
1.750	*	-52.679	-39.955	-27.231	-14.506	-1.782
2.500	*	-40.564	-21.782	-3.000	15.782	34.564
3.250	*	-28.449	-3.609	21.231	46.071	70.910
4.000	*	-16.333	14.564	45.462	76.359	107.256
4.750	*	-4.218	32.737	69.692	106.647	143.603
20% COST INFLATION	*					
PRICES	*					
1.750	*	-60.188	-47.667	-35.145	-22.624	-10.103
2.500	*	-48.137	-29.590	-11.043	7.504	26.051
3.250	*	-36.085	-11.513	13.060	37.632	62.205
4.000	*	-24.034	6.564	37.162	67.761	98.359
4.750	*	-11.983	24.641	61.265	97.889	134.513

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

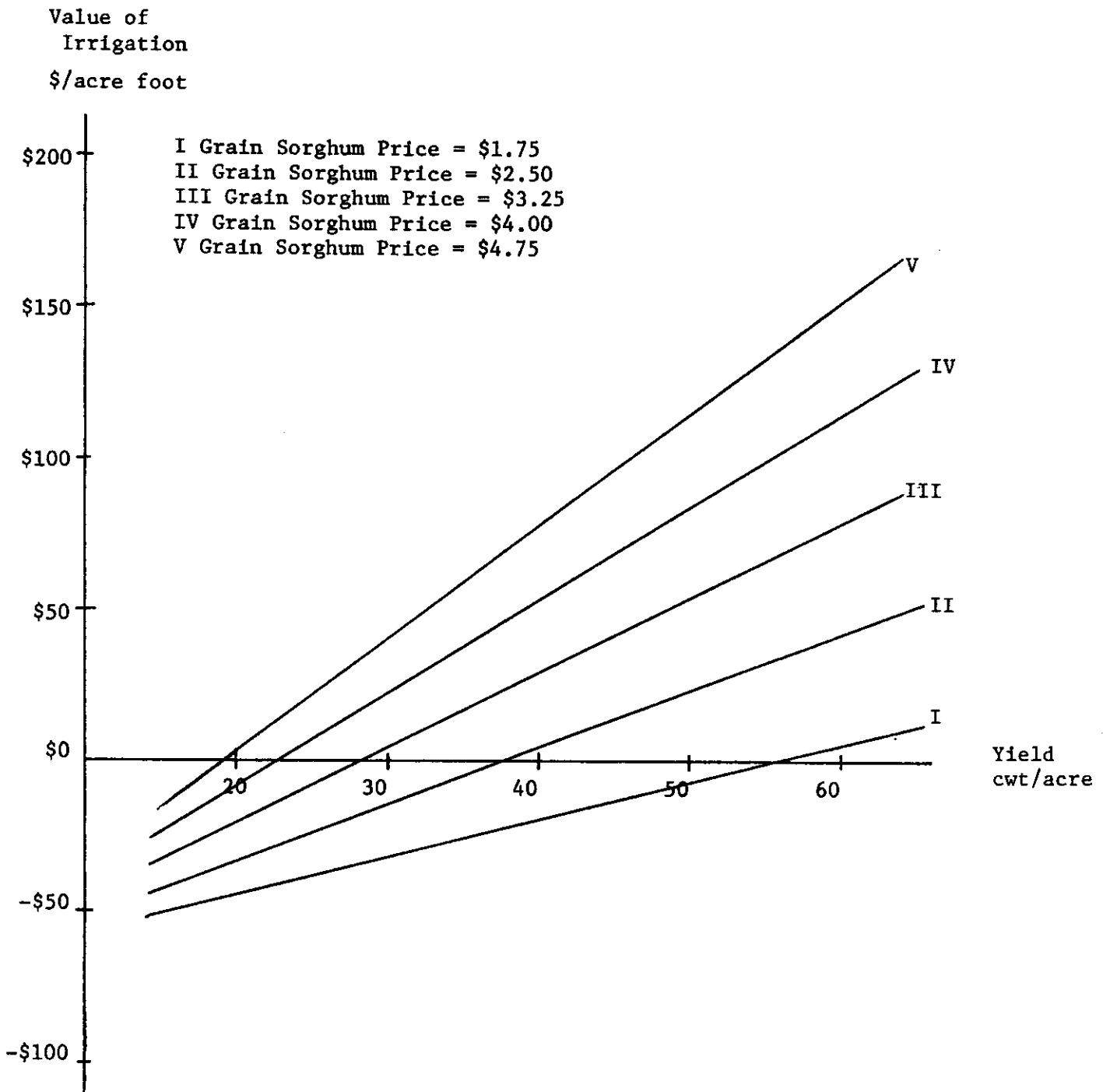


Figure Value of irrigation water applied to Grain Sorghum in Rolling Plains II for alternative Grain Sorghum prices and yields with expected 1974 costs.

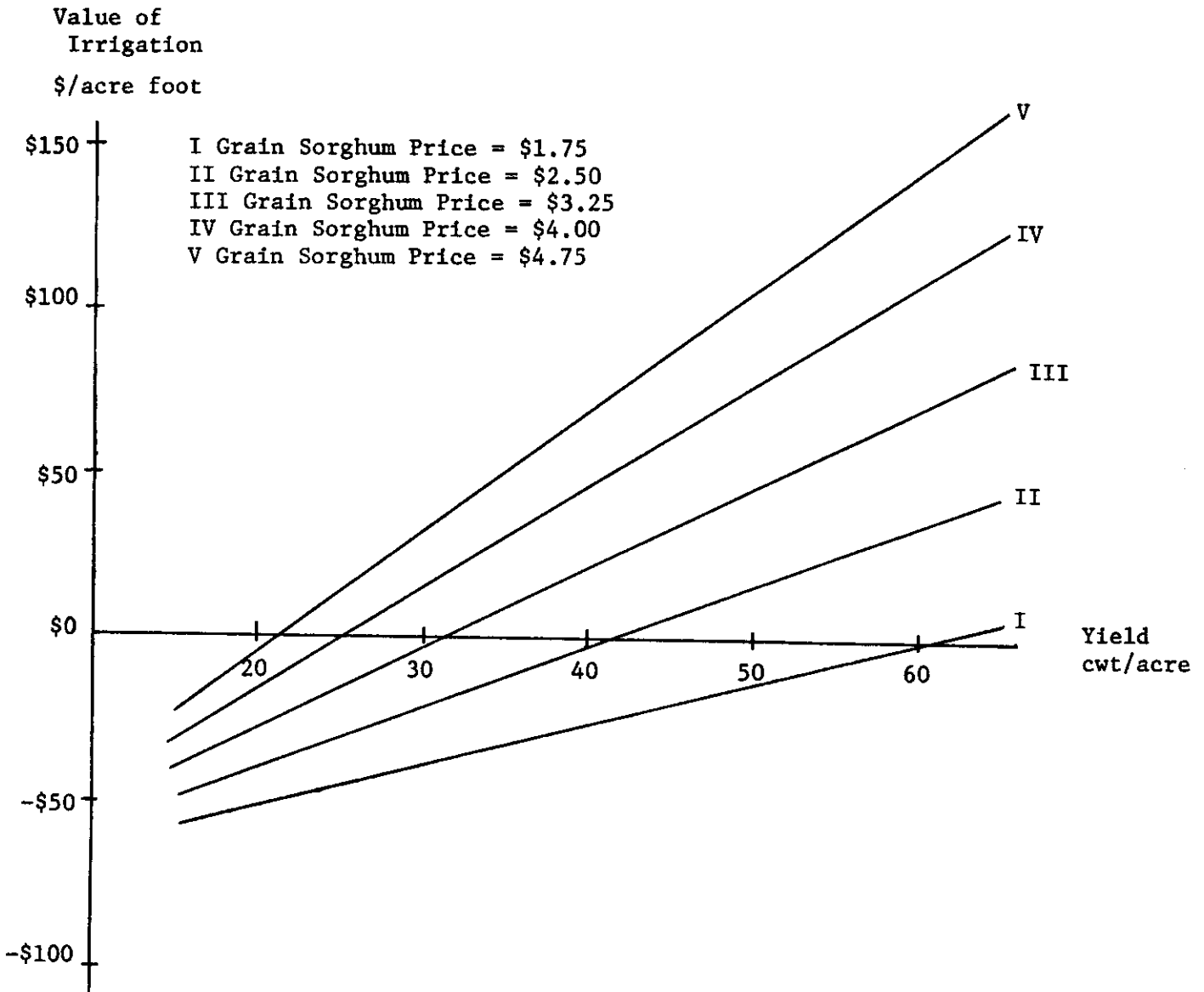


Figure Value of irrigation water applied to Grain Sorghum in Rolling Plains II for alternative prices and yields with expected 1974 costs inflated 10 percent.

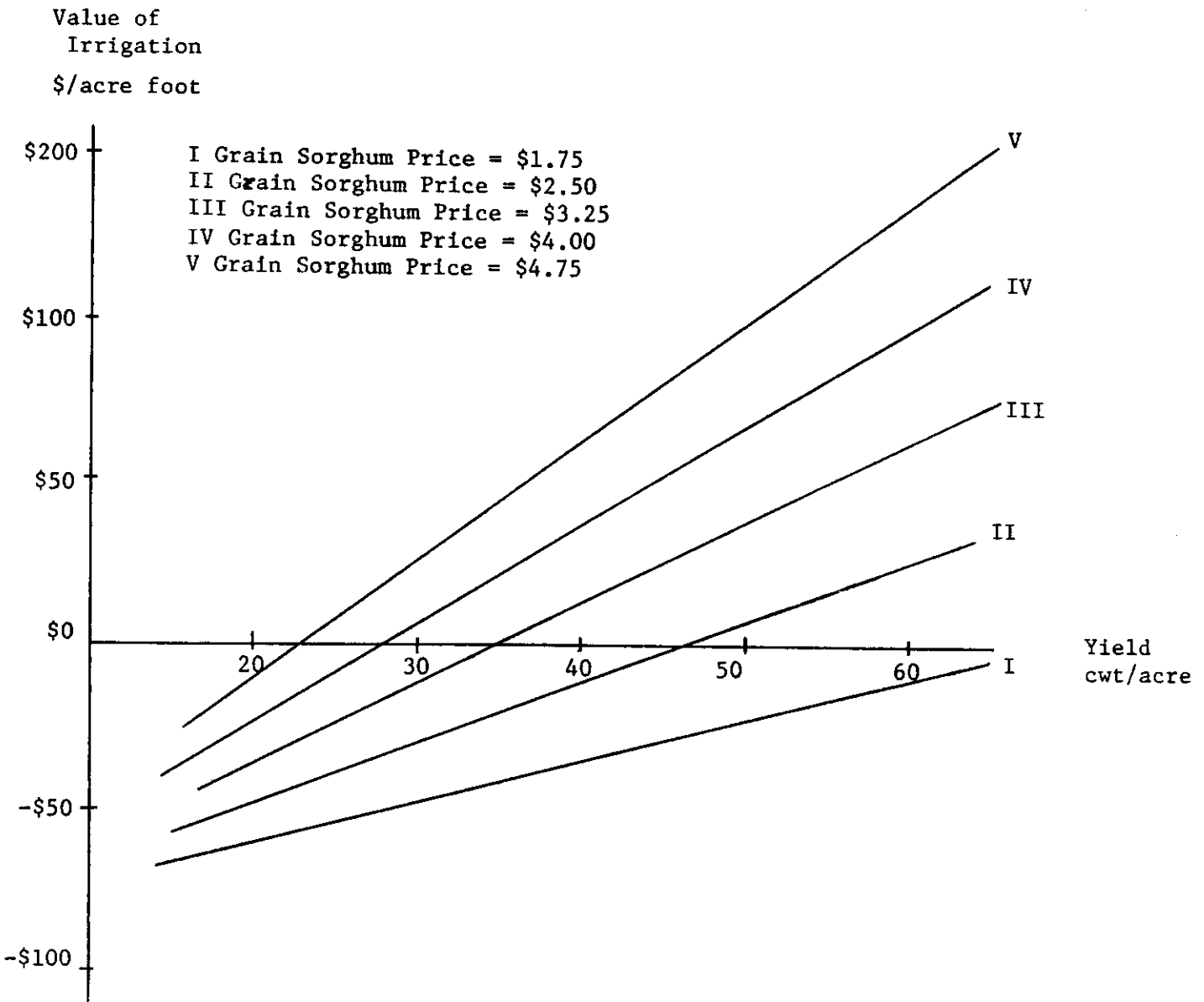


Figure Value of irrigation water applied to Grain Sorghum in Rolling Plains II for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
GUAR

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		9.0	12.0	15.0	18.0	21.0

PRODUCTION COSTS 1974	*					
PRICES	*					
3.000	*	-41.735	-31.976	-22.217	-12.458	-2.699
5.000	*	-21.133	-4.506	12.120	28.747	45.373
7.000	*	-0.530	22.964	46.458	69.952	93.446
9.000	*	20.072	50.434	80.795	111.157	141.518
11.000	*	40.675	77.904	115.133	152.361	189.590

10% COST INFLATION	*					
PRICES	*					
3.000	*	-49.161	-39.511	-29.860	-20.210	-10.559
5.000	*	-28.667	-12.186	4.296	20.778	37.260
7.000	*	-8.173	15.140	38.453	61.766	85.080
9.000	*	12.320	42.465	72.610	102.754	132.899
11.000	*	32.814	69.790	106.766	143.742	180.718

20% COST INFLATION	*					
PRICES	*					
3.000	*	-56.588	-47.046	-37.504	-27.961	-18.419
5.000	*	-36.202	-19.865	-3.528	12.810	29.147
7.000	*	-15.817	7.316	30.448	53.581	76.713
9.000	*	4.569	34.496	64.424	94.352	124.280
11.000	*	24.954	61.677	98.400	135.123	171.846

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

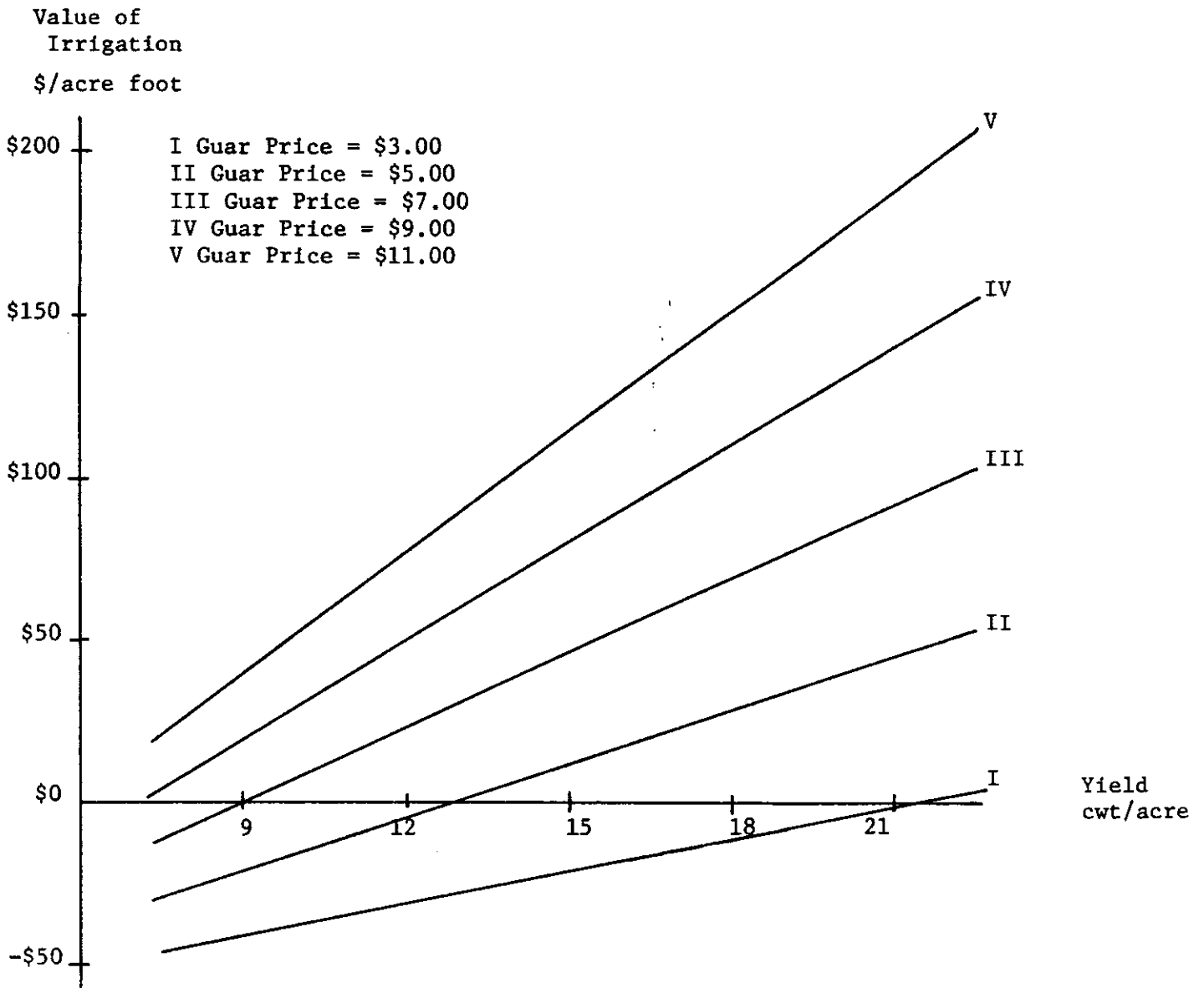


Figure Value of irrigation water applied to Guar in Rolling Plains II for alternative Guar prices and yields with expected 1974 costs.

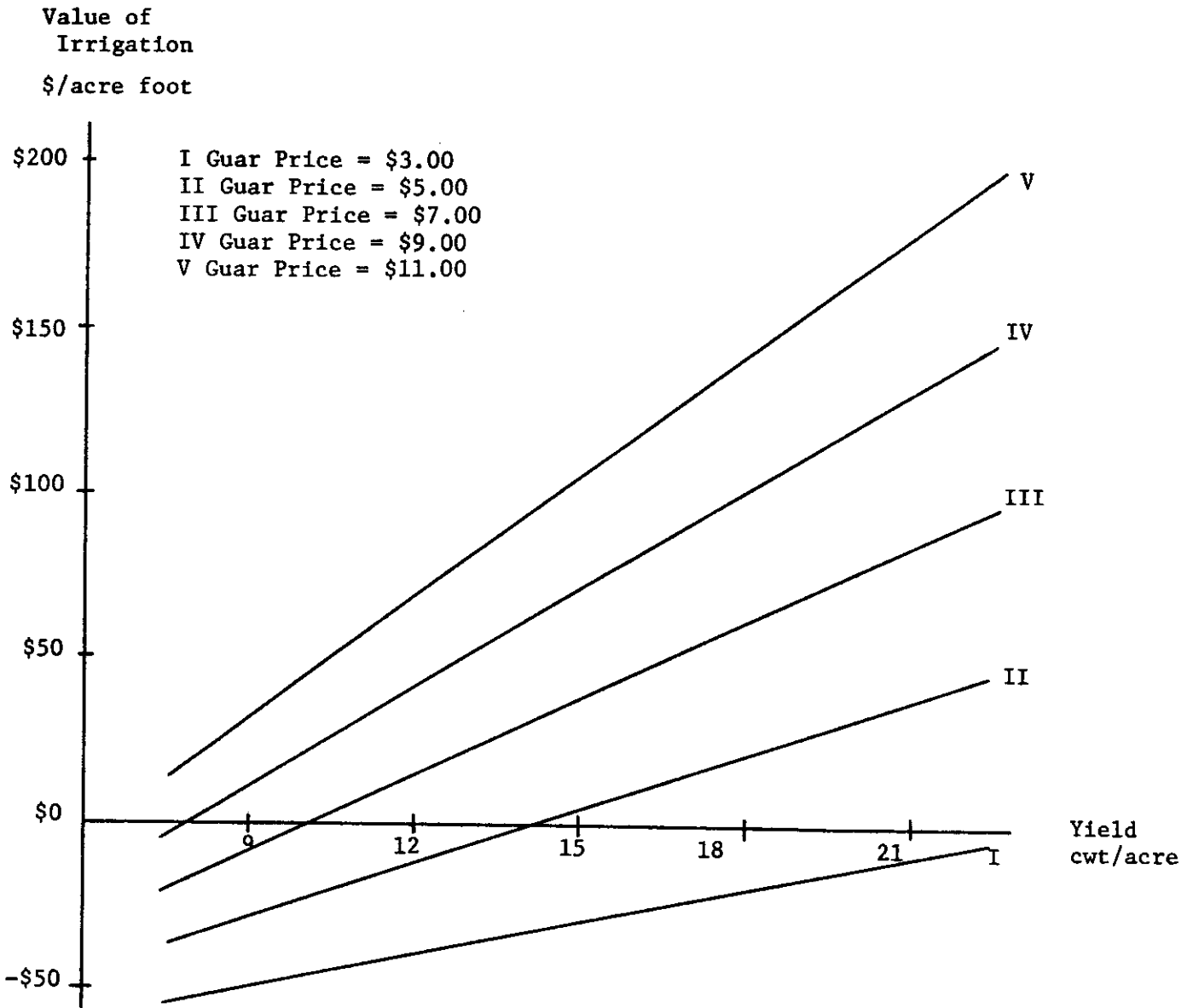


Figure Value of irrigation water applied to Guar in Rolling Plains II for alternative Guar prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

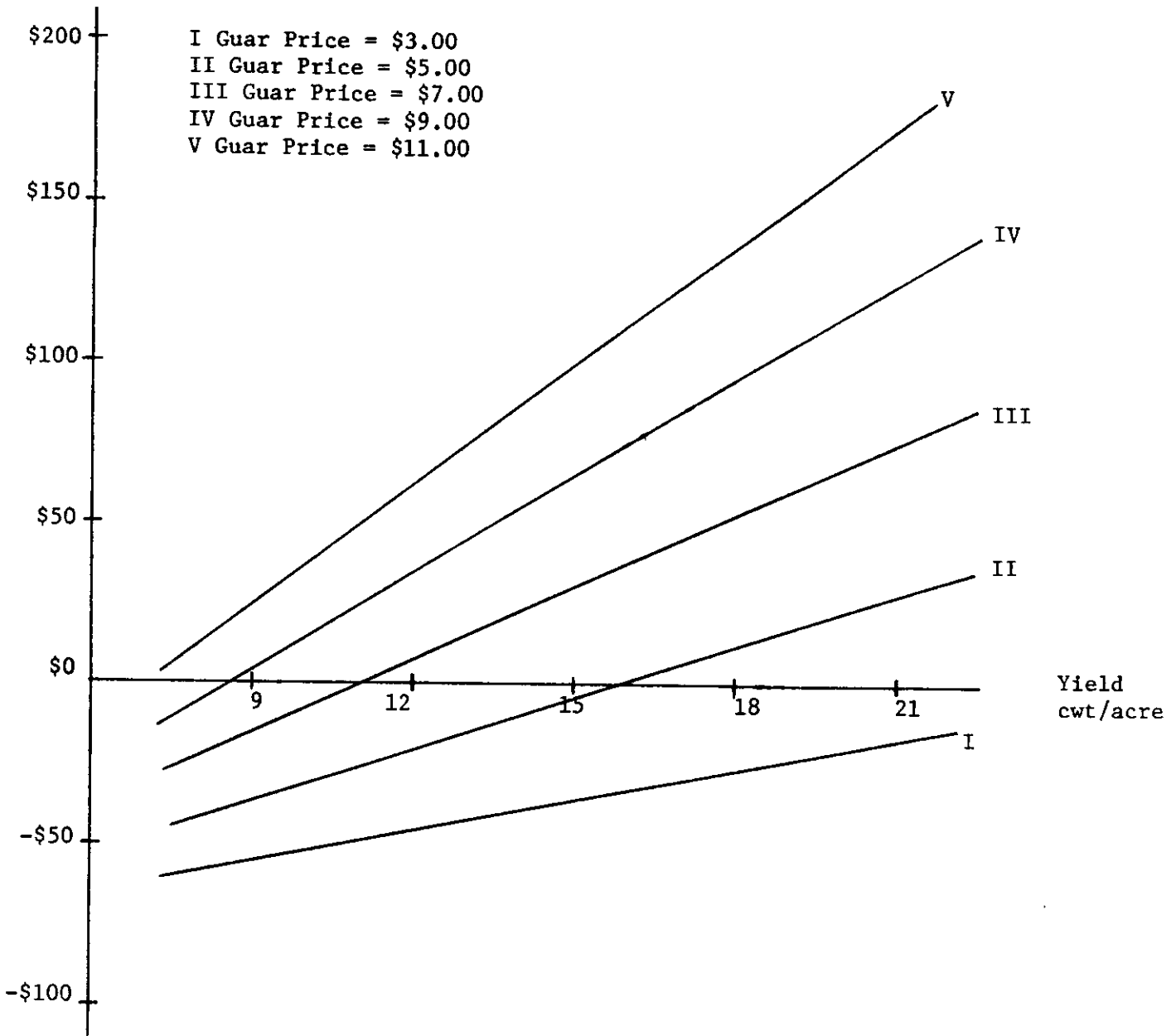


Figure Value of irrigation applied to Guar in Rolling Plains II for alternative Guar prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
HYBRID FORAGE HAY

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		2.0	4.0	6.0	8.0	10.0
PRODUCTION COSTS 1974						
PRICES	*					
20.000	*	-64.248	-59.120	-53.991	-48.863	-43.735
25.000	*	-56.128	-42.880	-29.632	-16.385	-3.137
30.000	*	-48.009	-26.641	-5.274	16.094	37.462
35.000	*	-39.889	-10.402	19.085	48.573	78.060
40.000	*	-31.769	5.838	43.444	81.051	118.658
10% COST INFLATION						
PRICES	*					
20.000	*	-74.091	-71.869	-69.647	-67.425	-65.202
25.000	*	-66.015	-55.715	-45.416	-35.117	-24.818
30.000	*	-57.938	-39.562	-21.185	-2.809	15.567
35.000	*	-49.861	-23.408	3.045	29.498	55.951
40.000	*	-41.784	-7.254	27.276	61.806	96.336
20% COST INFLATION						
PRICES	*					
20.000	*	-83.935	-84.619	-85.303	-85.986	-86.670
25.000	*	-75.901	-68.550	-61.200	-53.849	-46.499
30.000	*	-67.867	-52.482	-37.097	-21.713	-6.328
35.000	*	-59.832	-36.414	-12.995	10.424	33.843
40.000	*	-51.798	-20.345	11.108	42.561	74.014

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

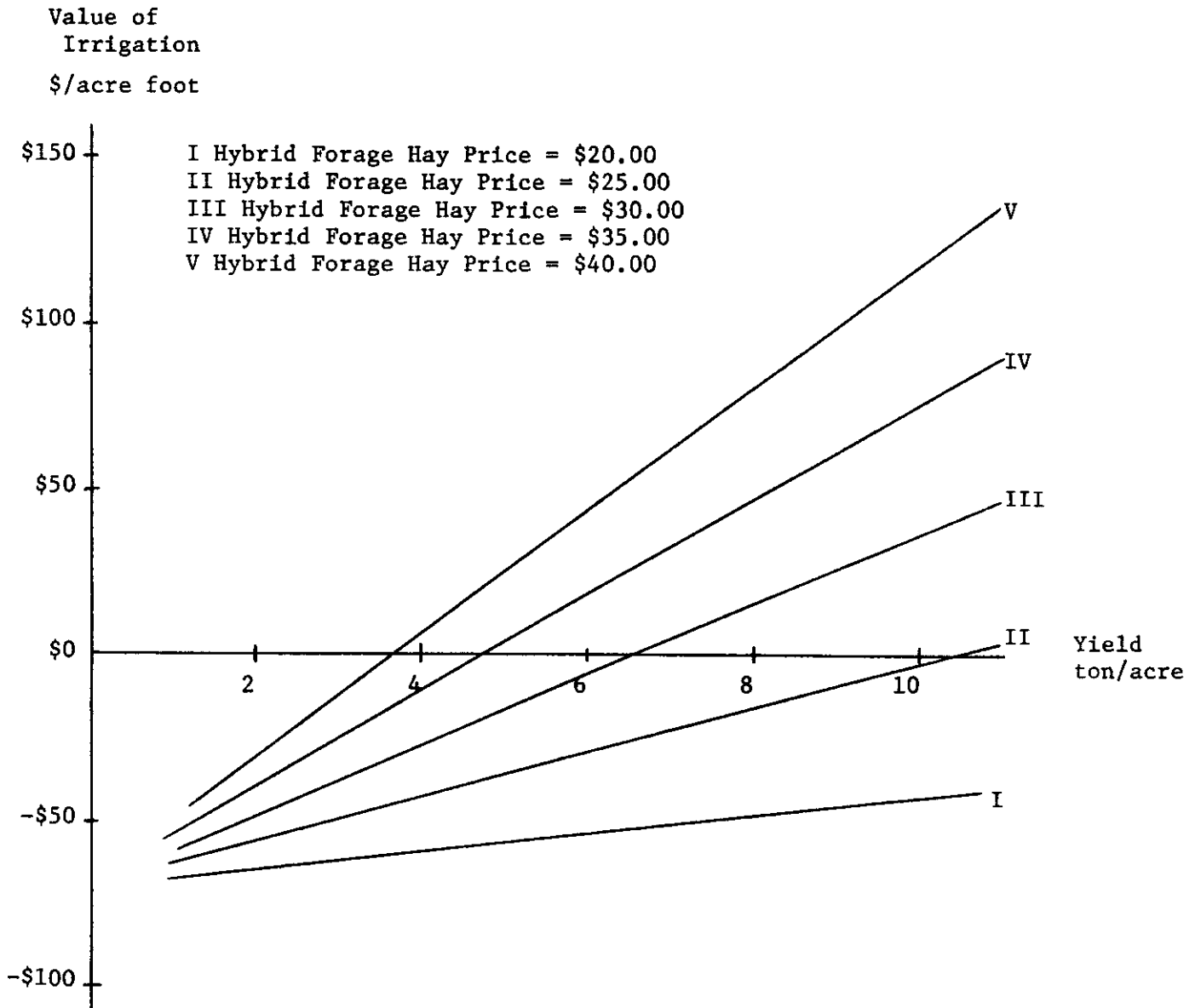


Figure Value of irrigation water applied to Hybrid Forage Hay in Rolling Plains II for alternative Hybrid Forage Hay prices and yields with expected 1974 costs.

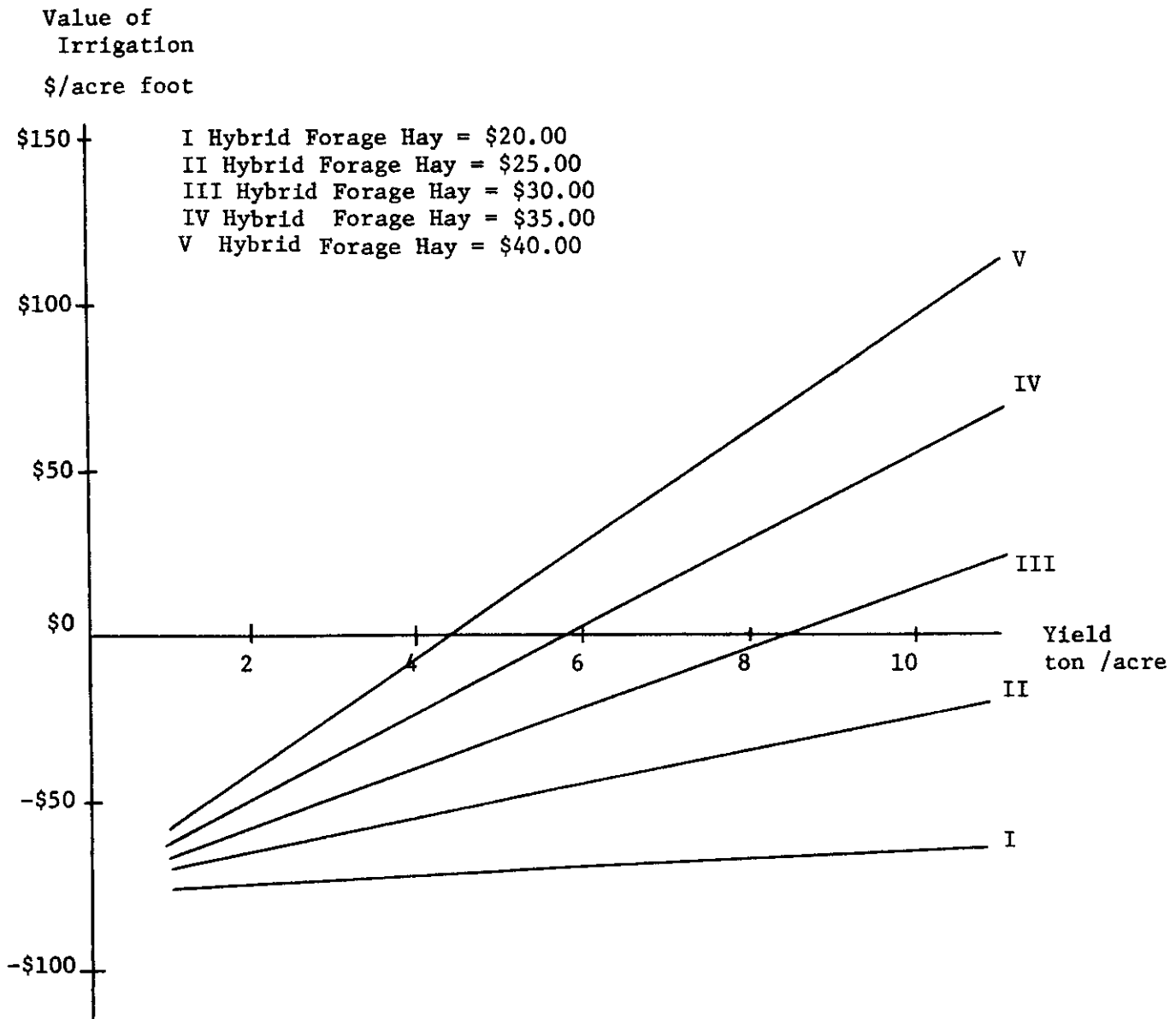


Figure Value of irrigation water applied to Hybrid Forage Hay in Rolling Plains II for alternative Hybrid Forage Hay prices and yields with expected 1974 costs inflated 10 percent.

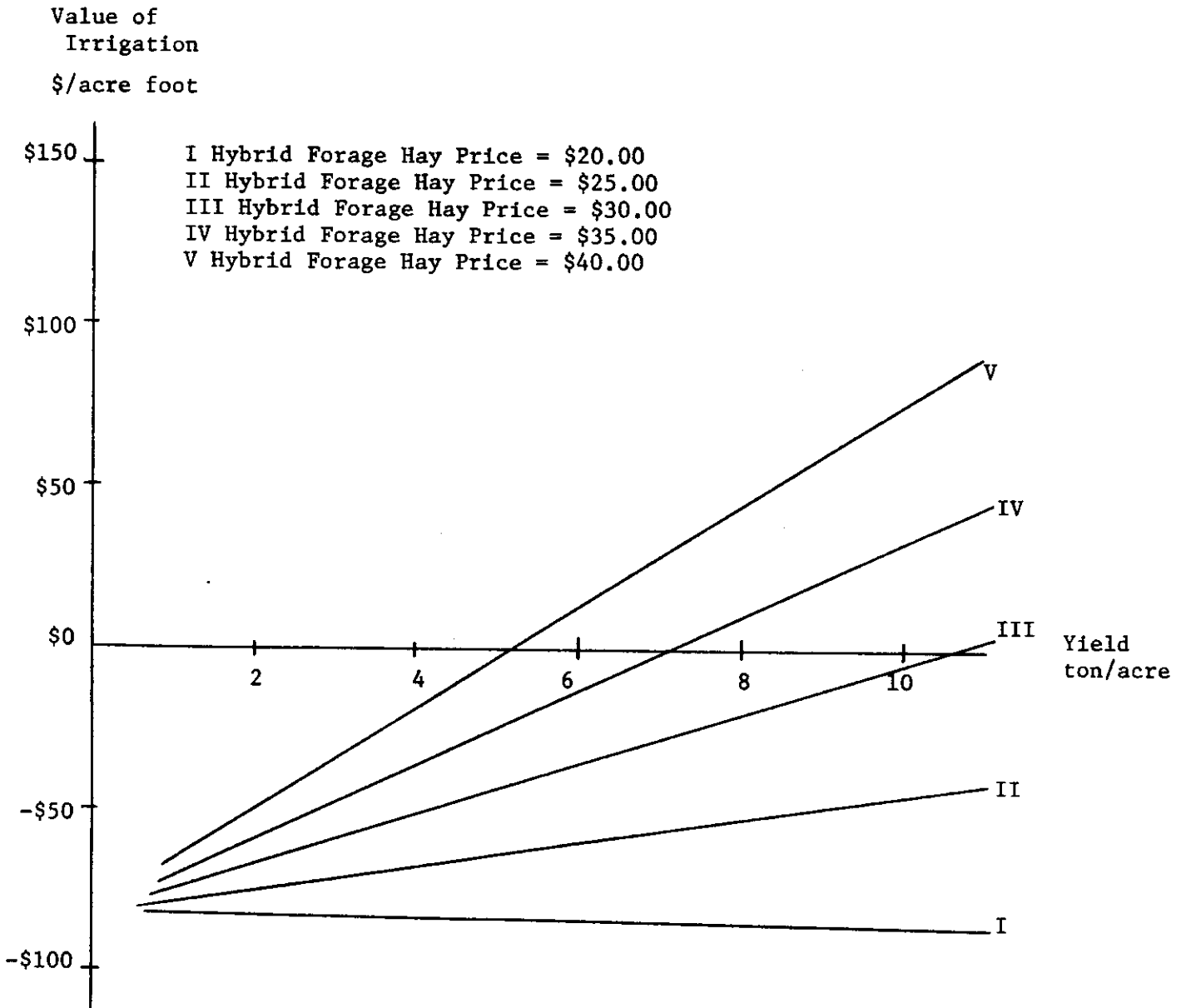


Figure Value of irrigation water applied to Hybrid Forage Hay in Rolling Plains II for alternative Hybrid Forage Hay with expected 1974 costs inflated 20 percent.

163
RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
IRISH POTATOES

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		50.0	100.0	150.0	200.0	250.0
PRODUCTION COSTS 1974						
PRICES	*					
4.000	*	-31.555	14.382	60.318	106.255	152.191
5.000	*	-14.770	47.951	110.671	173.392	236.113
6.000	*	2.014	81.520	161.025	240.530	320.035
7.000	*	18.799	115.088	211.378	307.668	403.958
8.000	*	35.583	148.657	261.731	374.806	487.880
10% COST INFLATION						
PRICES	*					
4.000	*	-41.777	1.686	45.148	88.611	132.074
5.000	*	-25.081	35.078	95.237	155.396	215.555
6.000	*	-8.385	68.470	145.325	222.180	299.035
7.000	*	8.311	101.862	195.414	288.965	382.516
8.000	*	25.007	135.255	245.502	355.749	465.997
20% COST INFLATION						
PRICES	*					
4.000	*	-52.000	-11.010	29.979	70.968	111.958
5.000	*	-35.392	22.205	79.802	137.399	194.997
6.000	*	-18.784	55.421	129.626	203.831	278.035
7.000	*	-2.177	88.636	179.449	270.261	361.074
8.000	*	14.431	121.852	229.272	336.693	444.113

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

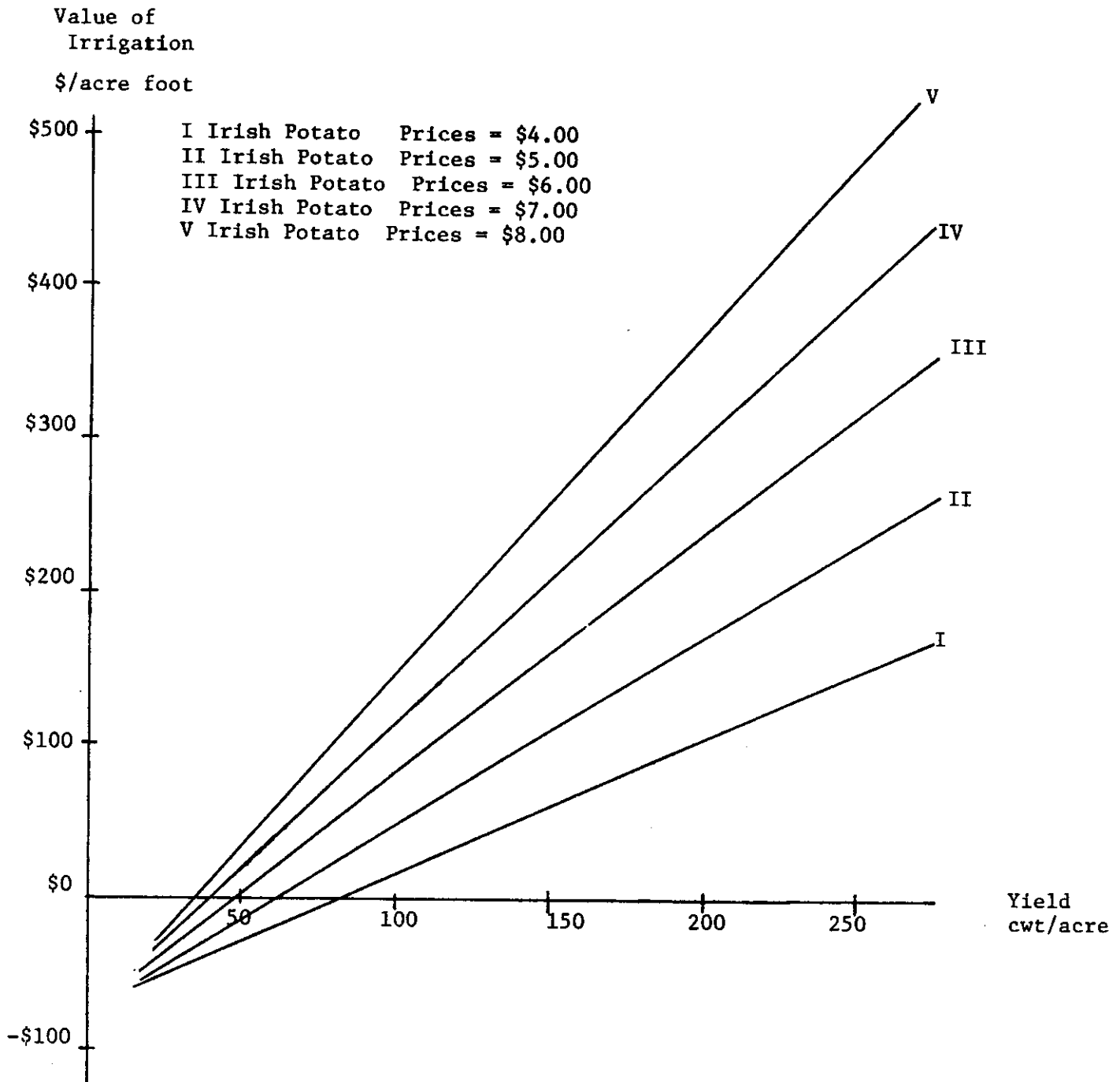


Figure Value of irrigation water applied to Irish Potatoes in Rolling Plains II for alternative Irish Potatoe prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

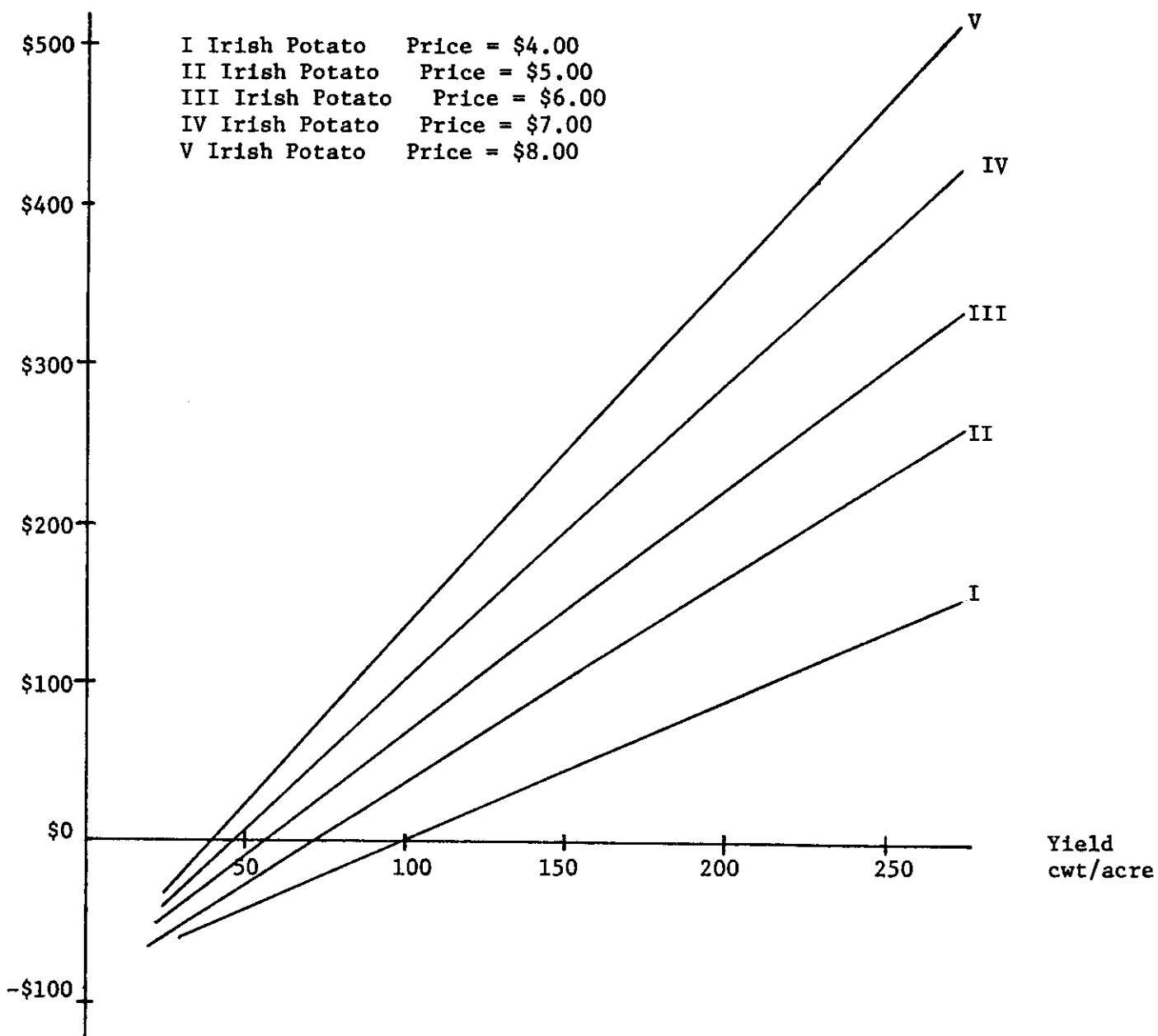


Figure Value of irrigation water applied to Irish Potatoes in Rolling Plains II for alternative Irish Potatoe prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

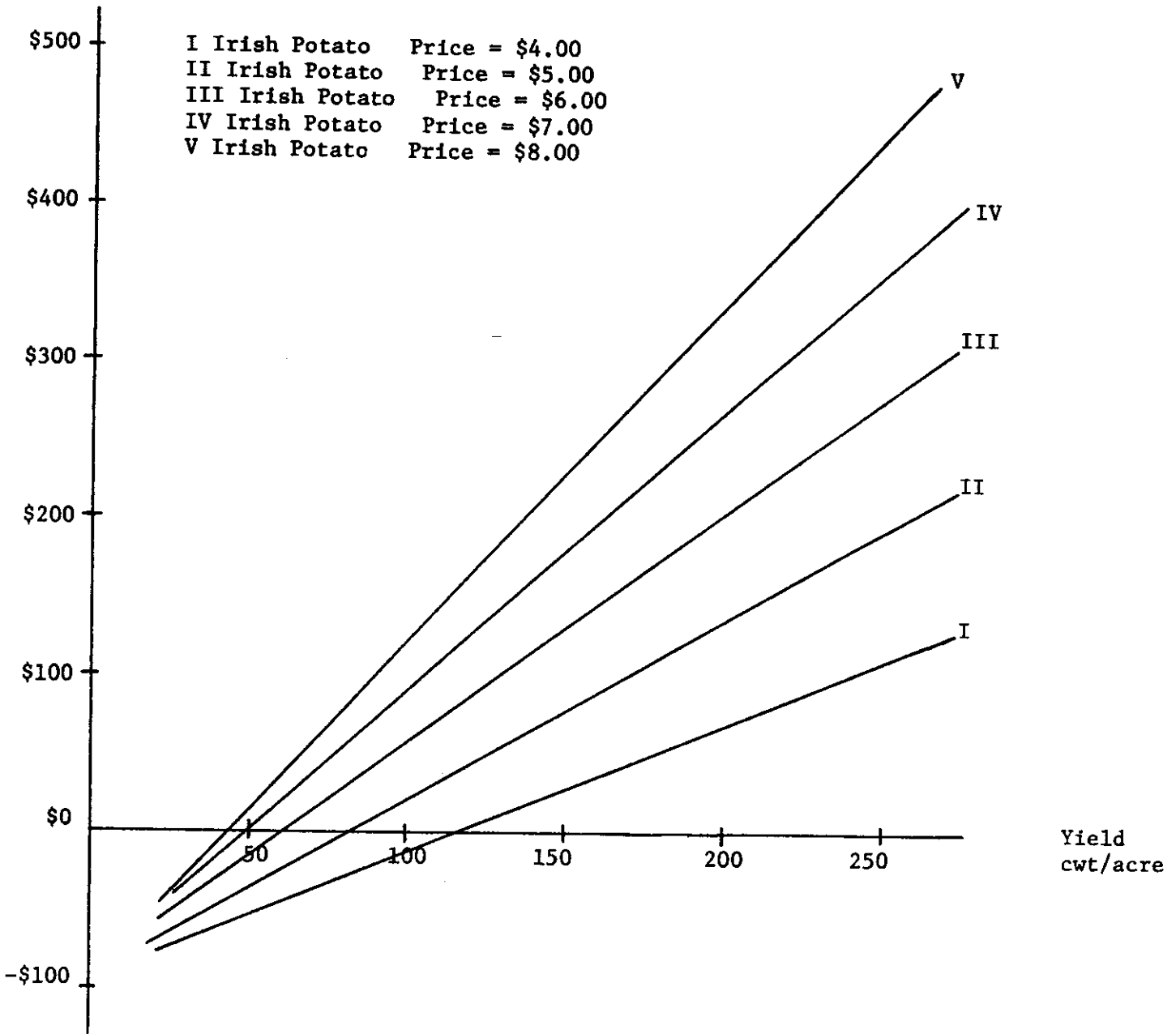


Figure Value of irrigation water applied to Irish Potatoes in Rolling Plains II for alternative Irish Potatoe prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
SORGHUM SILAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		13.0	17.0	21.0	25.0	29.0
PRODUCTION COSTS 1974						
PRICES	*					
6.000	*	-56.043	-51.940	-47.838	-43.735	-39.632
7.000	*	-45.487	-38.137	-30.786	-23.436	-16.085
8.000	*	-34.932	-24.333	-13.735	-3.137	7.462
9.000	*	-24.376	-10.530	3.316	17.162	31.009
10.000	*	-13.821	3.274	20.368	37.462	54.556
10% COST INFLATION						
PRICES	*					
6.000	*	-68.314	-65.852	-63.391	-60.929	-58.468
7.000	*	-57.814	-52.121	-46.429	-40.737	-35.044
8.000	*	-47.314	-38.391	-29.467	-20.544	-11.621
9.000	*	-36.814	-24.660	-12.506	-0.352	11.802
10.000	*	-26.314	-10.929	4.456	19.840	35.225
20% COST INFLATION						
PRICES	*					
6.000	*	-80.585	-79.764	-78.944	-78.123	-77.302
7.000	*	-70.140	-66.106	-62.072	-58.038	-54.003
8.000	*	-59.696	-52.448	-45.200	-37.952	-30.704
9.000	*	-49.251	-38.790	-28.328	-17.867	-7.405
10.000	*	-38.807	-25.132	-11.456	2.219	15.894

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

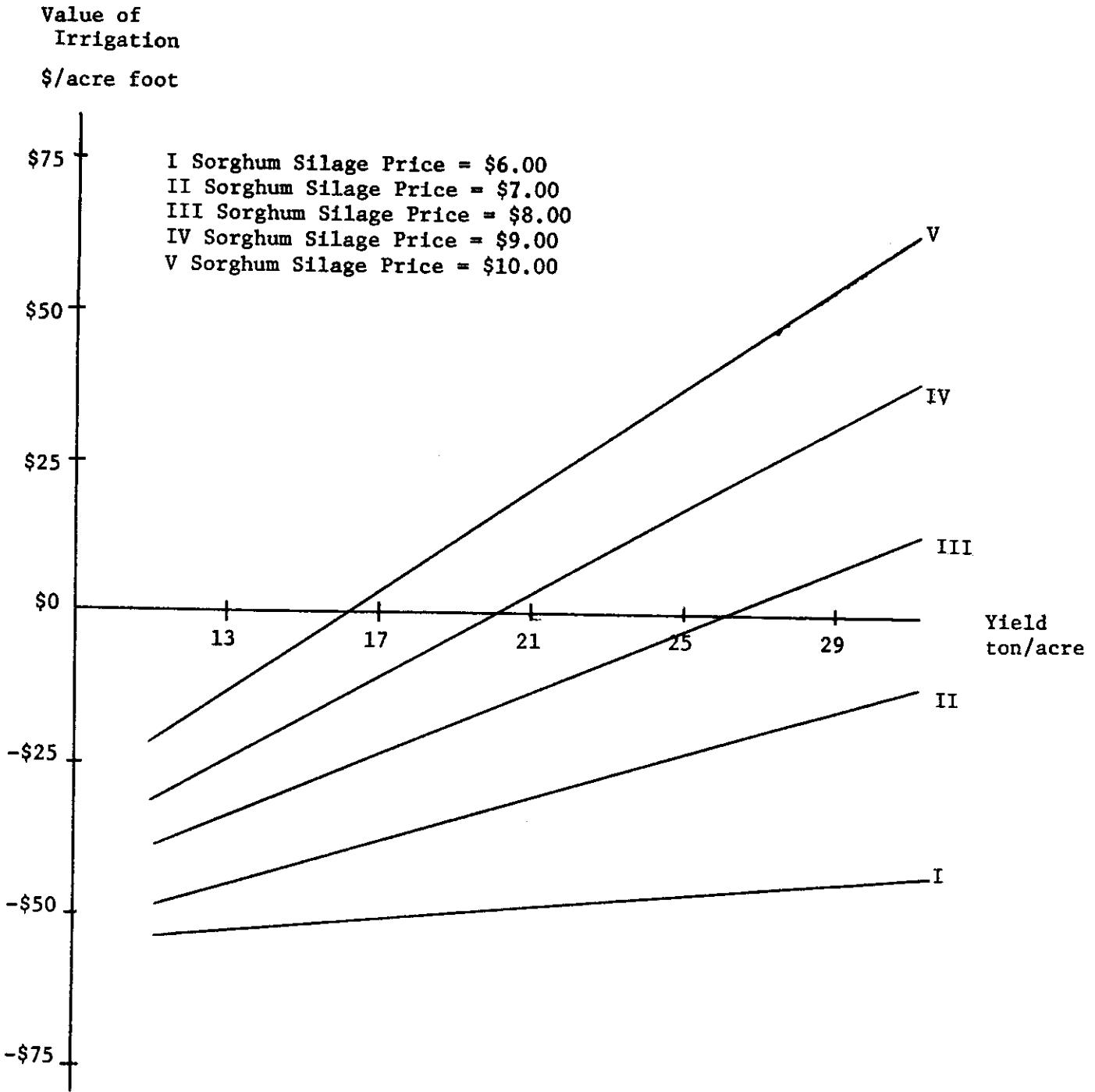


Figure Value of irrigation water applied to Sorghum Silage in Rolling Plains II for alternative Sorghum Silage prices and yields with expected 1974 costs.

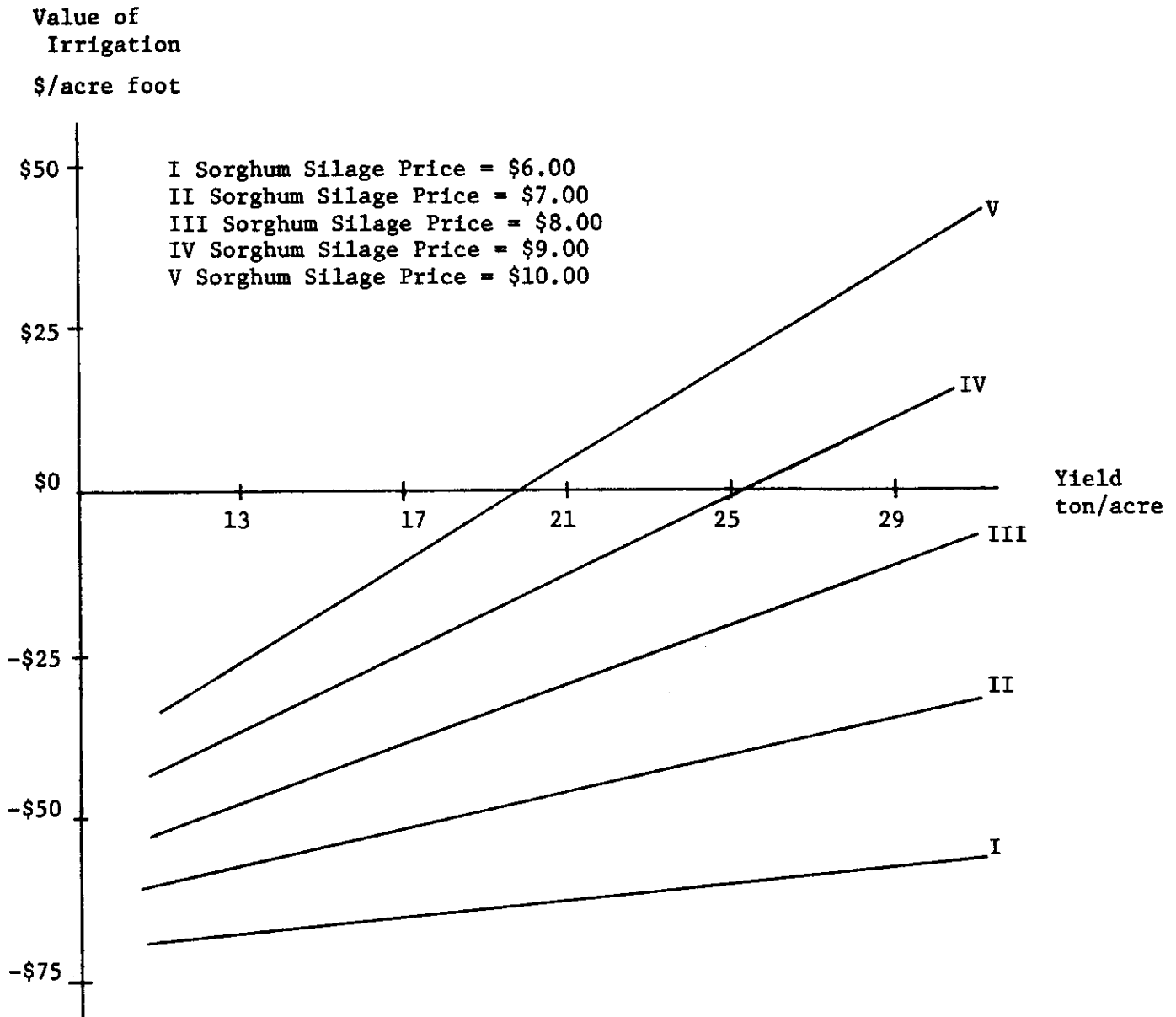


Figure Value of irrigation water applied to Sorghum Silage in Rolling Plains II for alternative Sorghum Silage prices and yields with expected 1974 costs inflated 10 percent.

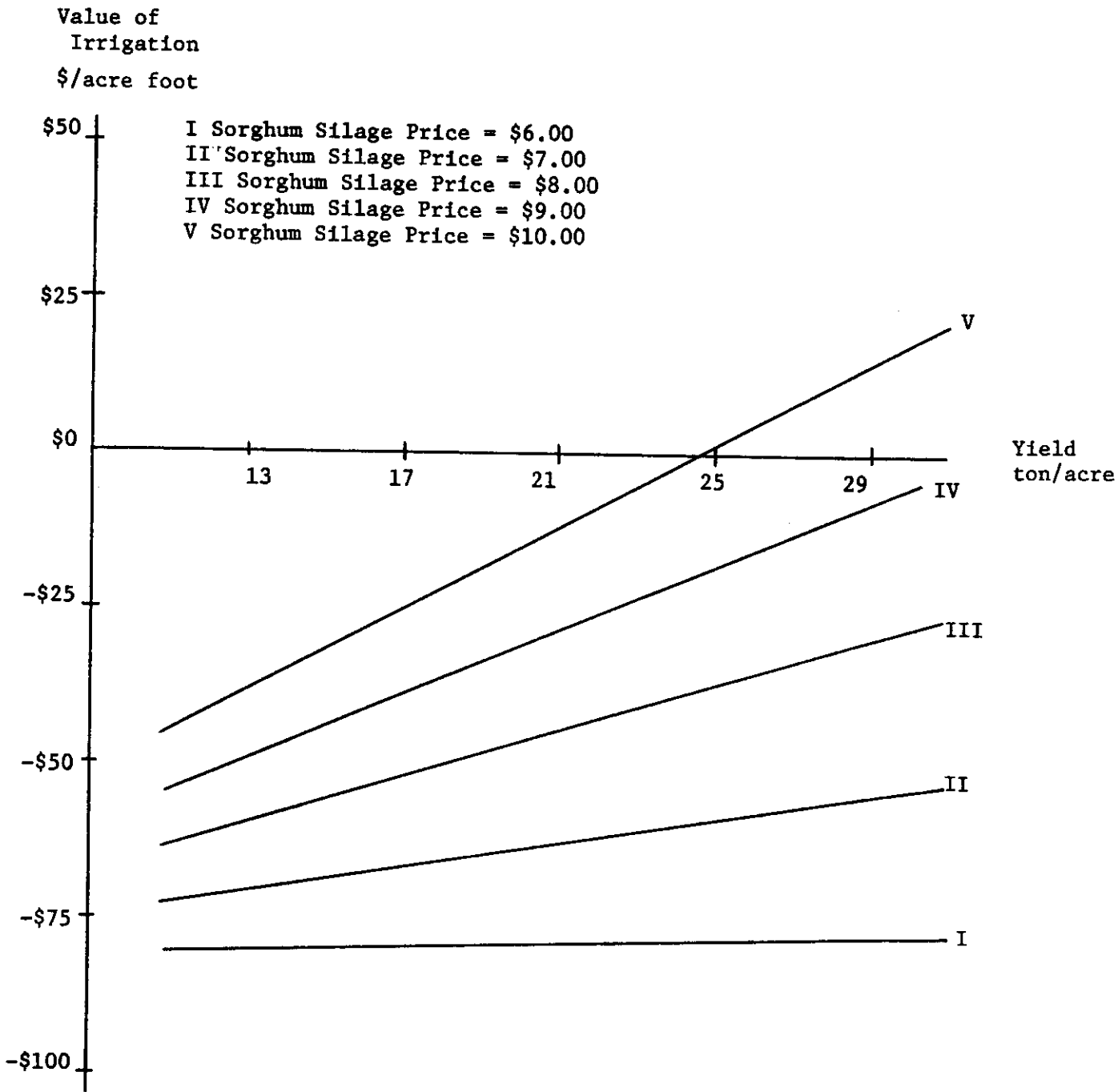


Figure Value of irrigation water applied to Sorghum Silage in Rolling Plains II for alternative Sorghum Silage prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

ROLLING PLAINS II
WHEAT

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		25.0	35.0	45.0	55.0	65.0

PRODUCTION COSTS 1974	*					
PRICES	*					
1.000	*	-44.940	-29.556	-14.171	1.214	16.598
2.000	*	-24.641	-1.137	22.367	45.872	69.376
3.000	*	-4.342	27.282	58.906	90.530	122.154
4.000	*	15.957	55.701	95.444	135.188	174.931
5.000	*	36.256	84.120	131.983	179.846	227.709

10% COST INFLATION	*					
PRICES	*					
1.000	*	-53.708	-38.494	-23.280	-8.067	7.147
2.000	*	-33.515	-10.225	13.066	36.356	59.647
3.000	*	-13.323	18.044	49.412	80.779	112.147
4.000	*	6.869	46.314	85.758	125.202	164.647
5.000	*	27.062	74.583	122.104	169.625	217.147

20% COST INFLATION	*					
PRICES	*					
1.000	*	-62.475	-47.432	-32.390	-17.347	-2.304
2.000	*	-42.390	-19.313	3.764	26.841	49.918
3.000	*	-22.304	8.807	39.918	71.029	102.140
4.000	*	-2.219	36.926	76.072	115.217	154.362
5.000	*	17.867	65.046	112.225	159.405	206.584

A DRYLAND RETURN OF 12.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

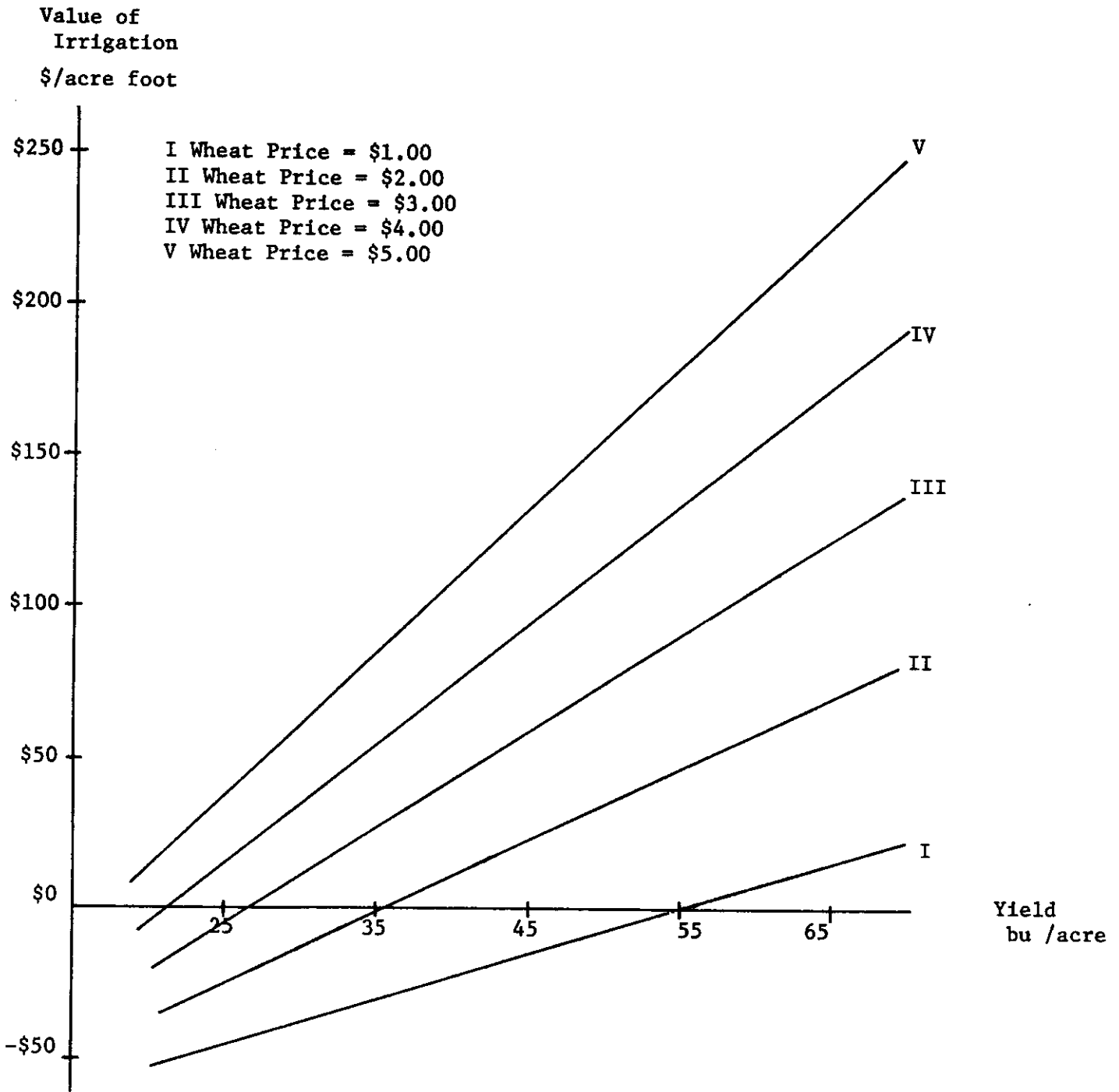


Figure Value of irrigation water applied to Wheat in Rolling Plains II for alternative Wheat prices and yields with expected 1974 costs.

Value of
Irrigation
\$/acre foot

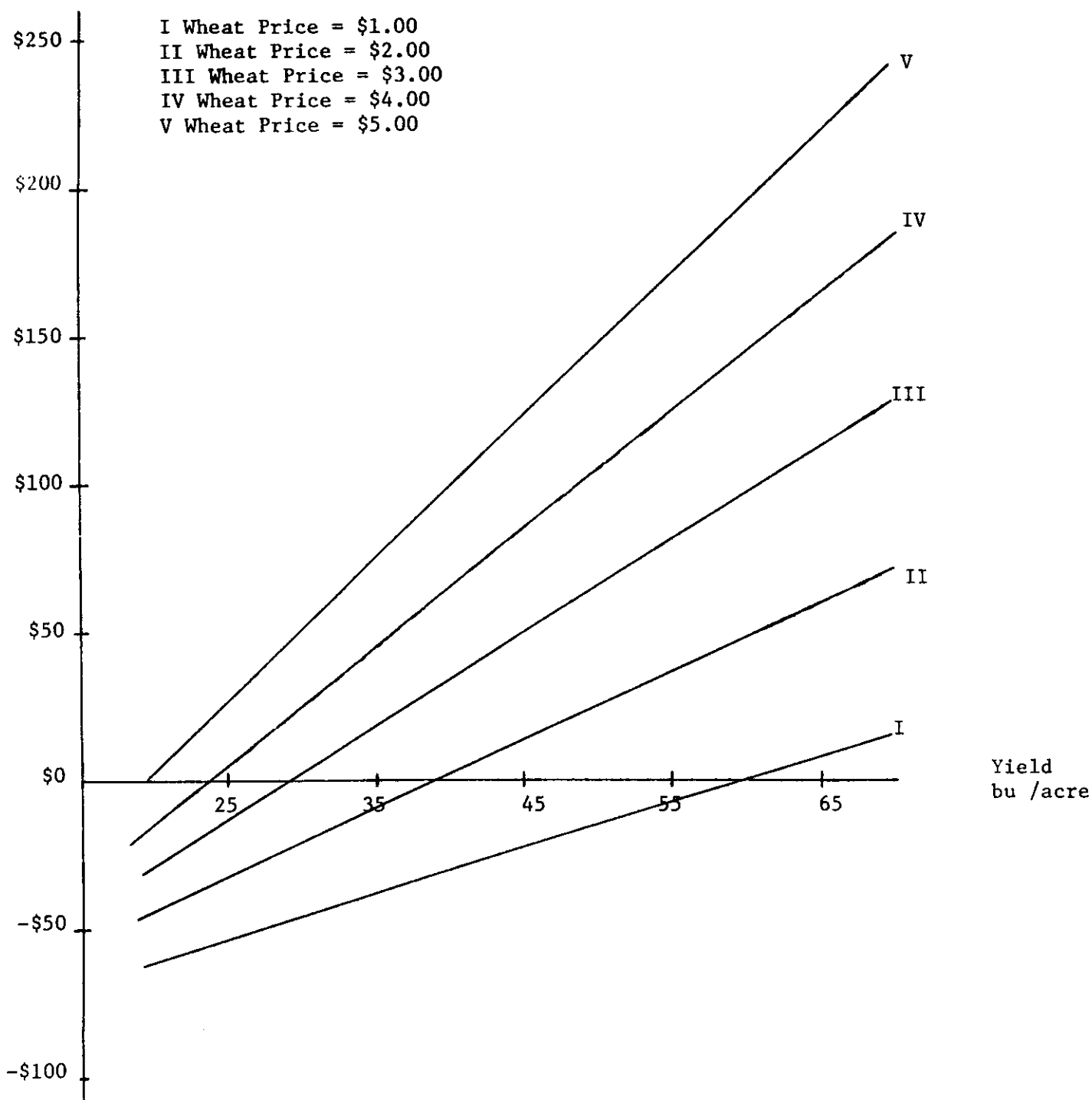


Figure Value of irrigation water applied to Wheat in Rolling Plains II for alternative Wheat prices and yields with expected 1974 costs inflated 10 percent.

Value of
Irrigation
\$/acre foot

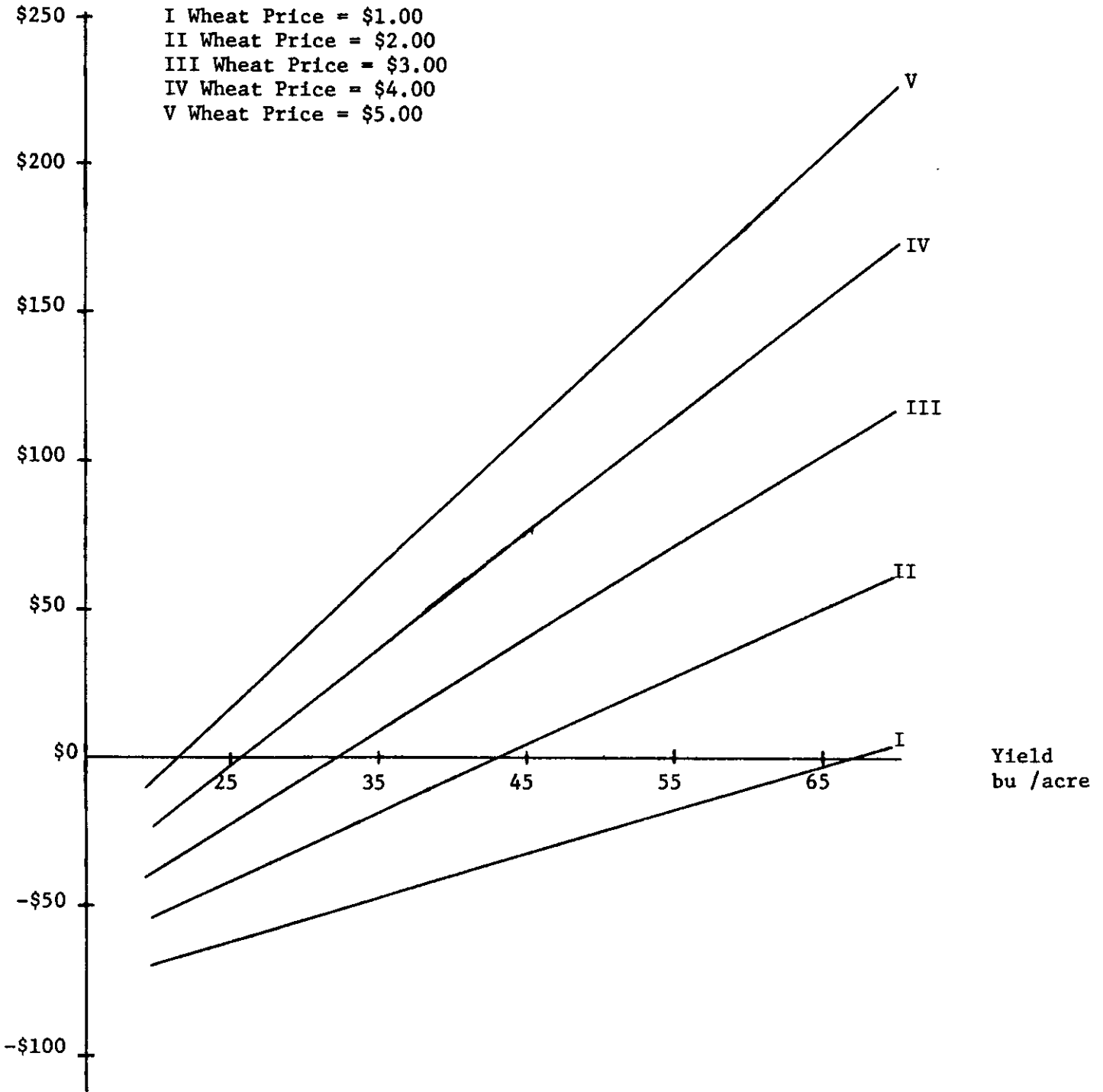


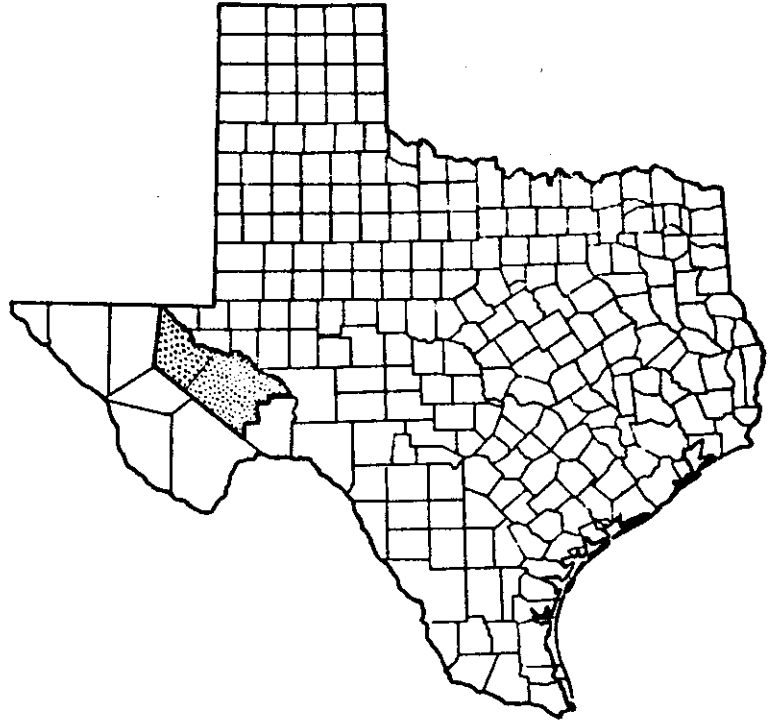
Figure Value of irrigation water applied to Wheat in Rolling Plains II for alternative Wheat prices and yields with expected 1974 costs inflated 20 percent.

Texas Trans-Pecos

This area is characterized by limited rainfall, large livestock ranches, and several intensive irrigation projects. Pumping depths are relatively great, requiring high value crops, or high yielding crops, to repay irrigation costs.

Alfalfa, cotton, silage, small grains and vegetables are typical crops. Grain sorghum is limited by the banks gross mite and yields fail to make this an attractive alternative.

A land charge of \$21.00 per acre was assessed for this region. The alternative yields per acre and prices used in the analysis are presented in the following table.



Crop	Unit	Yields					Prices				
		2	4	6	8	10	10.00	20.00	30.00	40.00	50.00
Alfalfa	ton	2	4	6	8	10	10.00	20.00	30.00	40.00	50.00
Barley	cwt	10	20	30	40	50	2.00	3.00	4.00	5.00	6.00
Cantaloupe	crate	50	75	100	125	150	1.00	3.00	5.00	7.00	9.00
Cotton, Pima	lbs	300	375	450	525	600	.40	.60	.80	1.00	1.20
Cotton, Upland	lbs	450	575	700	825	950	.20	.30	.40	.50	.60
Forage sorghum silage	ton	10	20	30	40	50	6.00	8.00	10.00	12.00	14.00
Grain sorghum	cwt	25	30	35	40	45	2.00	2.50	3.00	3.50	4.00
Wheat	bu	22	32	42	52	62	1.50	2.50	3.50	4.50	5.50

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
ALFALFA

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		2.0	4.0	6.0	8.0	10.0
PRODUCTION COSTS 1974	*					
PRICES	*					
10.000	*	-57.267	-63.242	-69.217	-75.192	-81.167
20.000	*	-52.517	-53.742	-54.967	-56.192	-57.417
30.000	*	-47.767	-44.242	-40.717	-37.192	-33.667
40.000	*	-43.017	-34.742	-26.467	-18.192	-9.917
50.000	*	-38.267	-25.242	-12.217	0.808	13.833
10% COST INFLATION	*					
PRICES	*					
10.000	*	-63.494	-70.567	-77.639	-84.712	-91.784
20.000	*	-58.769	-61.117	-63.464	-65.812	-68.159
30.000	*	-54.044	-51.667	-49.289	-46.912	-44.534
40.000	*	-49.319	-42.217	-35.114	-28.012	-20.909
50.000	*	-44.594	-32.767	-20.939	-9.112	2.716
20% COST INFLATION	*					
PRICES	*					
10.000	*	-69.721	-77.891	-86.061	-94.231	-102.401
20.000	*	-65.021	-68.491	-71.961	-75.431	-78.901
30.000	*	-60.321	-59.091	-57.861	-56.631	-55.401
40.000	*	-55.621	-49.691	-43.761	-37.831	-31.901
50.000	*	-50.921	-40.291	-29.661	-19.031	-8.401

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

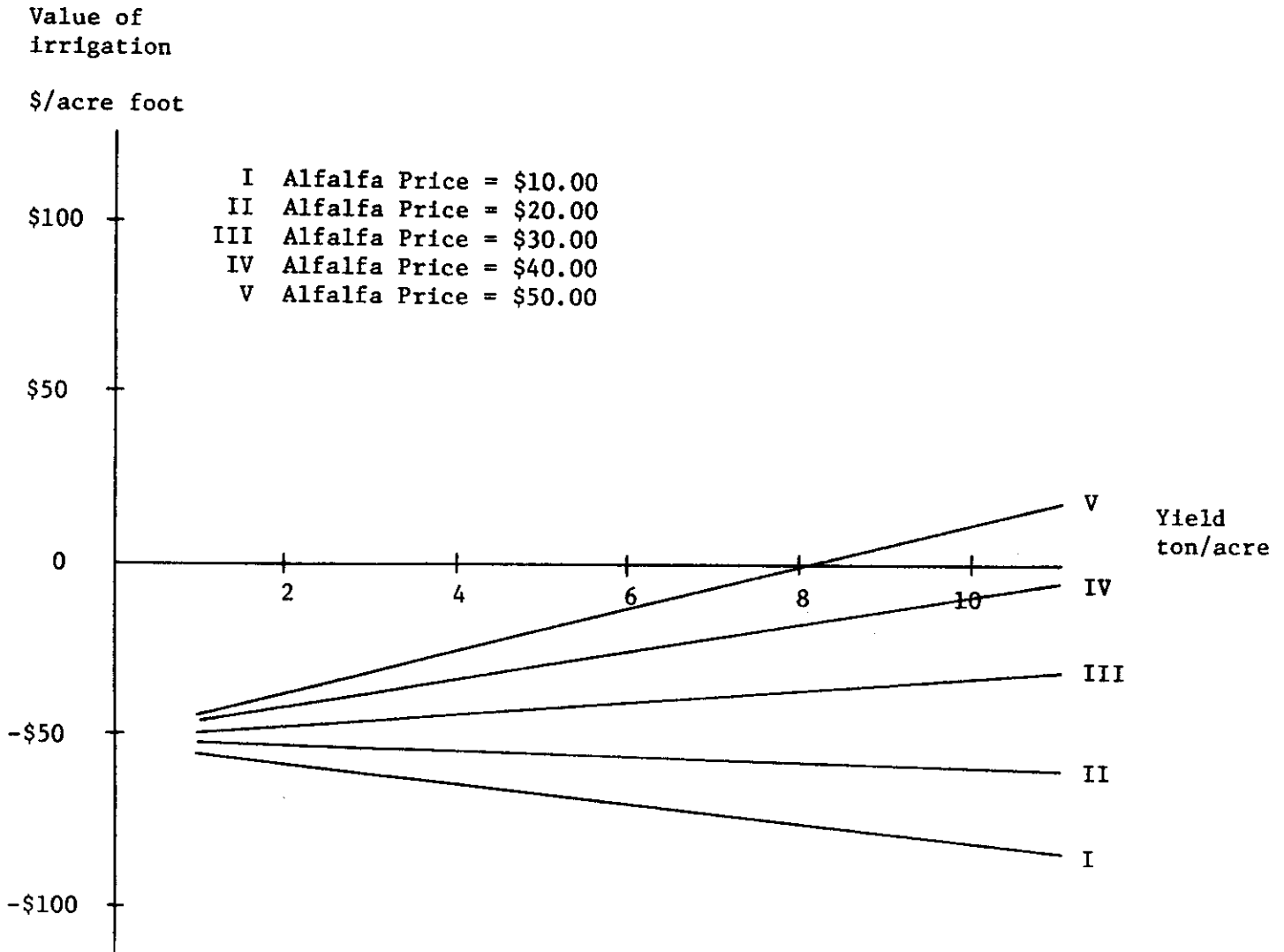


Figure Value of irrigation water applied to Alfalfa in Trans Pecos for alternative Alfalfa prices and yields with expected 1974 costs.

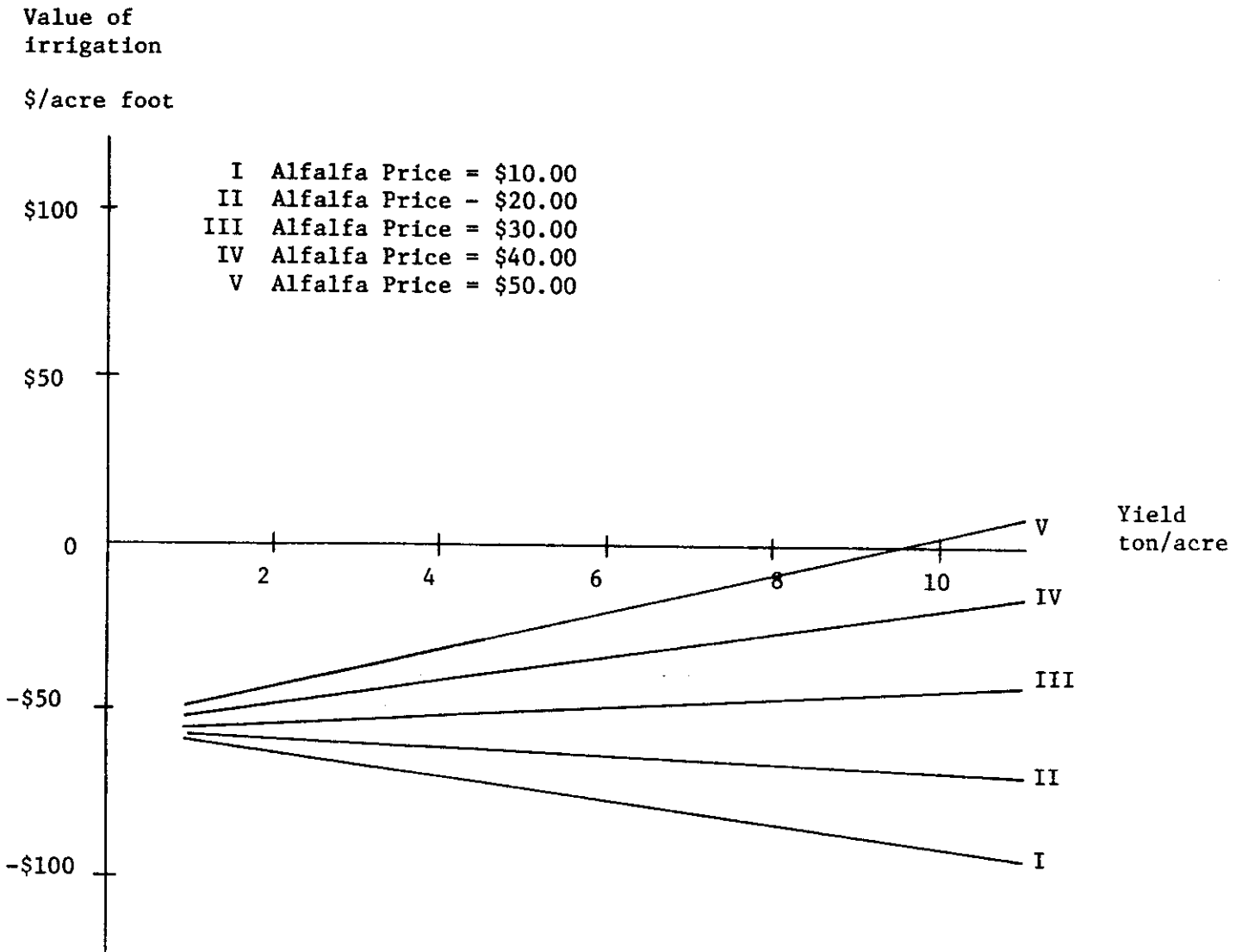


Figure Value of irrigation water applied to Alfalfa in Trans Pecos for alternative Alfalfa prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation

\$/acre foot

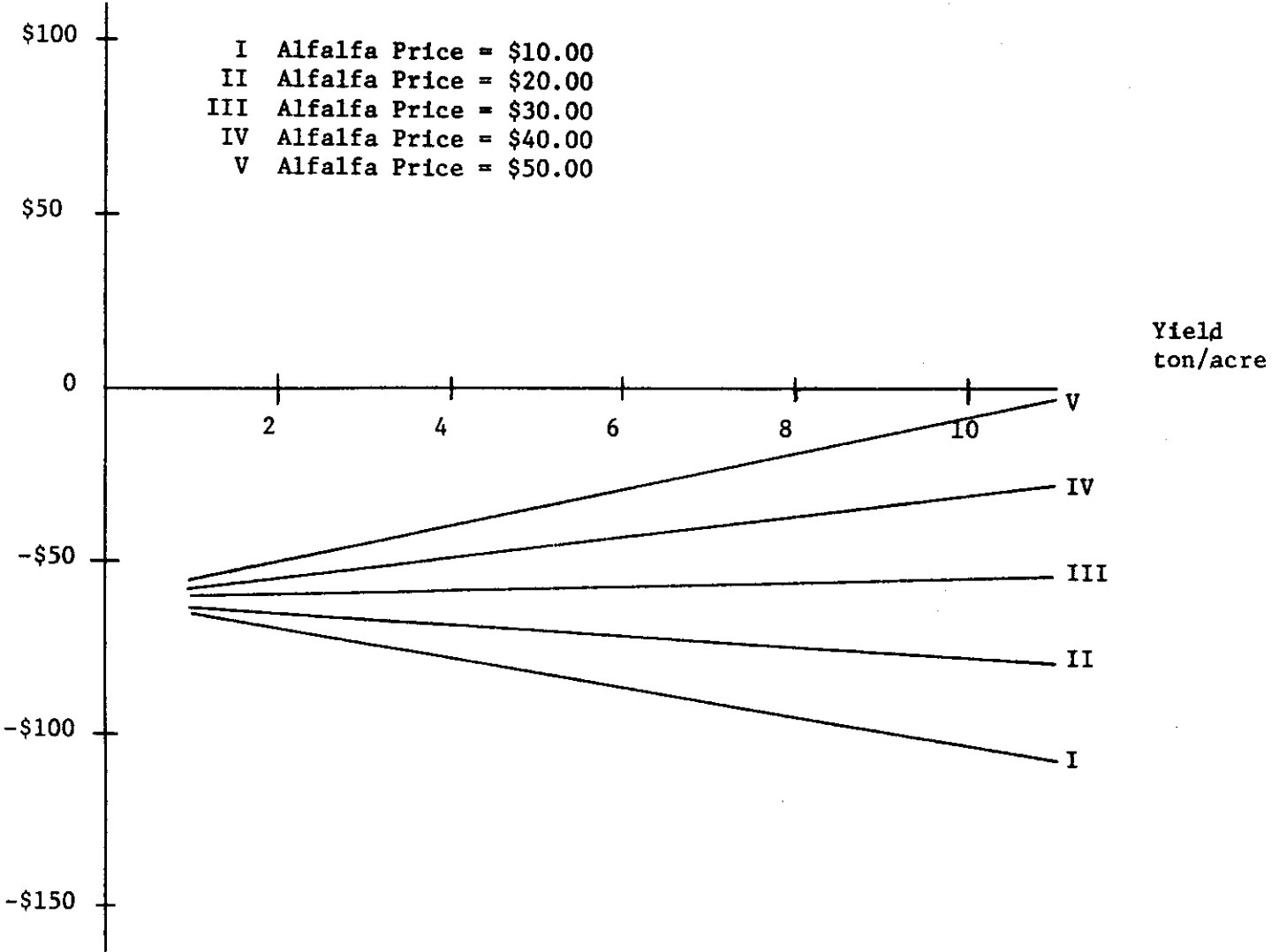


Figure Value of irrigation water applied to Alfalfa in Trans Pecos for alternative Alfalfa prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
BARLEY

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		10.0	20.0	30.0	40.0	50.0

PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-53.249	-47.729	-42.208	-36.688	-31.167
	*					
3.000	*	-50.252	-41.735	-33.218	-24.700	-16.183
	*					
4.000	*	-47.256	-35.741	-24.227	-12.713	-1.199
	*					
5.000	*	-44.259	-29.748	-15.237	-0.726	13.785
	*					
6.000	*	-41.262	-23.754	-6.246	11.262	28.770
	*					

10% COST INFLATION	*					
PRICES	*					
2.000	*	-59.205	-53.763	-48.322	-42.880	-37.438
	*					
3.000	*	-56.224	-47.801	-39.379	-30.956	-22.533
	*					
4.000	*	-53.243	-41.839	-30.435	-19.032	-7.628
	*					
5.000	*	-50.262	-35.877	-21.492	-7.107	7.278
	*					
6.000	*	-47.281	-29.915	-12.549	4.817	22.183
	*					

20% COST INFLATION	*					
PRICES	*					
2.000	*	-65.161	-59.798	-54.435	-49.073	-43.710
	*					
3.000	*	-62.196	-53.867	-45.539	-37.211	-28.883
	*					
4.000	*	-59.230	-47.937	-36.644	-25.350	-14.057
	*					
5.000	*	-56.265	-42.006	-27.748	-13.489	0.770
	*					
6.000	*	-53.300	-36.076	-18.852	-1.628	15.596
	*					

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

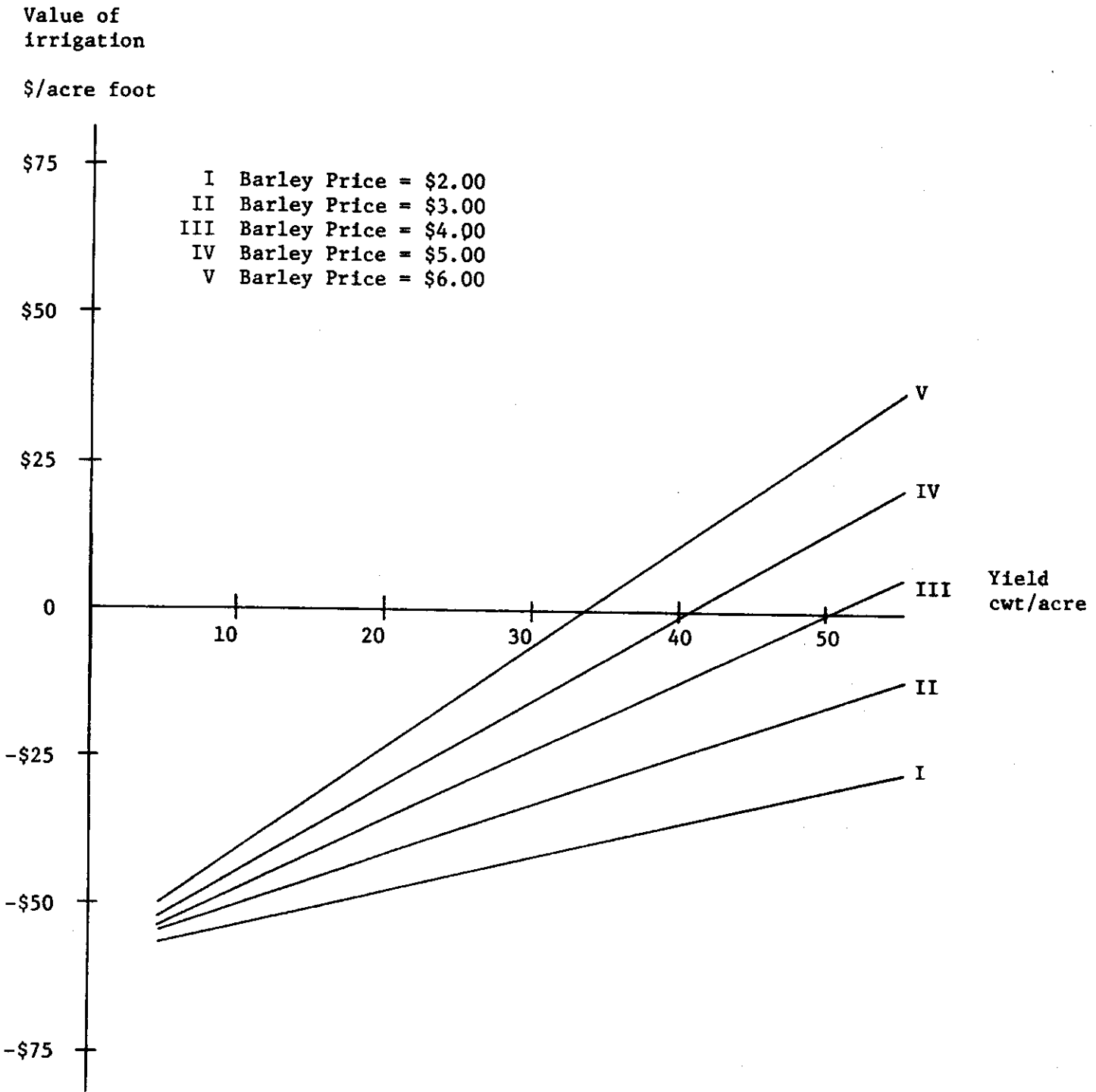


Figure Value of irrigation water applied to Barley in Trans Pecos for alternative Barley prices and yields with expected 1974 costs.

Value of
irrigation
\$/acre foot

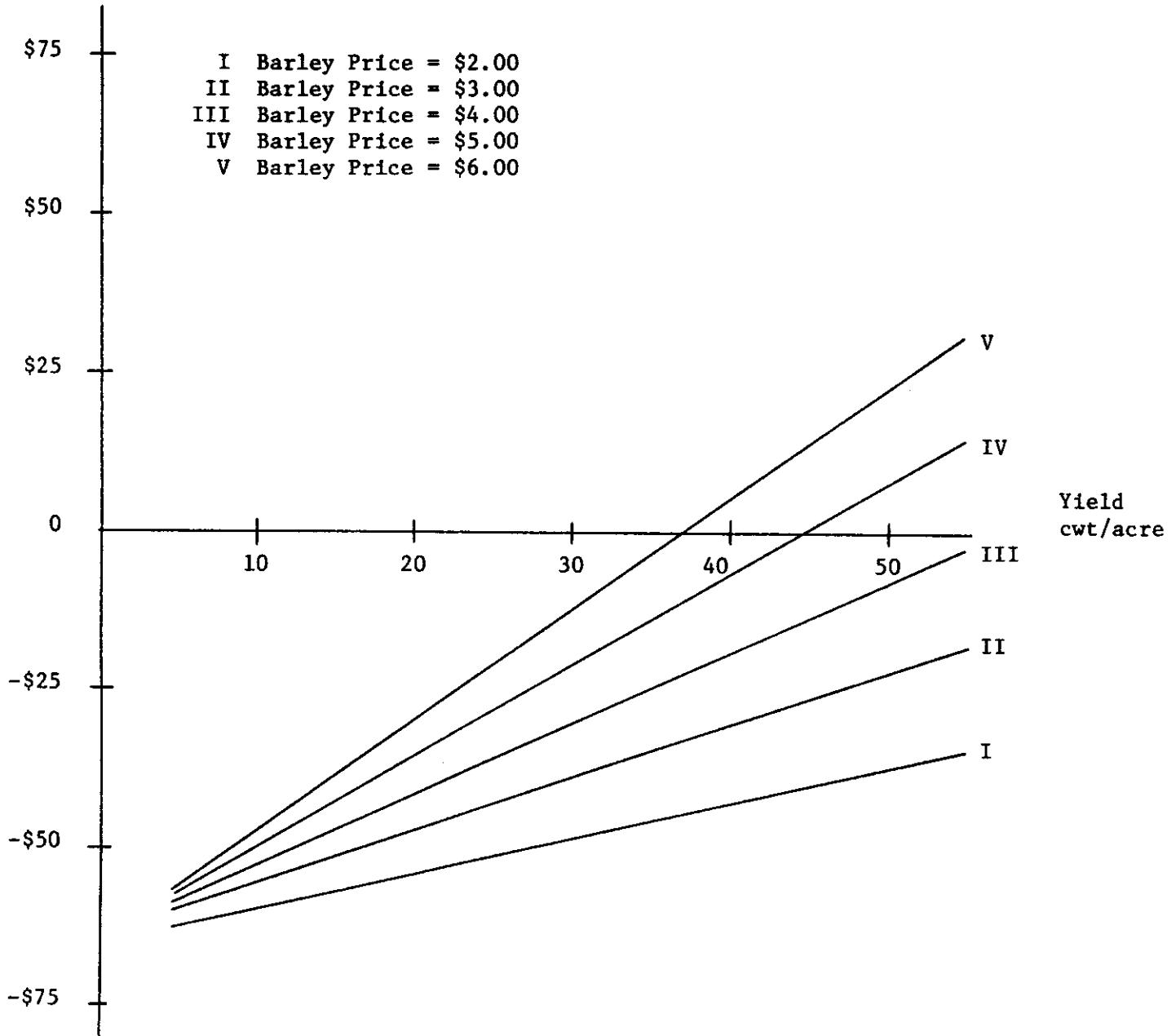


Figure Value of irrigation water applied to Barley in Trans Pecos for alternative Barley prices and yields with expected 1974 costs inflated 10 percent.

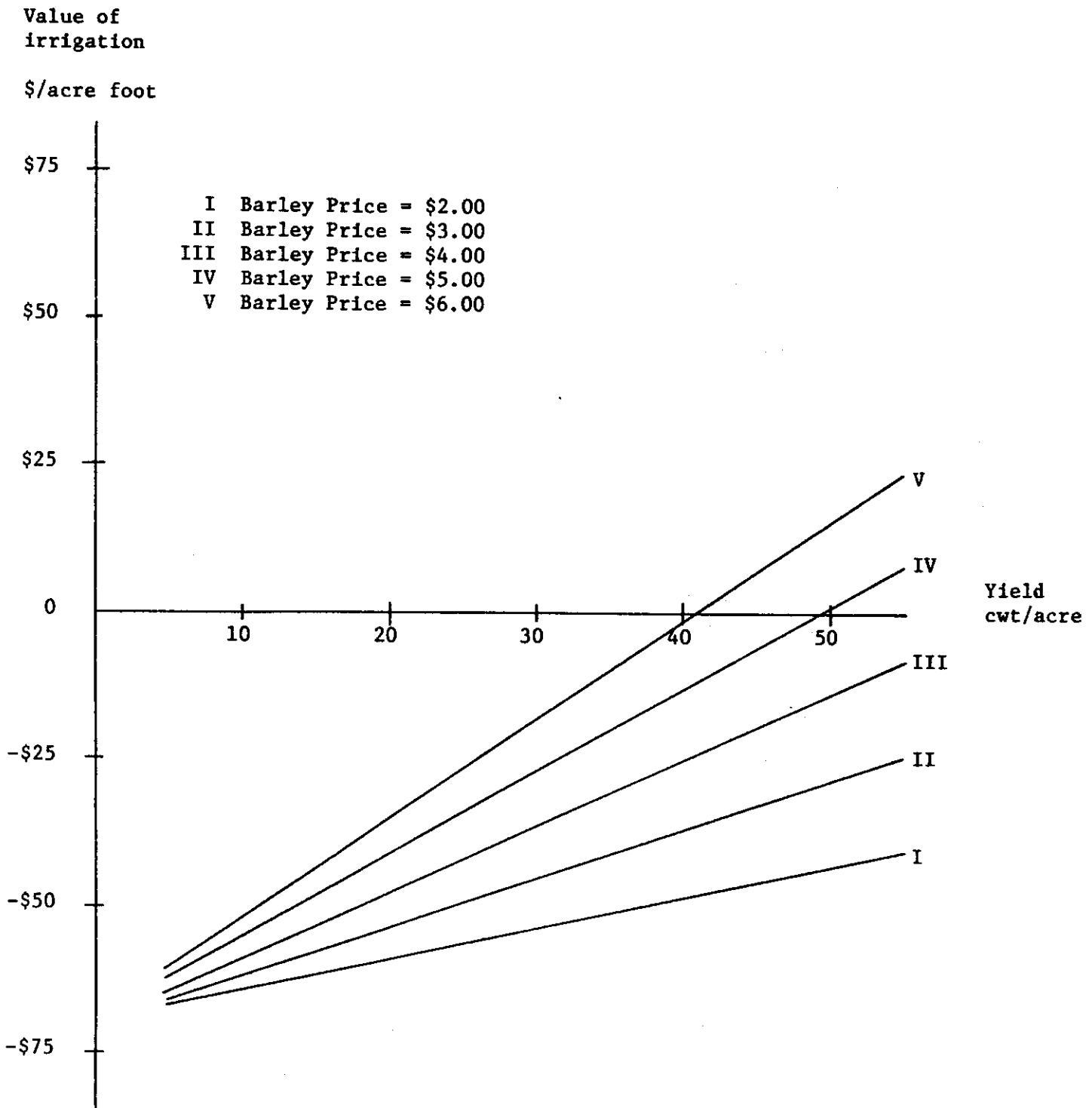


Figure Value of irrigation water applied to Barley in Trans Pecos for alternative Barley prices and yields with expected 1974 costs inflated 20 percent.

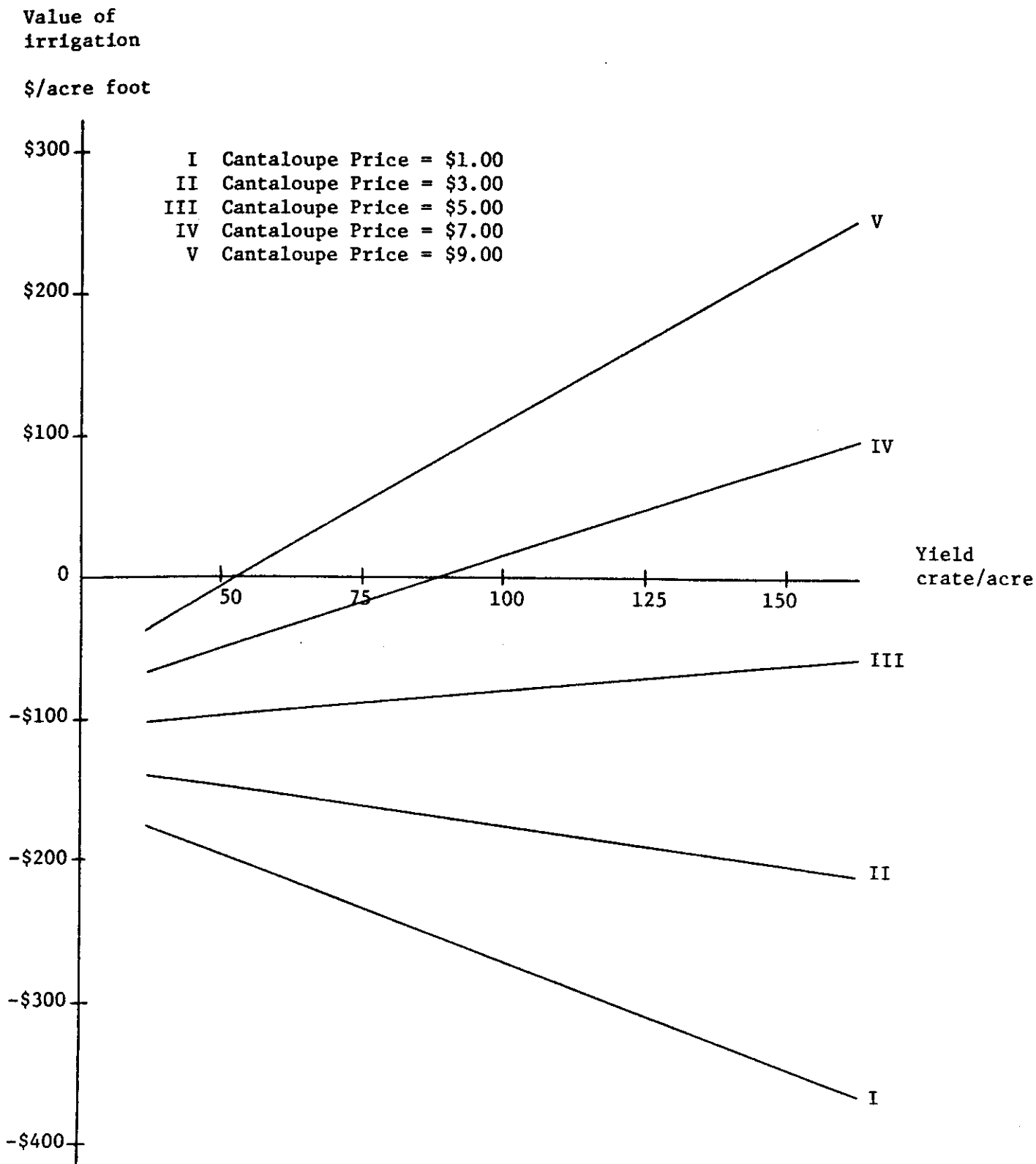


Figure Value of irrigation water applied to Cantaloupes in Trans Pecos for alternative Cantaloupe prices and yields with expected 1974 costs.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
CANTALOUPE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION CRATE PER ACRE				
		50.0	75.0	100.0	125.0	150.0

PRODUCTION COSTS 1974	*					
PRICES	*					
1.000	*	-194.170	-232.295	-270.420	-308.545	-346.670
3.000	*	-146.670	-161.045	-175.420	-189.795	-204.170
5.000	*	-99.170	-89.795	-80.420	-71.045	-61.670
7.000	*	-51.670	-18.545	14.580	47.705	80.830
9.000	*	-4.170	52.705	109.580	166.455	223.330

10% COST INFLATION						
PRICES	*					
1.000	*	-216.087	-259.274	-302.462	-345.649	-388.837
3.000	*	-168.837	-188.399	-207.962	-227.524	-247.087
5.000	*	-121.587	-117.524	-113.462	-109.399	-105.337
7.000	*	-74.337	-46.649	-18.962	8.726	36.413
9.000	*	-27.087	24.226	75.538	126.851	178.163

20% COST INFLATION						
PRICES	*					
1.000	*	-238.004	-286.254	-334.504	-382.754	-431.004
3.000	*	-191.004	-215.754	-240.504	-265.254	-290.004
5.000	*	-144.004	-145.254	-146.504	-147.754	-149.004
7.000	*	-97.004	-74.754	-52.504	-30.254	-8.004
9.000	*	-50.004	-4.254	41.496	87.246	132.996

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

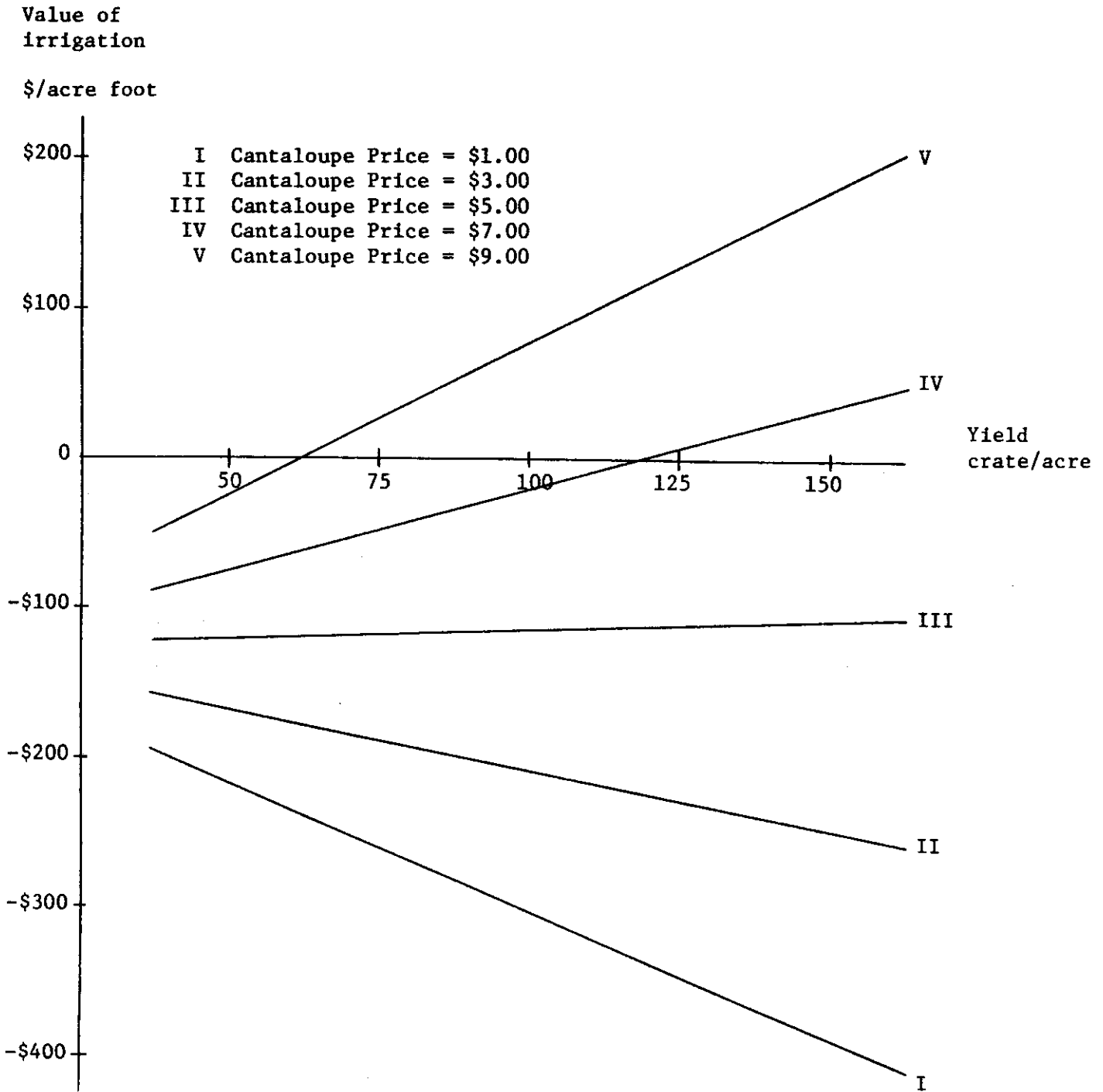


Figure Value of irrigation water applied to Cantaloupes in Trans Pecos for alternative Cantaloupe prices and yields with expected 1974 costs inflated 10 percent.

Value of irrigation

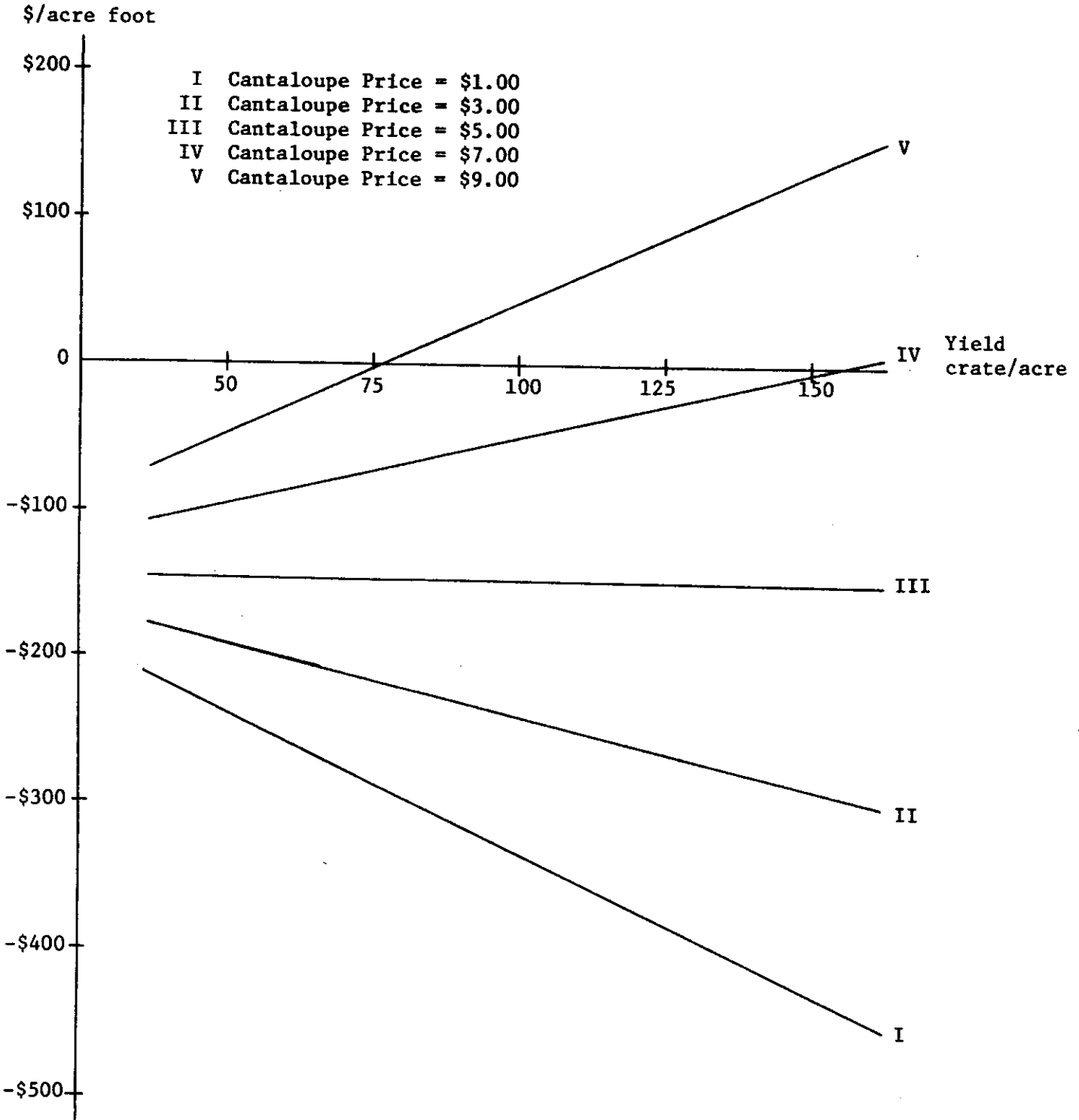


Figure Value of irrigation water applied to Cantaloupes in Trans Pecos for alternative Cantaloupe prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
PIMA COTTON

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION LBS PER ACRE				
		300.0	375.0	450.0	525.0	600.0

PRODUCTION COSTS 1974	*					
PRICES	*					
0.400	*	-69.232	-63.620	-58.008	-52.396	-46.785
0.600	*	-53.700	-44.206	-34.711	-25.217	-15.722
0.800	*	-38.169	-24.792	-11.414	1.963	15.341
1.000	*	-22.638	-5.377	11.883	29.143	46.403
1.200	*	-7.106	14.037	35.180	56.323	77.466
	*					

10% COST INFLATION	*					
PRICES	*					
0.400	*	-79.817	-74.559	-69.302	-64.045	-58.787
0.600	*	-64.367	-55.247	-46.128	-37.008	-27.888
0.800	*	-48.918	-35.936	-22.953	-9.971	3.011
1.000	*	-33.468	-16.624	0.221	17.065	33.910
1.200	*	-18.019	2.688	23.395	44.102	64.809
	*					

20% COST INFLATION	*					
PRICES	*					
0.400	*	-90.402	-85.499	-80.596	-75.693	-70.790
0.600	*	-75.034	-66.289	-57.544	-48.799	-40.054
0.800	*	-59.666	-47.080	-34.493	-21.906	-9.319
1.000	*	-44.299	-27.870	-11.441	4.988	21.417
1.200	*	-28.931	-8.660	11.611	31.882	52.152
	*					

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
irrigation

\$/acre foot

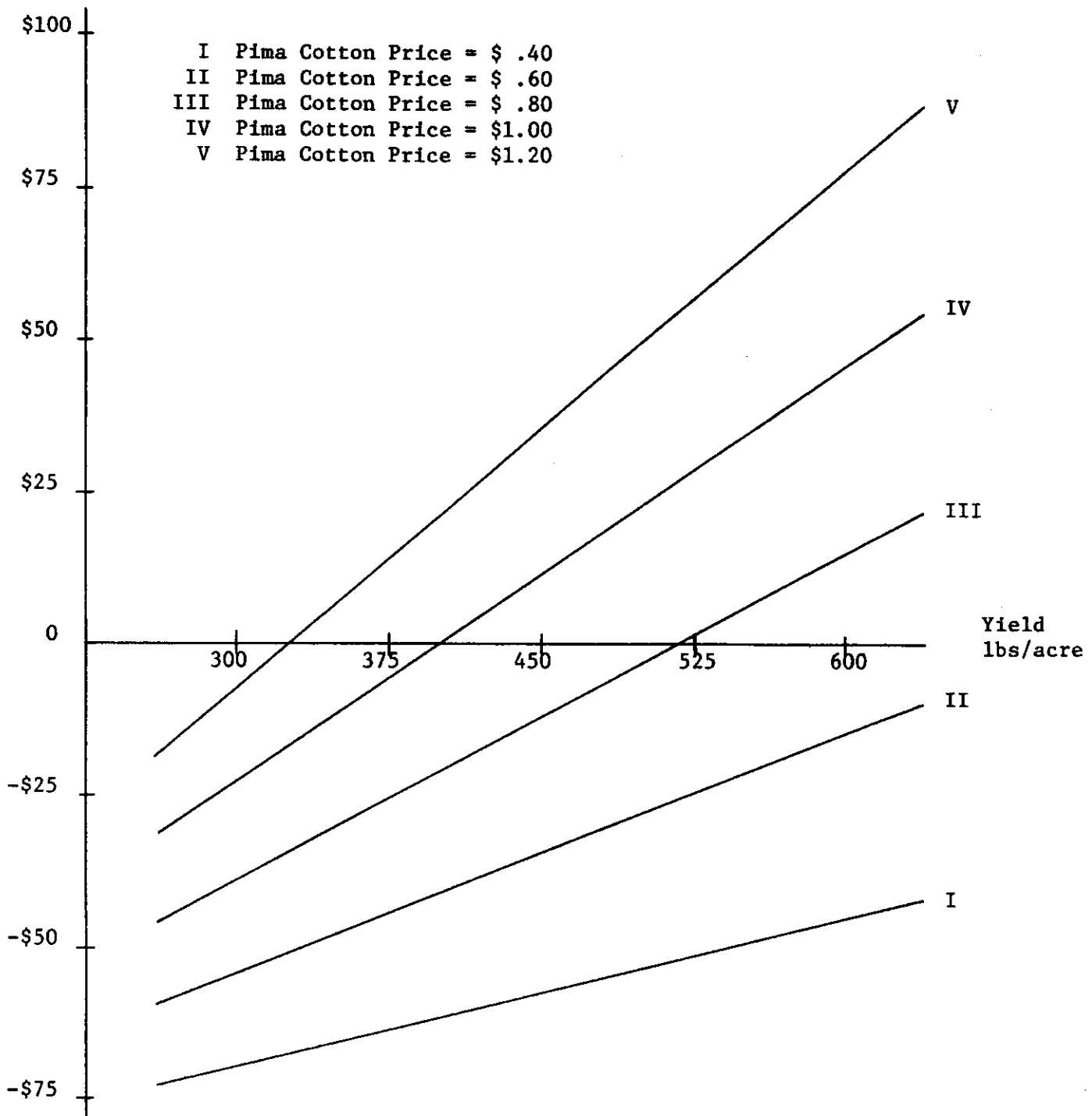


Figure Value of irrigation water applied to Pima Cotton in Trans Pecos for alternative Pima Cotton prices and yields with expected 1974 costs.

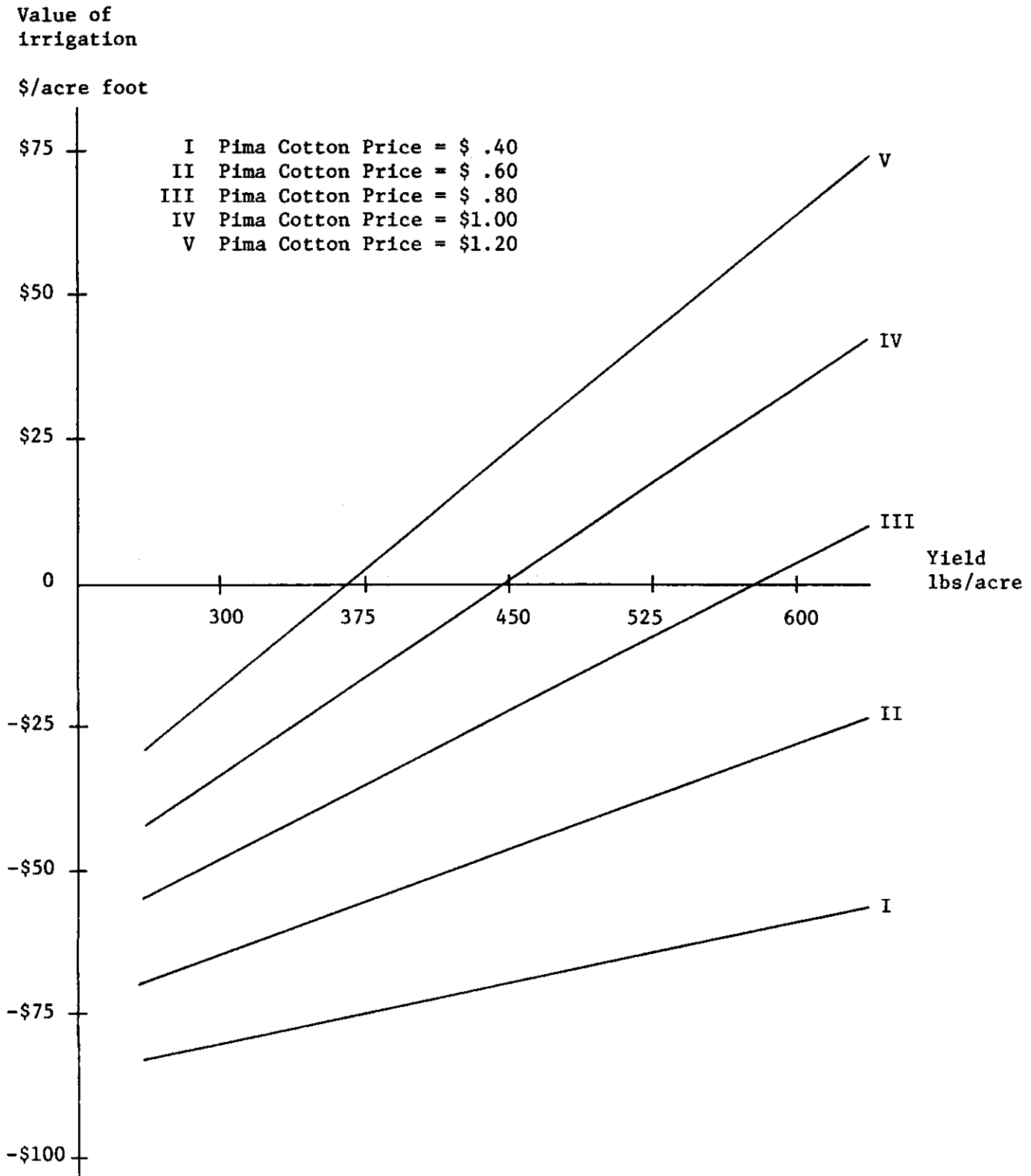


Figure Value of irrigation water applied to Pima Cotton in Trans Pecos for alternative Pima Cotton prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation

\$/acre foot

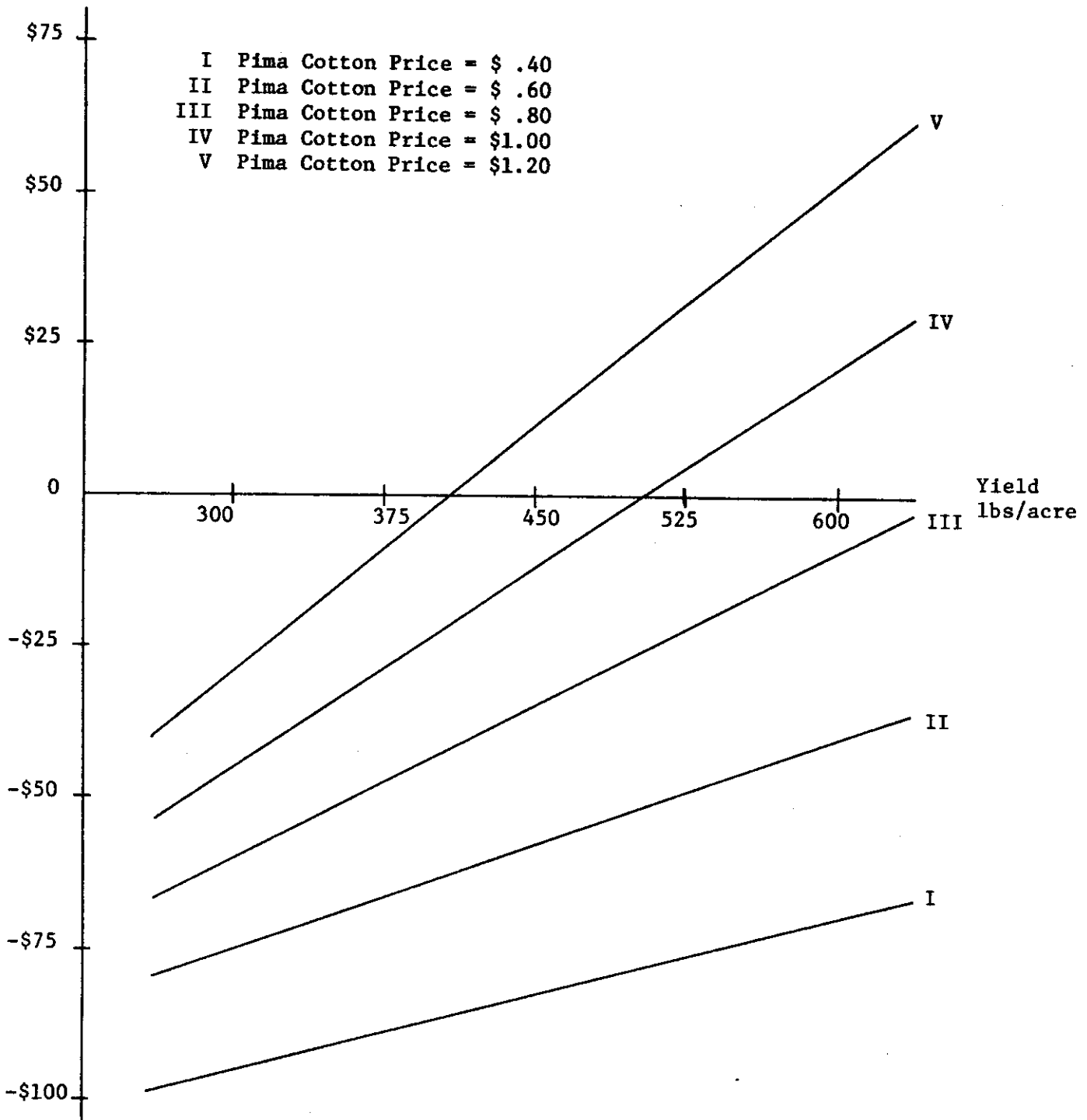


Figure Value of irrigation water applied to Pima Cotton in Trans Pecos for alternative Pima Cotton prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
UPLAND COTTON

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		450.0	575.0	700.0	825.0	950.0
PRODUCTION COSTS 1974	*					
PRICES	*					
0.200	*	-76.033	-71.823	-67.613	-63.403	-59.193
0.300	*	-64.384	-56.939	-49.493	-42.048	-34.602
0.400	*	-52.736	-42.054	-31.373	-20.692	-10.011
0.500	*	-41.087	-27.170	-13.253	0.664	14.580
0.600	*	-29.439	-12.286	4.867	22.019	39.172
10% COST INFLATION	*					
PRICES	*					
0.200	*	-86.677	-82.891	-79.104	-75.318	-71.532
0.300	*	-75.090	-68.085	-61.080	-54.075	-47.071
0.400	*	-63.502	-53.279	-43.055	-32.832	-22.609
0.500	*	-51.915	-38.473	-25.031	-11.589	1.853
0.600	*	-40.328	-23.667	-7.007	9.654	26.315
20% COST INFLATION	*					
PRICES	*					
0.200	*	-97.321	-93.958	-90.596	-87.234	-83.871
0.300	*	-85.795	-79.231	-72.667	-66.103	-59.539
0.400	*	-74.269	-64.503	-54.738	-44.972	-35.206
0.500	*	-62.743	-49.776	-36.809	-23.841	-10.874
0.600	*	-51.217	-35.048	-18.879	-2.711	13.458

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

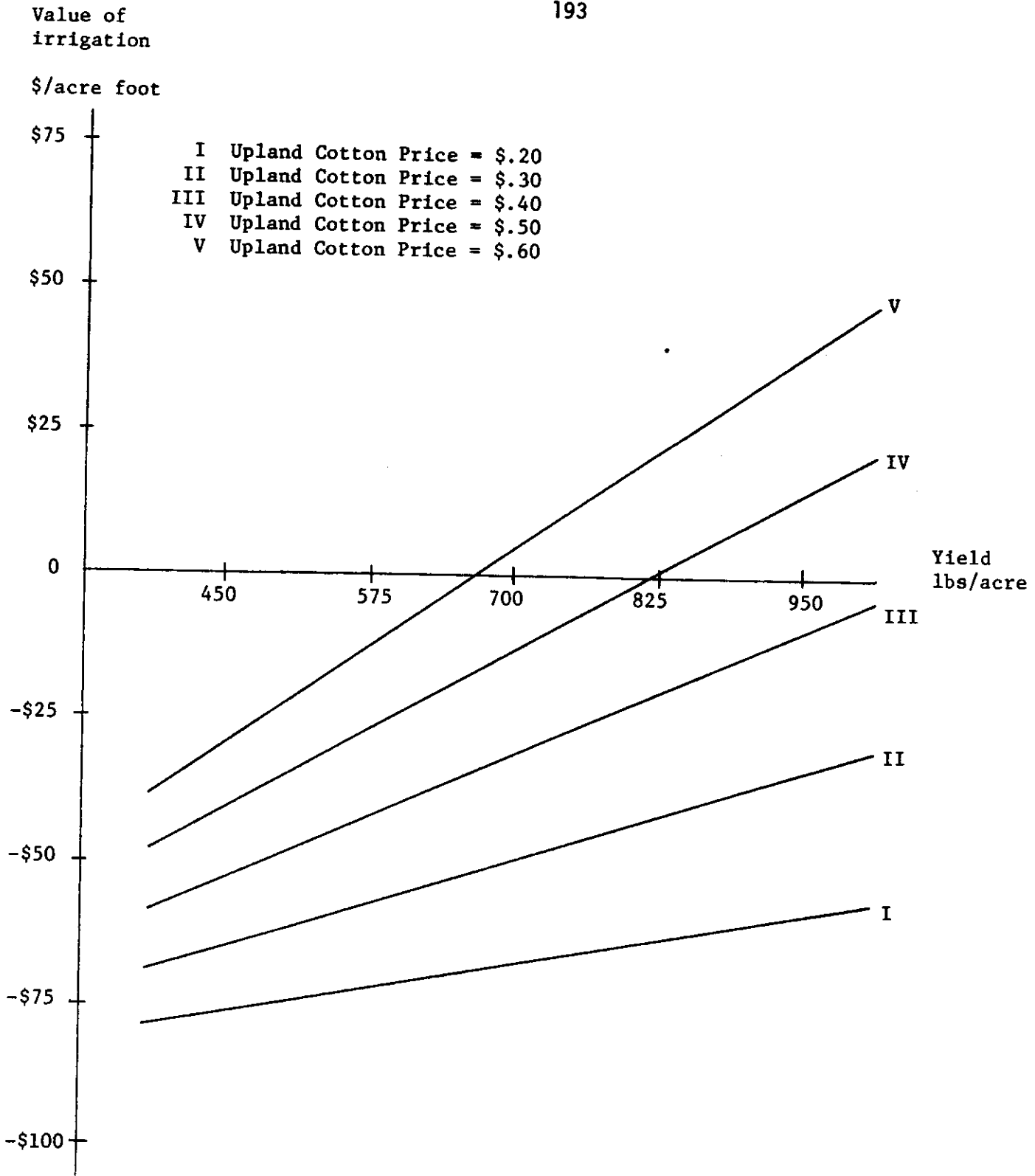


Figure Value of irrigation water applied to Upland Cotton in Trans Pecos for alternative Upland Cotton prices and yields with expected 1974 costs.

Value of irrigation

\$/acre foot

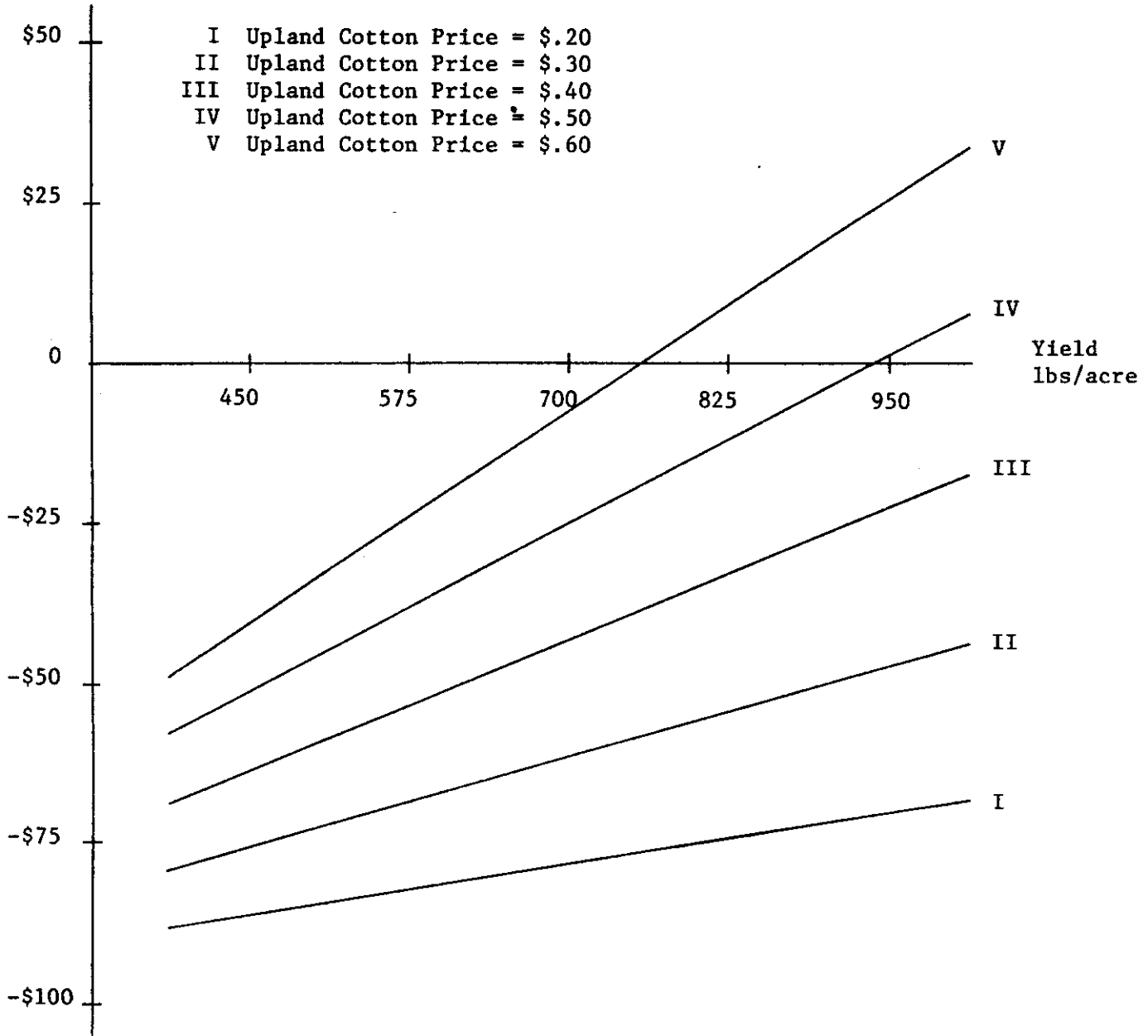


Figure Value of irrigation water applied to Upland Cotton in Trans Pecos for alternative Upland Cotton prices and yields with expected 1974 costs inflated 10 percent.

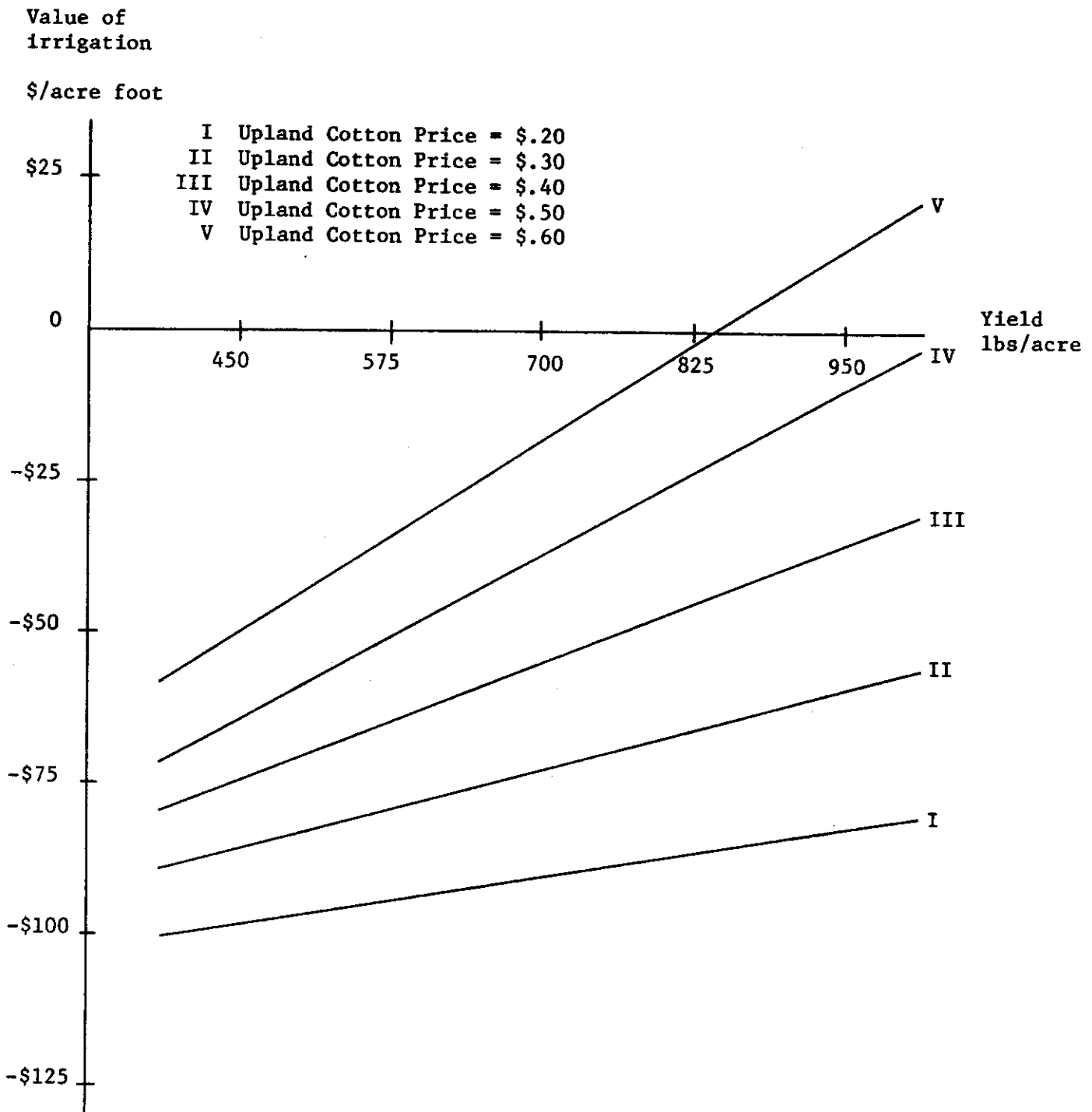


Figure Value of irrigation water applied to Upland Cotton in Trans Pecos for alternative Upland Cotton prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
FORAGE SORGHUM SILAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		10.0	15.0	20.0	25.0	30.0
PRODUCTION COSTS 1974						
PRICES	*					
6.000	*	-47.700	-35.468	-23.236	-11.004	1.227
8.000	*	-39.545	-23.236	-6.927	9.382	25.691
10.000	*	-31.391	-11.004	9.382	29.768	50.154
12.000	*	-23.236	1.227	25.691	50.154	74.618
14.000	*	-15.082	13.459	42.000	70.541	99.082
10% COST INFLATION						
PRICES	*					
6.000	*	-55.045	-42.877	-30.710	-18.542	-6.375
8.000	*	-46.933	-30.710	-14.487	1.736	17.960
10.000	*	-38.821	-18.542	1.736	22.015	42.294
12.000	*	-30.710	-6.375	17.960	42.294	66.629
14.000	*	-22.598	5.792	34.183	62.573	90.964
20% COST INFLATION						
PRICES	*					
6.000	*	-62.390	-50.287	-38.184	-26.081	-13.978
8.000	*	-54.321	-38.184	-22.046	-5.909	10.228
10.000	*	-46.252	-26.081	-5.909	14.263	34.434
12.000	*	-38.184	-13.978	10.228	34.434	58.640
14.000	*	-30.115	-1.875	26.366	54.606	82.846

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

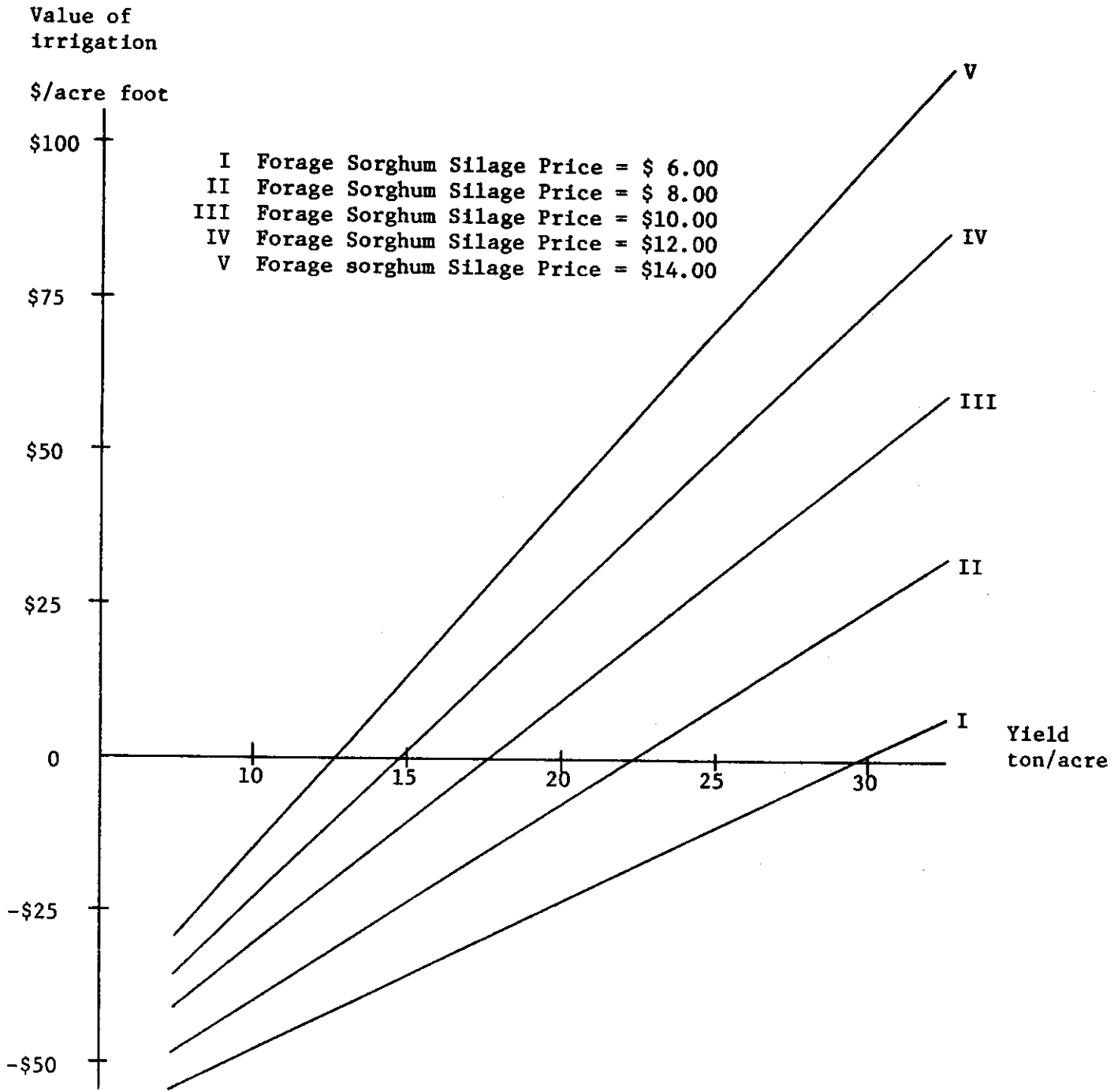


Figure Value of irrigation water applied to Forage Sorghum Silage in Trans Pecos for alternative Forage Sorghum Silage prices and yields with expected 1974 costs.

Value of
irrigation

\$/acre foot

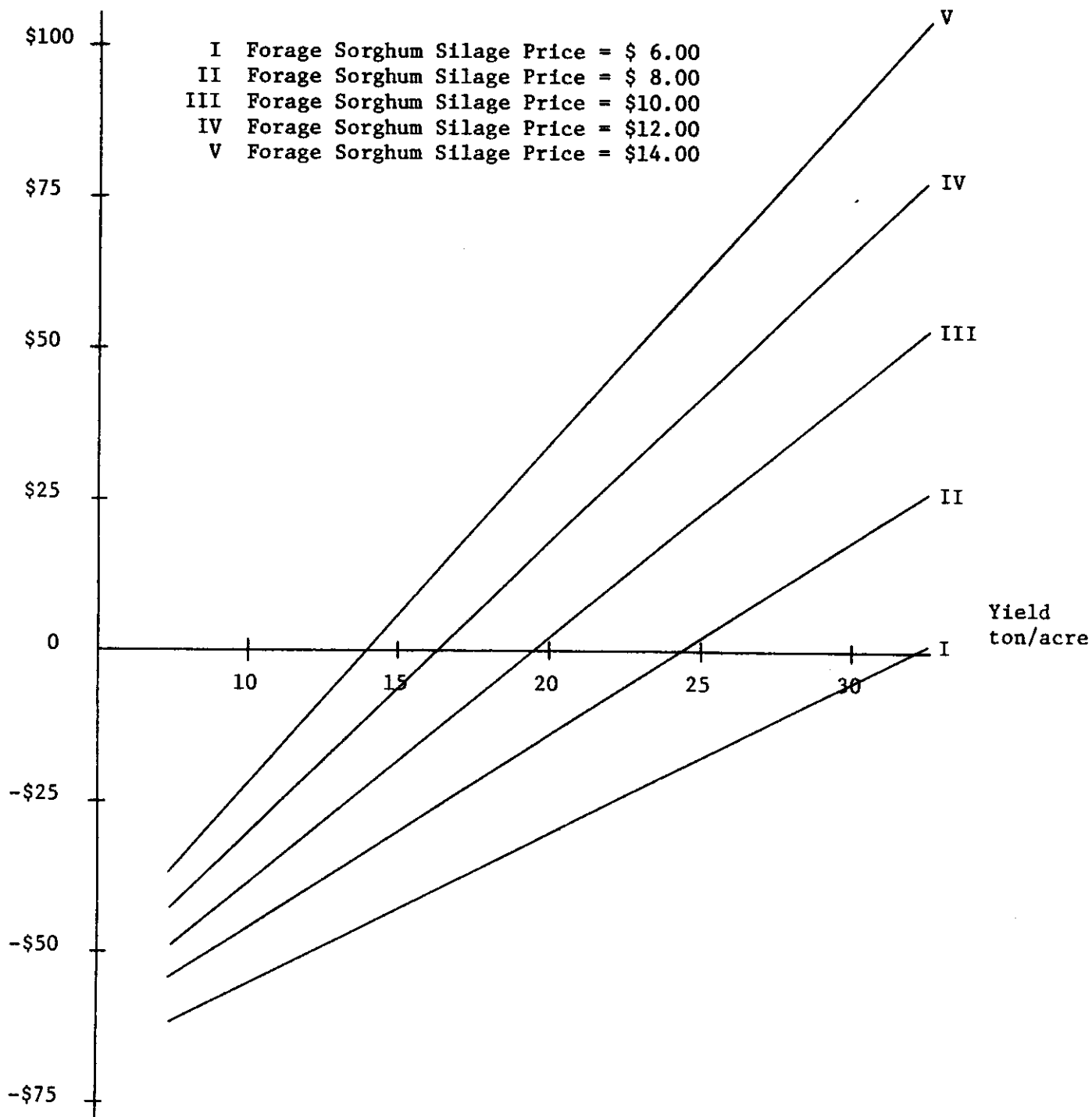


Figure Value of irrigation water applied to Forage Sorghum Silage in Trans Pecos for alternative Forage Sorghum Silage prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation

\$/acre foot

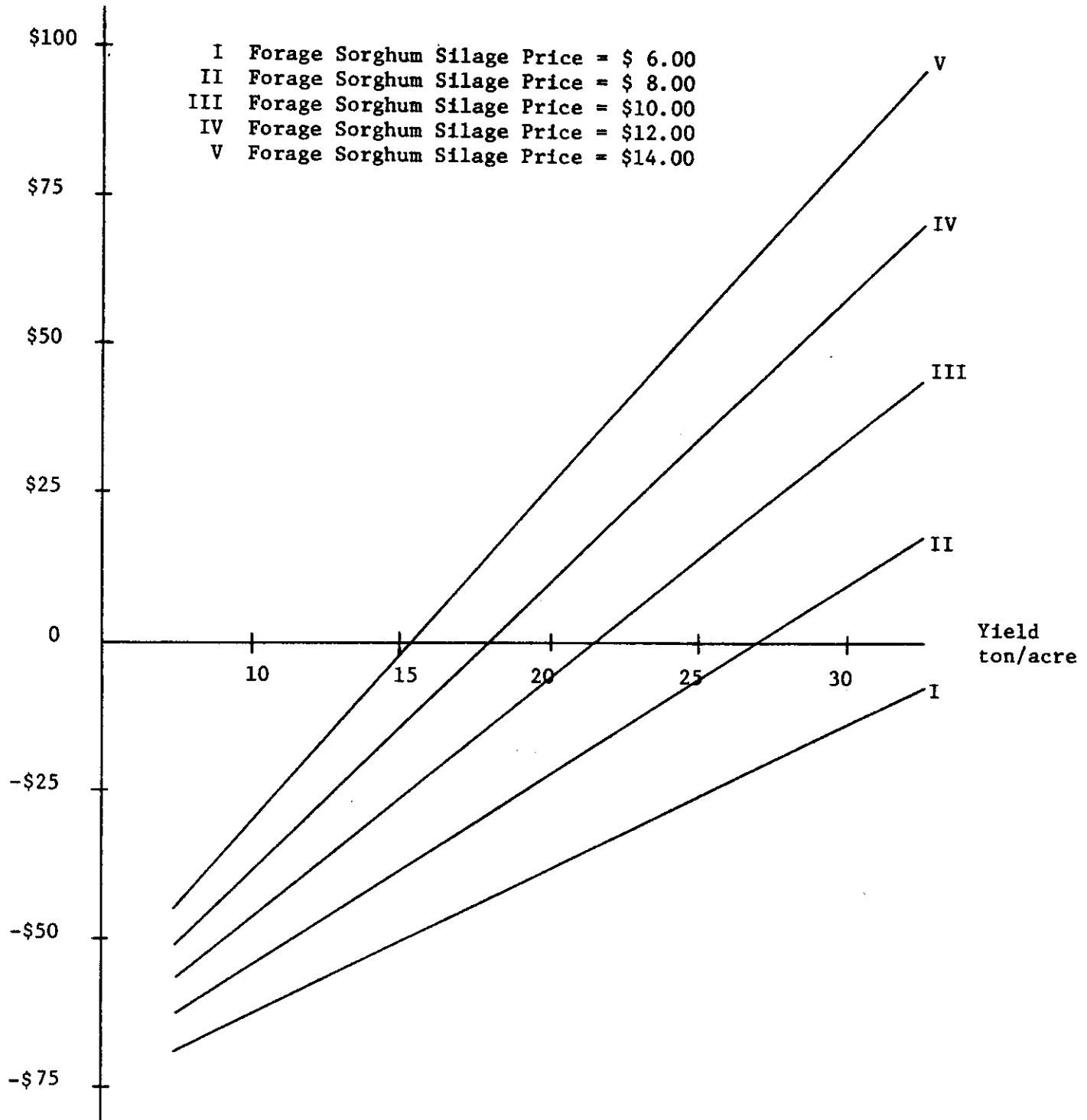


Figure Value of irrigation water applied to Forage Sorghum Silage in Trans Pecos for alternative Forage Sorghum Silage with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
GRAIN SORGHUM

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		25.0	30.0	35.0	40.0	45.0
PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-51.154	-47.399	-43.644	-39.888	-36.133
2.500	*	-46.058	-41.283	-36.509	-31.734	-26.959
3.000	*	-40.961	-35.167	-29.373	-23.579	-17.785
3.500	*	-35.865	-29.051	-22.238	-15.425	-8.612
4.000	*	-30.768	-22.936	-15.103	-7.270	0.562
10% COST INFLATION	*					
PRICES	*					
2.000	*	-58.416	-54.714	-51.012	-47.311	-43.609
2.500	*	-53.346	-48.630	-43.915	-39.199	-34.483
3.000	*	-48.276	-42.547	-36.817	-31.088	-25.358
3.500	*	-43.207	-36.463	-29.720	-22.976	-16.232
4.000	*	-38.137	-30.379	-22.622	-14.864	-7.107
20% COST INFLATION	*					
PRICES	*					
2.000	*	-65.677	-62.029	-58.381	-54.733	-51.085
2.500	*	-60.634	-55.978	-51.321	-46.664	-42.008
3.000	*	-55.591	-49.926	-44.261	-38.596	-32.930
3.500	*	-50.548	-43.875	-37.201	-30.527	-23.853
4.000	*	-45.506	-37.823	-30.141	-22.458	-14.776

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

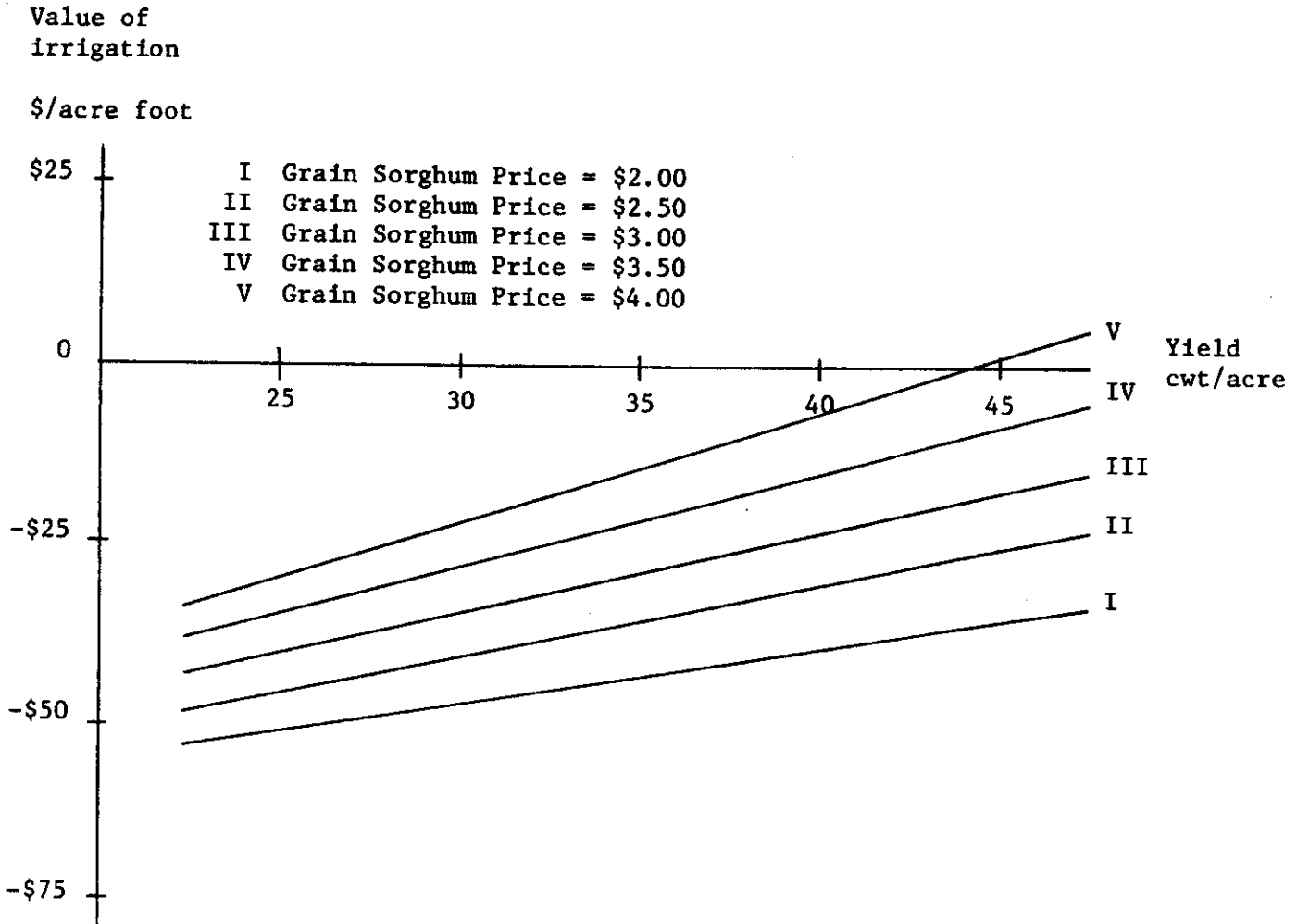


Figure Value of irrigation water applied to Grain Sorghum in Trans Pecos for alternative Grain Sorghum prices and yields with expected 1974 costs.

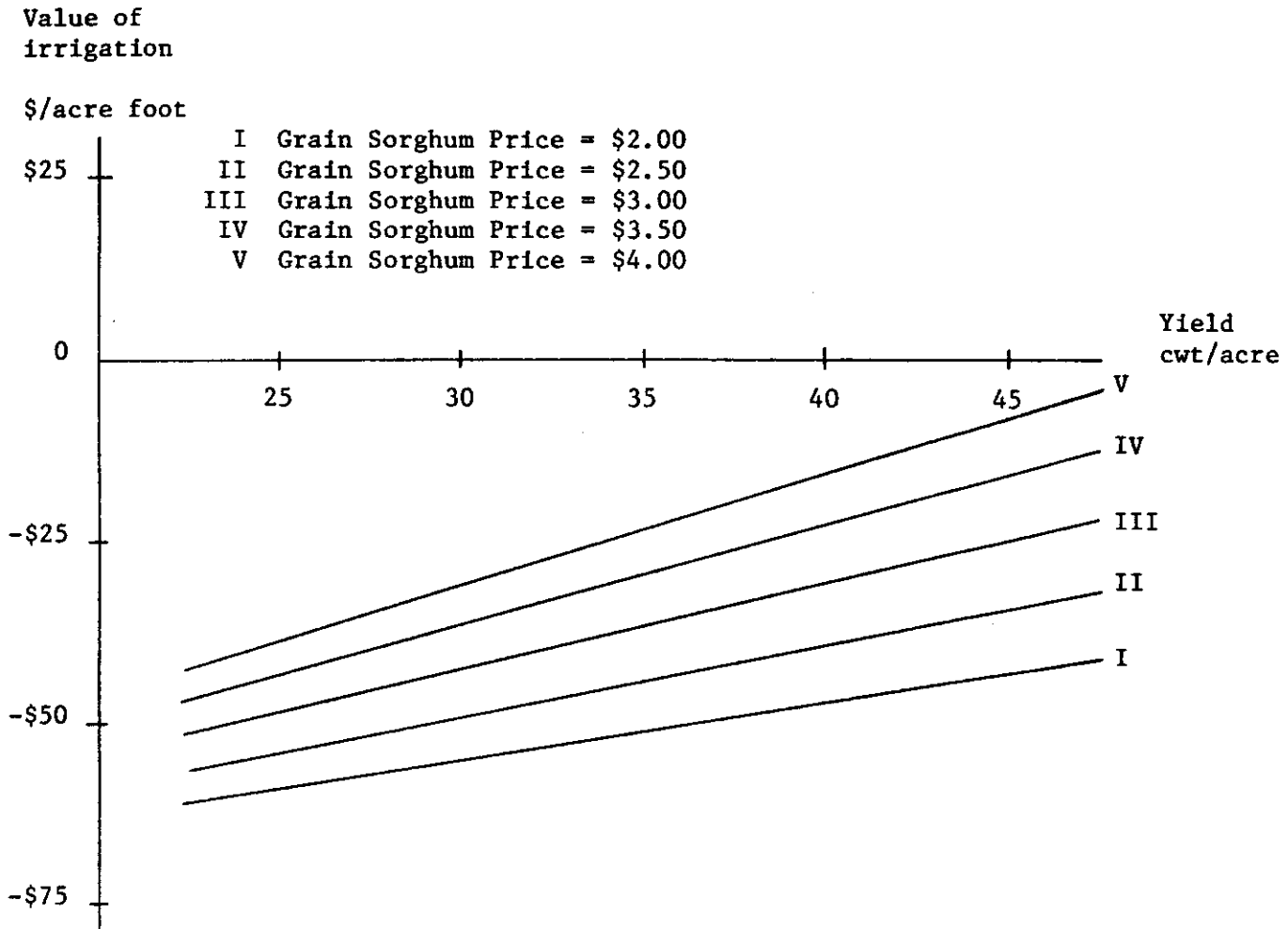


Figure Value of irrigation water applied to Grain Sorghum in Trans Pecos for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation

\$/acre foot

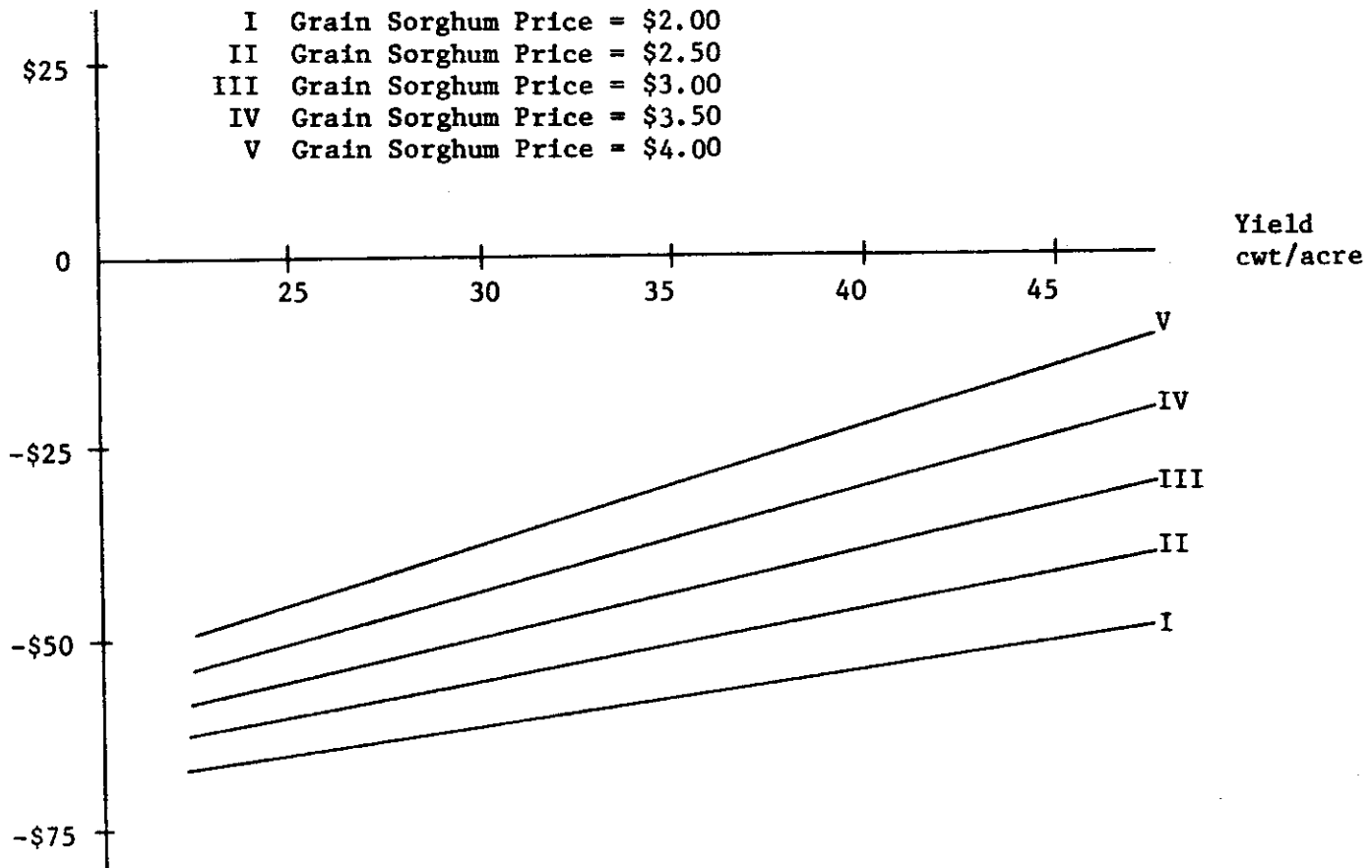


Figure Value of irrigation water applied to Grain Sorghum in Trans Pecos for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

TRANS PECOS
WHEAT

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		22.0	32.0	42.0	52.0	62.0
PRODUCTION COSTS 1974	*					
PRICES	*					
1.500	*	-17.005	-10.380	-3.755	2.870	9.495
2.500	*	-6.555	4.820	16.195	27.570	38.945
3.500	*	3.895	20.020	36.145	52.270	68.395
4.500	*	14.345	35.220	56.095	76.970	97.845
5.500	*	24.795	50.420	76.045	101.670	127.295
10% COST INFLATION	*					
PRICES	*					
1.500	*	-25.155	-18.618	-12.080	-5.543	0.995
2.500	*	-14.760	-3.498	7.765	19.027	30.290
3.500	*	-4.365	11.622	27.609	43.597	59.585
4.500	*	6.030	26.742	47.454	68.167	88.880
5.500	*	16.424	41.862	67.299	92.737	118.174
20% COST INFLATION	*					
PRICES	*					
1.500	*	-33.306	-26.856	-20.406	-13.956	-7.506
2.500	*	-22.966	-11.816	-0.666	10.484	21.634
3.500	*	-12.626	3.224	19.074	34.924	50.774
4.500	*	-2.286	18.264	38.814	59.364	79.914
5.500	*	8.054	33.304	58.554	83.804	109.054

A DRYLAND RETURN OF 21.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

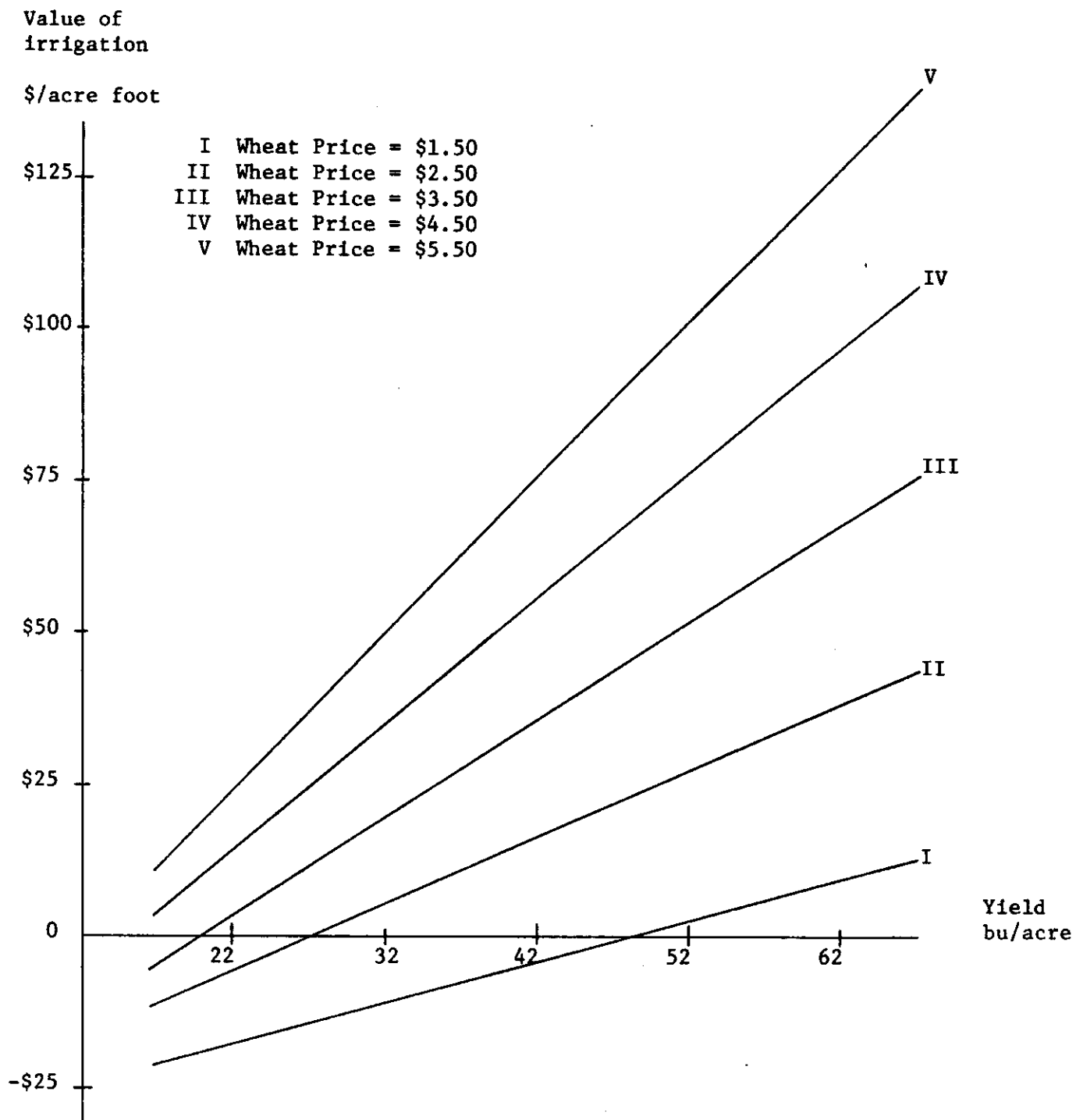


Figure Value of irrigation water applied to Wheat in Trans Pecos for alternative Wheat prices and yields with expected 1974 costs.

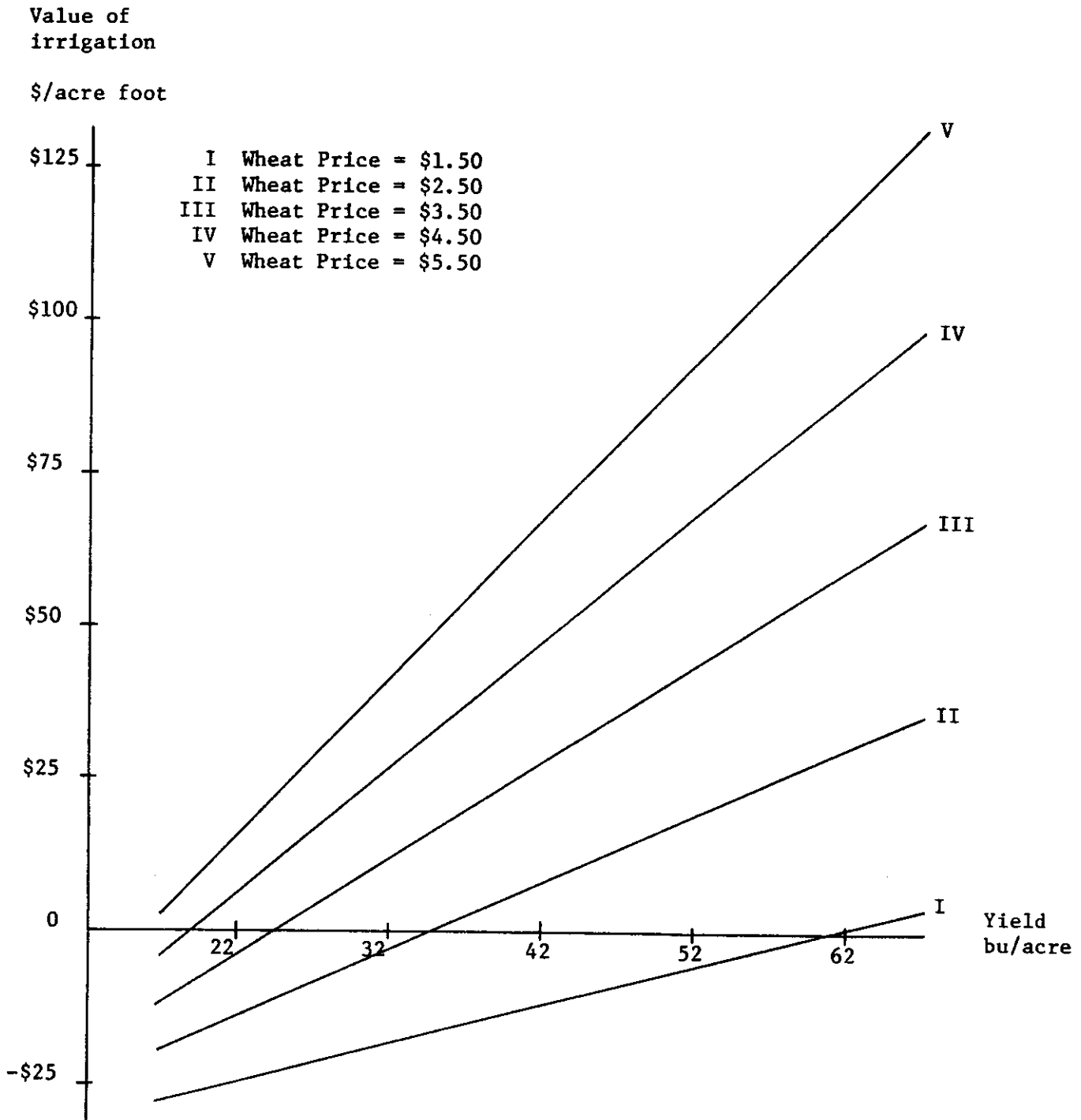


Figure Value of irrigation water applied to Wheat in Trans Pecos for alternative Wheat prices and yields with expected 1974 costs inflated 10 percent.

\$/acre foot

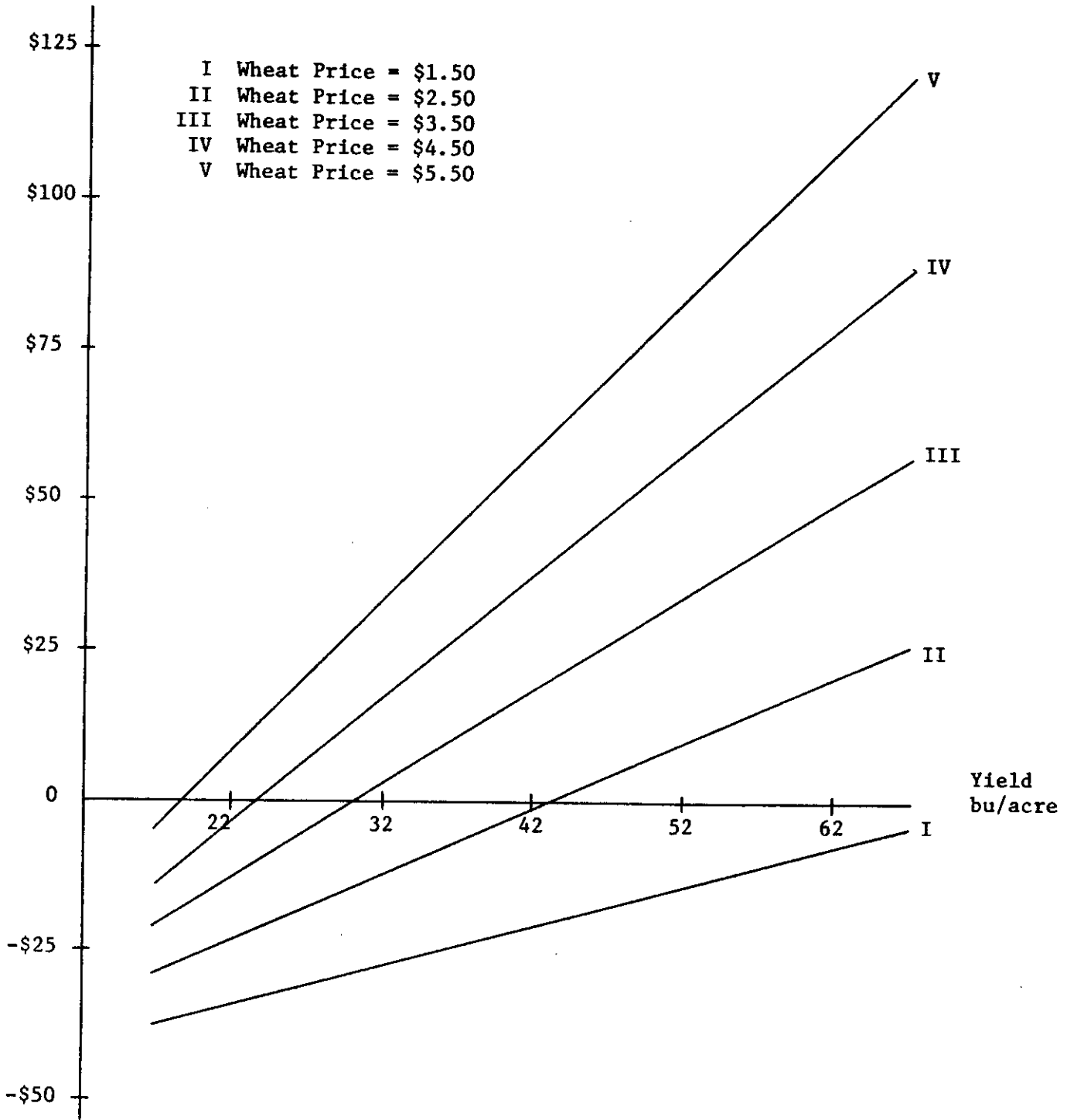


Figure Value of irrigation water applied to Wheat in Trans Pecos for alternative Wheat prices and yields with expected 1974 costs inflated 20 percent.

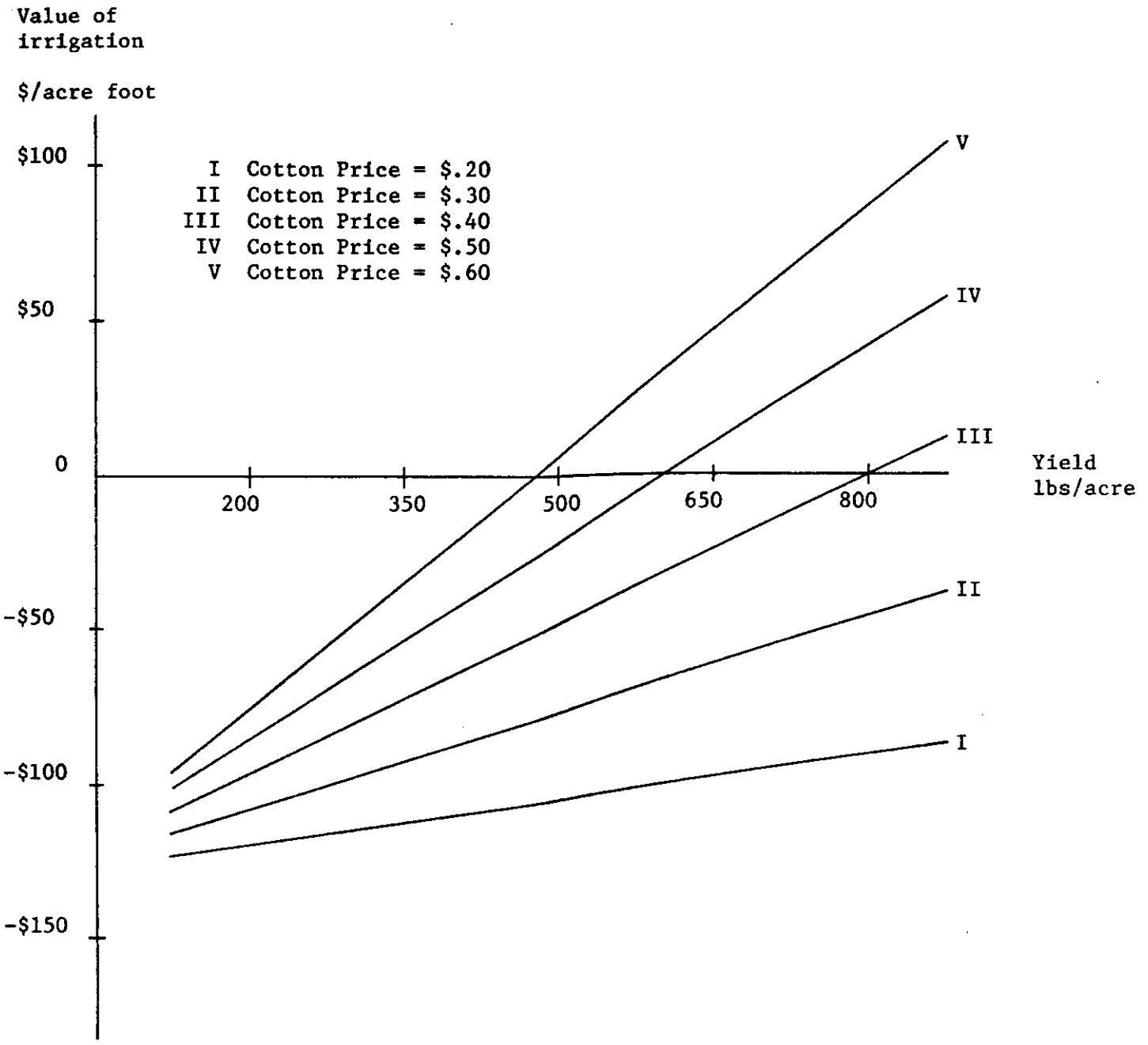


Figure Value of irrigation water applied to Cotton in Winter Garden for alternative Cotton prices and yields with expected 1974 costs inflated 20 percent.

233
RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
CUCUMBERS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION CARTON PER ACRE				
	*	75.0	150.0	225.0	300.0	375.0

PRODUCTION COSTS 1974						
PRICES	*					
1.000	*	-218.503	-299.341	-380.179	-461.018	-541.856
	*					
2.500	*	-154.506	-171.347	-188.189	-205.030	-221.871
	*					
4.000	*	-90.509	-43.353	3.802	50.958	98.114
	*					
5.500	*	-26.512	84.641	195.793	306.946	418.099
	*					
7.000	*	37.485	212.635	387.784	562.934	738.084
	*					

10% COST INFLATION						
PRICES	*					
1.000	*	-244.844	-338.257	-431.670	-525.084	-618.497
	*					
2.500	*	-191.184	-210.937	-240.690	-270.443	-300.196
	*					
4.000	*	-117.524	-83.617	-49.710	-15.812	18.105
	*					
5.500	*	-53.864	43.704	141.271	238.838	336.406
	*					
7.000	*	9.796	171.024	332.251	493.479	654.707
	*					

20% COST INFLATION						
PRICES	*					
1.000	*	-271.185	-377.173	-483.161	-589.149	-695.137
	*					
2.500	*	-207.862	-250.527	-293.191	-335.856	-378.521
	*					
4.000	*	-144.539	-123.880	-103.221	-82.563	-61.904
	*					
5.500	*	-81.215	2.767	86.749	170.731	254.713
	*					
7.000	*	-17.892	129.413	276.719	424.024	571.329
	*					

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
irrigation

\$/acre foot

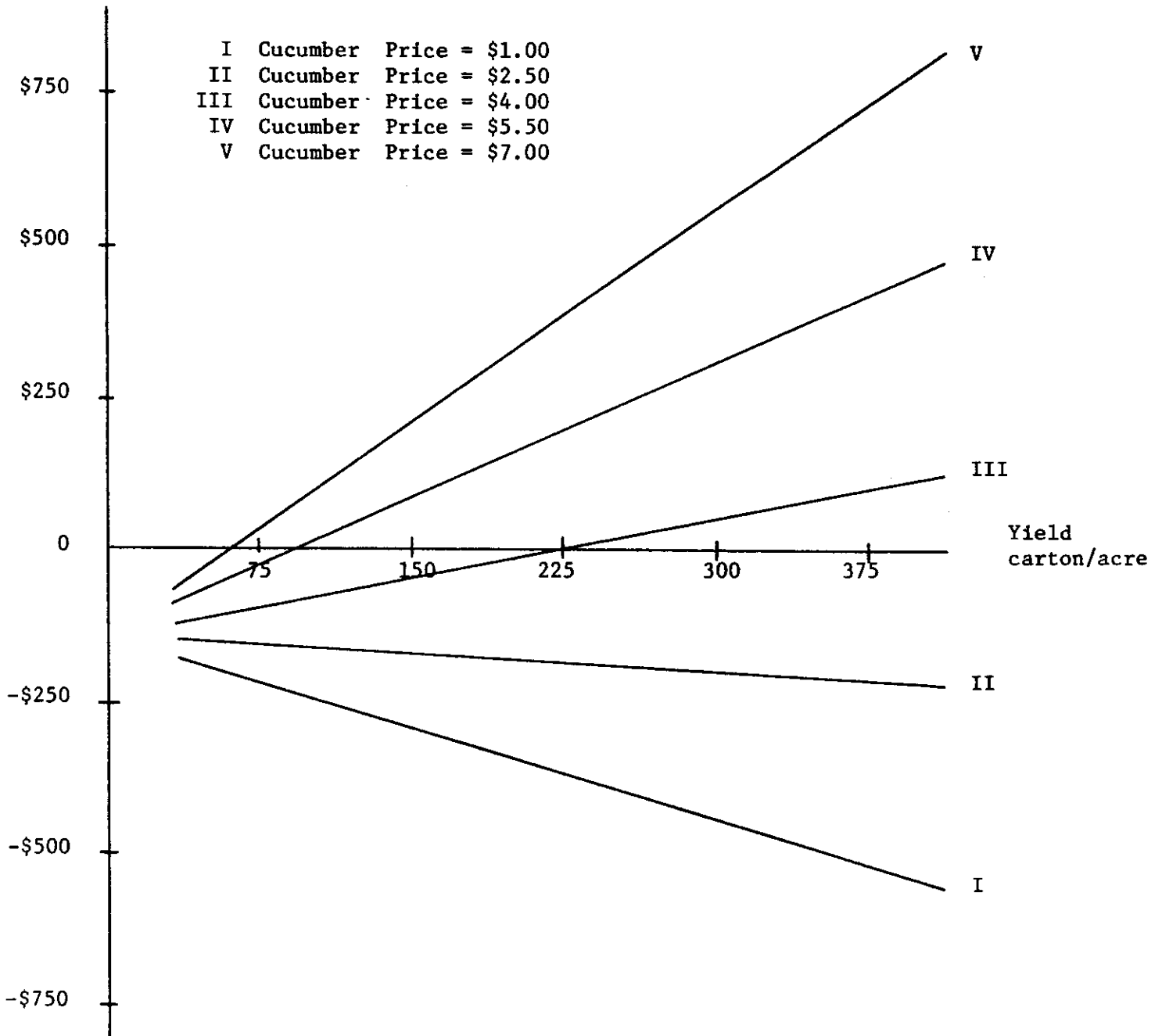


Figure Value of irrigation water applied to Cucumbers in Winter Garden for alternative Cucumber prices and yields with expected 1974 costs.

Value of
irrigation

\$/acre foot

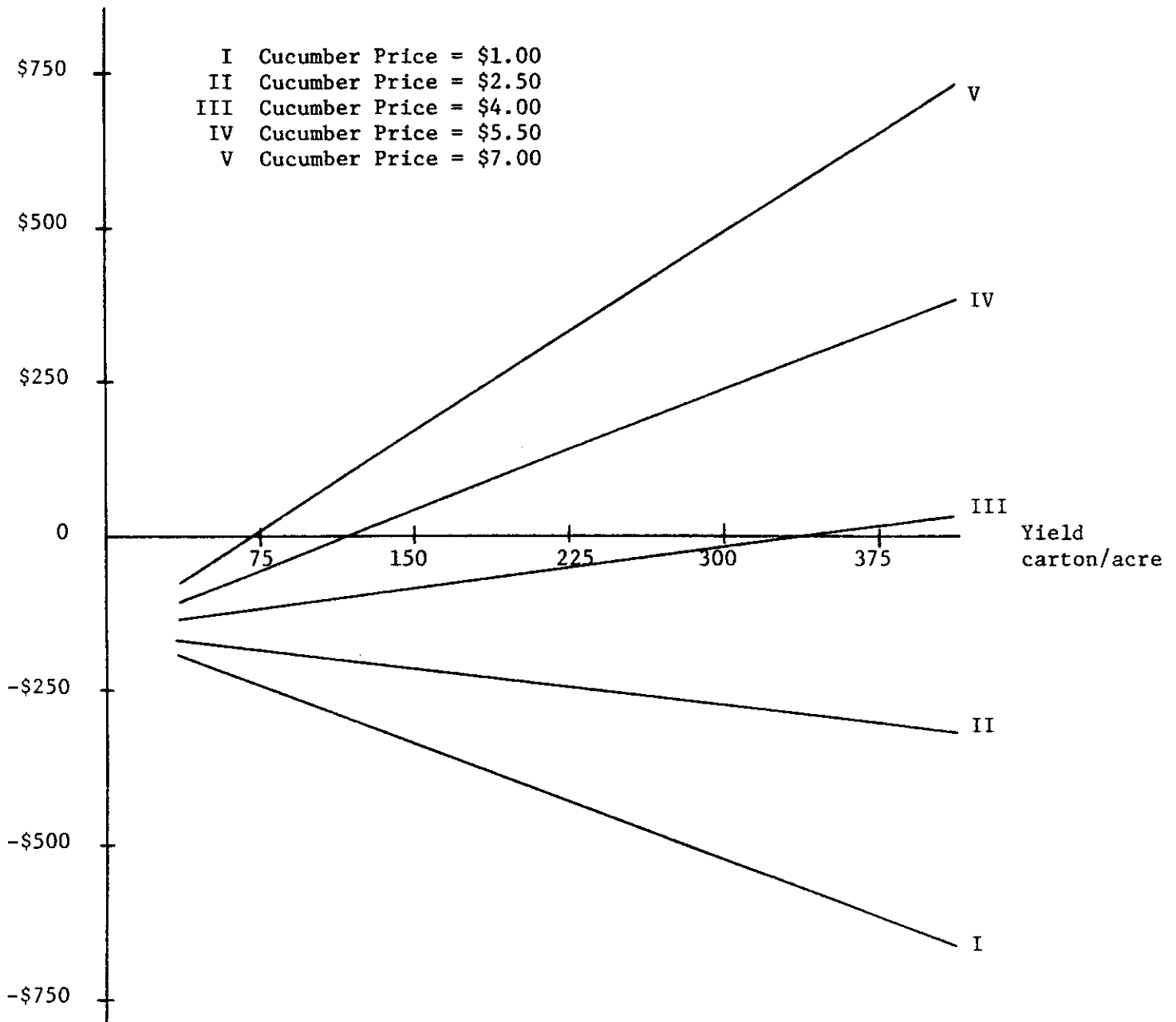


Figure Value of irrigation water applied to Cucumbers in Winter Garden for alternative Cucumber prices and yields with expected 1974 costs inflated 10 percent.

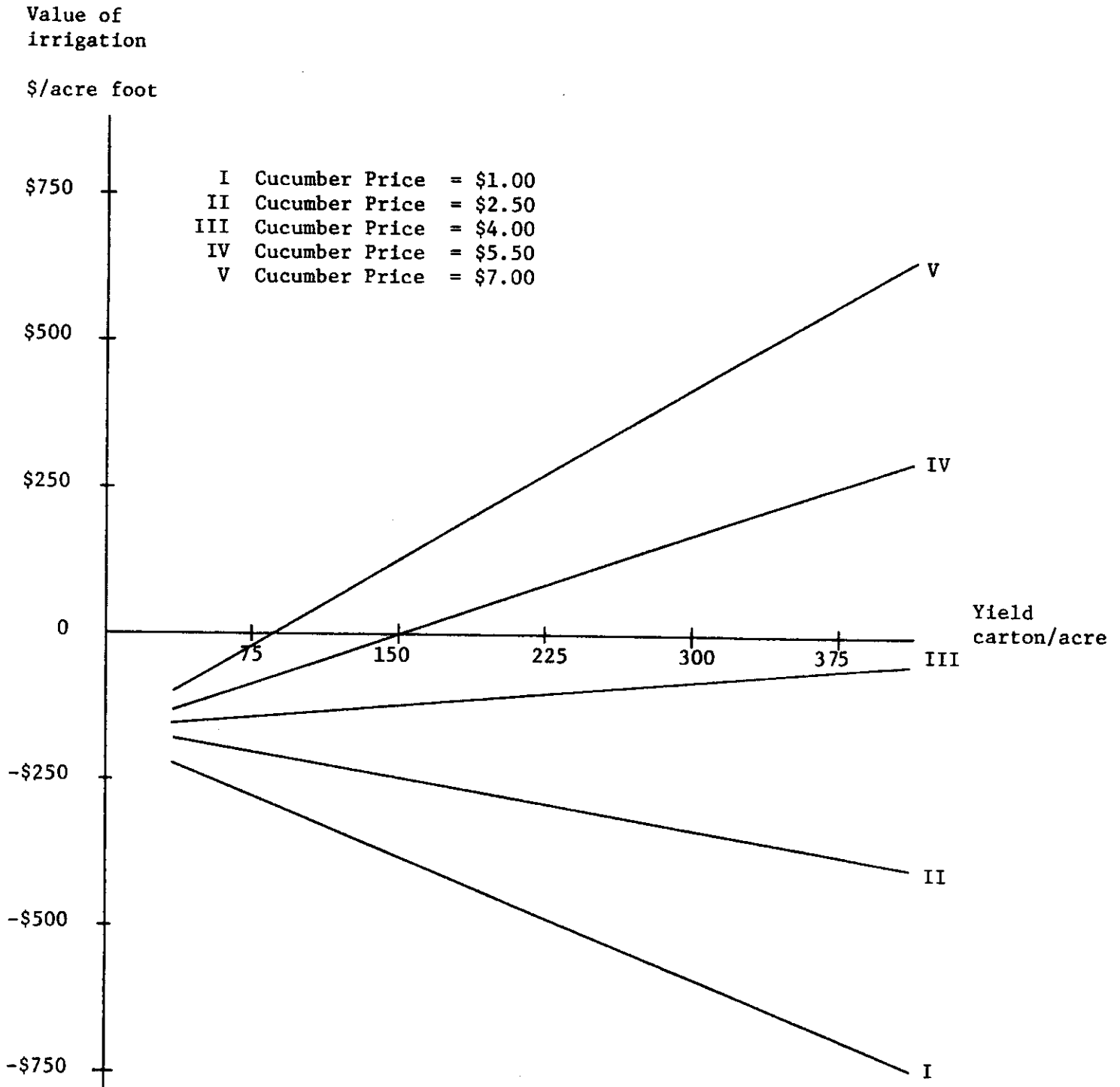


Figure Value of irrigation water applied to Cucumbers in Winter Garden for alternative Cucumber prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
FORAGE SORGHUM HAY

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		4.0	6.0	8.0	10.0	12.0

PRODUCTION COSTS 1974	*					
PRICES	*					
25.000	*	-123.660	-119.380	-115.100	-110.820	-106.540
	*					
30.000	*	-104.660	-90.880	-77.100	-63.320	-49.540
	*					
35.000	*	-85.660	-62.380	-39.100	-15.820	7.460
	*					
40.000	*	-66.660	-33.880	-1.100	31.680	64.460
	*					
45.000	*	-47.660	-5.380	36.900	79.180	121.460
	*					

10% COST INFLATION	*					
PRICES	*					
25.000	*	-146.026	-146.318	-146.610	-146.902	-147.194
	*					
30.000	*	-127.126	-117.968	-108.810	-99.652	-90.494
	*					
35.000	*	-108.226	-89.618	-71.010	-52.402	-33.794
	*					
40.000	*	-89.326	-61.268	-33.210	-5.152	22.906
	*					
45.000	*	-70.426	-32.918	4.590	42.098	79.606
	*					

20% COST INFLATION	*					
PRICES	*					
25.000	*	-168.392	-173.256	-178.120	-182.984	-187.848
	*					
30.000	*	-149.592	-145.056	-140.520	-135.984	-131.448
	*					
35.000	*	-130.792	-116.856	-102.920	-88.984	-75.048
	*					
40.000	*	-111.992	-88.656	-65.320	-41.984	-18.648
	*					
45.000	*	-93.192	-60.456	-27.720	5.016	37.752
	*					

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

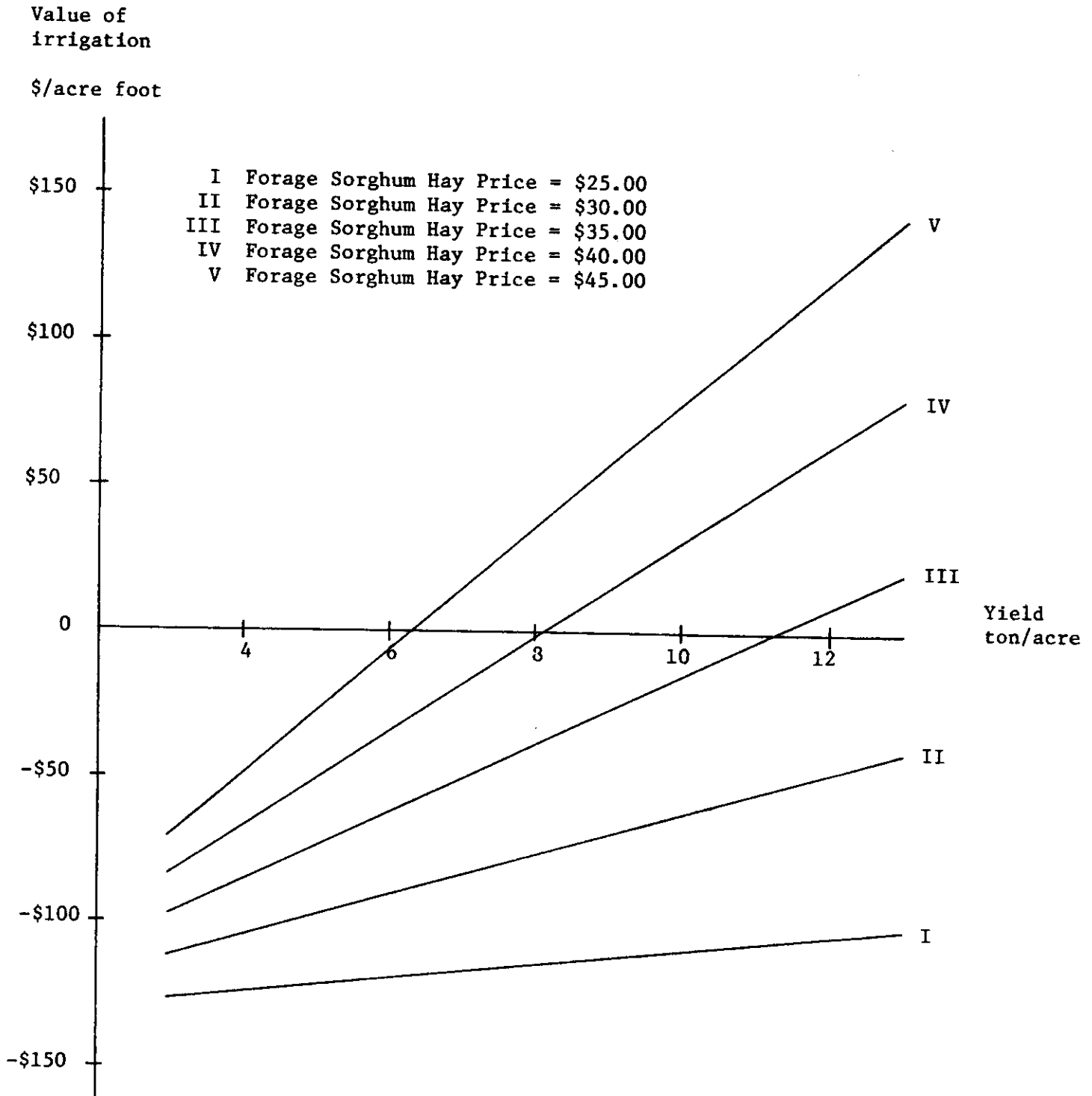


Figure Value of irrigation water applied to Forage Sorghum Hay in Winter Garden for alternative Forage Sorghum Hay prices and yields with expected 1974 costs.

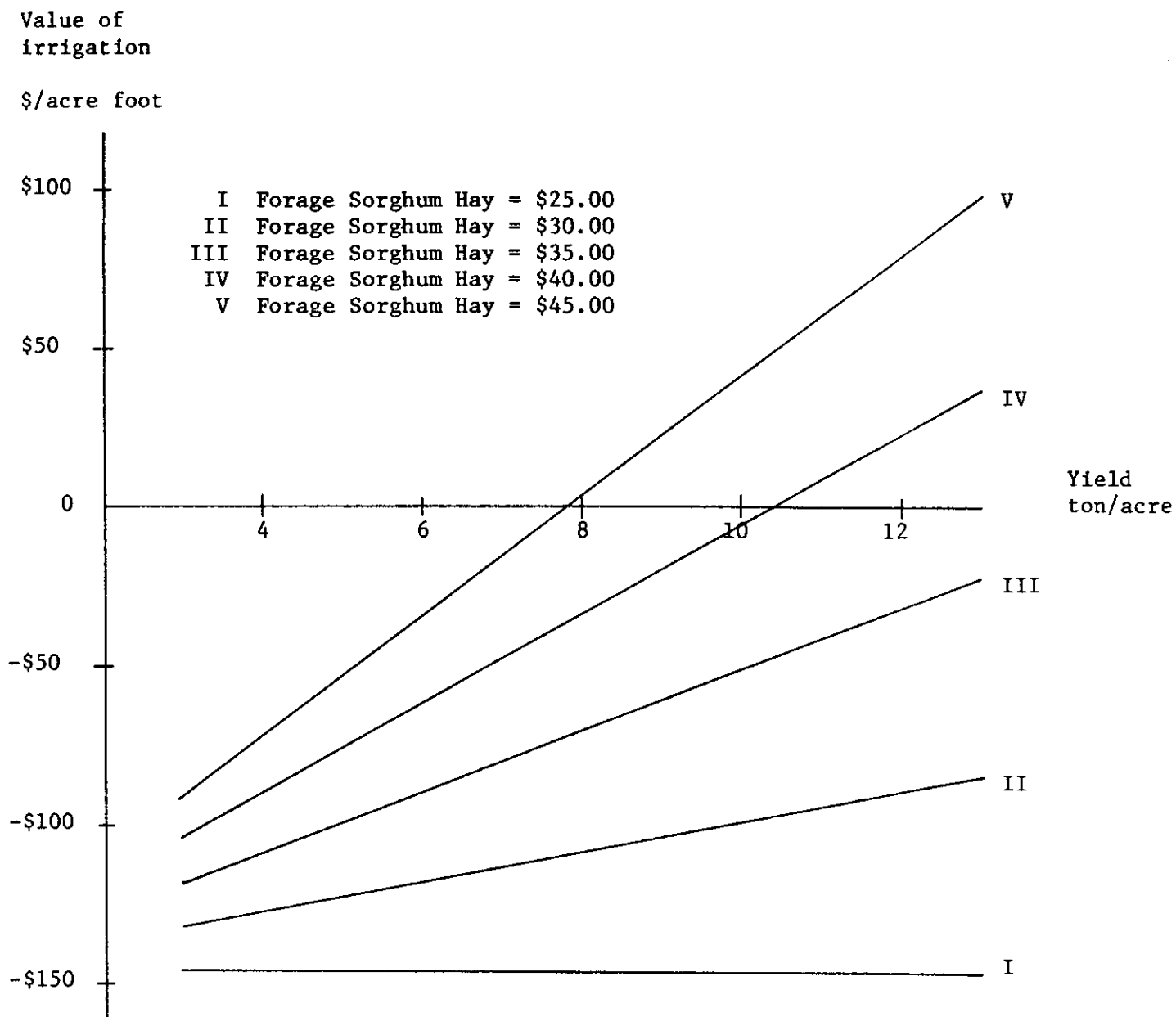


Figure Value of irrigation water applied to Forage Sorghum Hay in Winter Garden for alternative Forage Sorghum Hay prices and yields with expected 1974 costs inflated 10 percent.

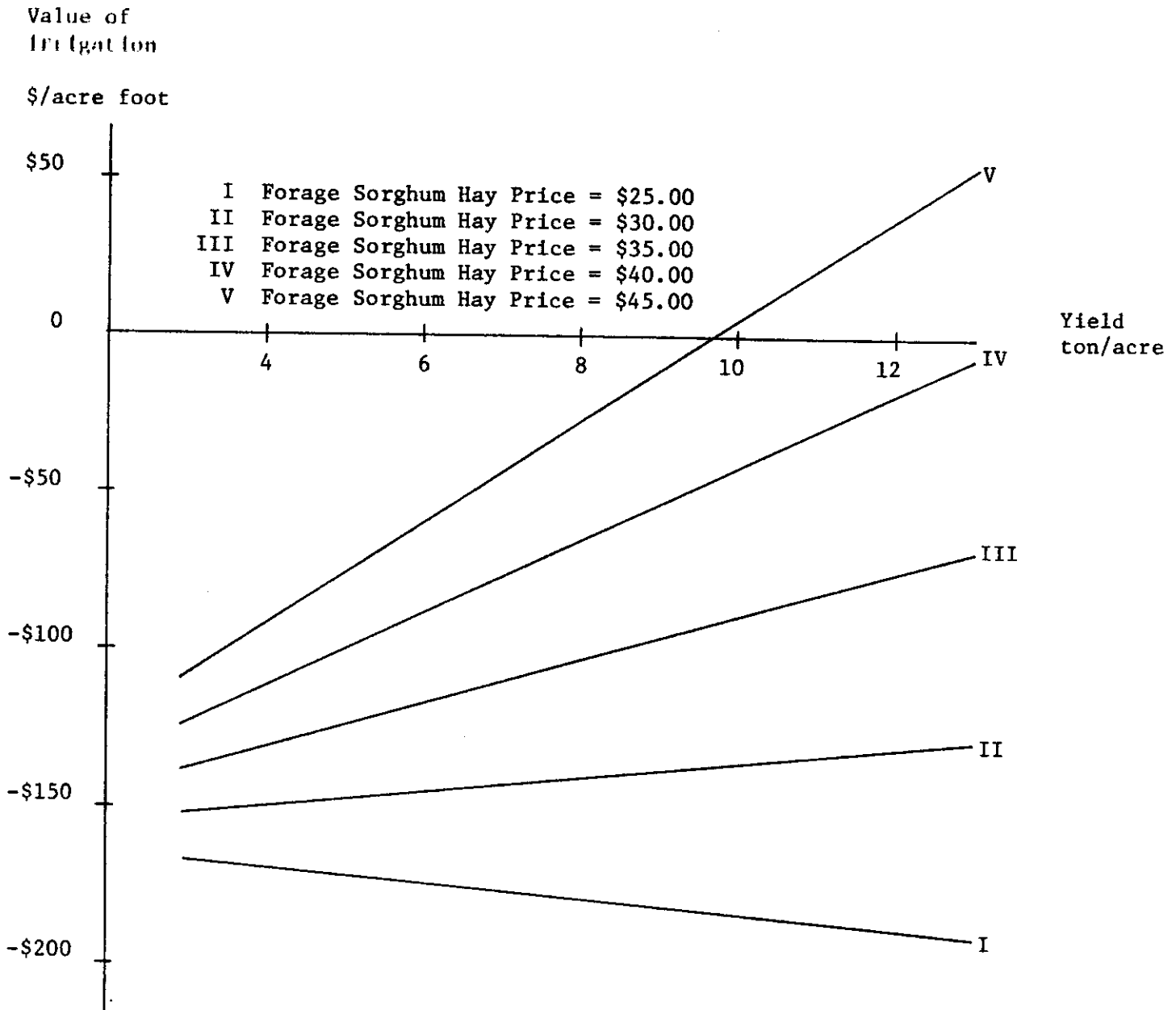


Figure Value of irrigation water applied to Forage Sorghum Hay in Winter Garden for alternative Forage Sorghum Hay prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
GRAIN SORGHUM

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		20.0	30.0	40.0	50.0	60.0
PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-69.632	-57.232	-44.832	-32.432	-20.032
2.500	*	-62.032	-45.832	-29.632	-13.432	2.768
3.000	*	-54.432	-34.432	-14.432	5.568	25.568
3.500	*	-46.832	-23.032	0.768	24.568	48.368
4.000	*	-39.232	-11.632	15.968	43.568	71.168
10% COST INFLATION	*					
PRICES	*					
2.000	*	-79.795	-67.755	-55.715	-43.675	-31.635
2.500	*	-72.235	-56.415	-40.595	-24.775	-8.955
3.000	*	-64.675	-45.075	-25.475	-5.875	13.725
3.500	*	-57.115	-33.735	-10.355	13.025	36.405
4.000	*	-49.555	-22.395	4.765	31.925	59.085
20% COST INFLATION	*					
PRICES	*					
2.000	*	-89.958	-78.278	-66.598	-54.918	-43.238
2.500	*	-82.438	-66.998	-51.558	-36.118	-20.678
3.000	*	-74.918	-55.718	-36.518	-17.318	1.882
3.500	*	-67.398	-44.438	-21.478	1.482	24.442
4.000	*	-59.878	-33.158	-6.438	20.282	47.002

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

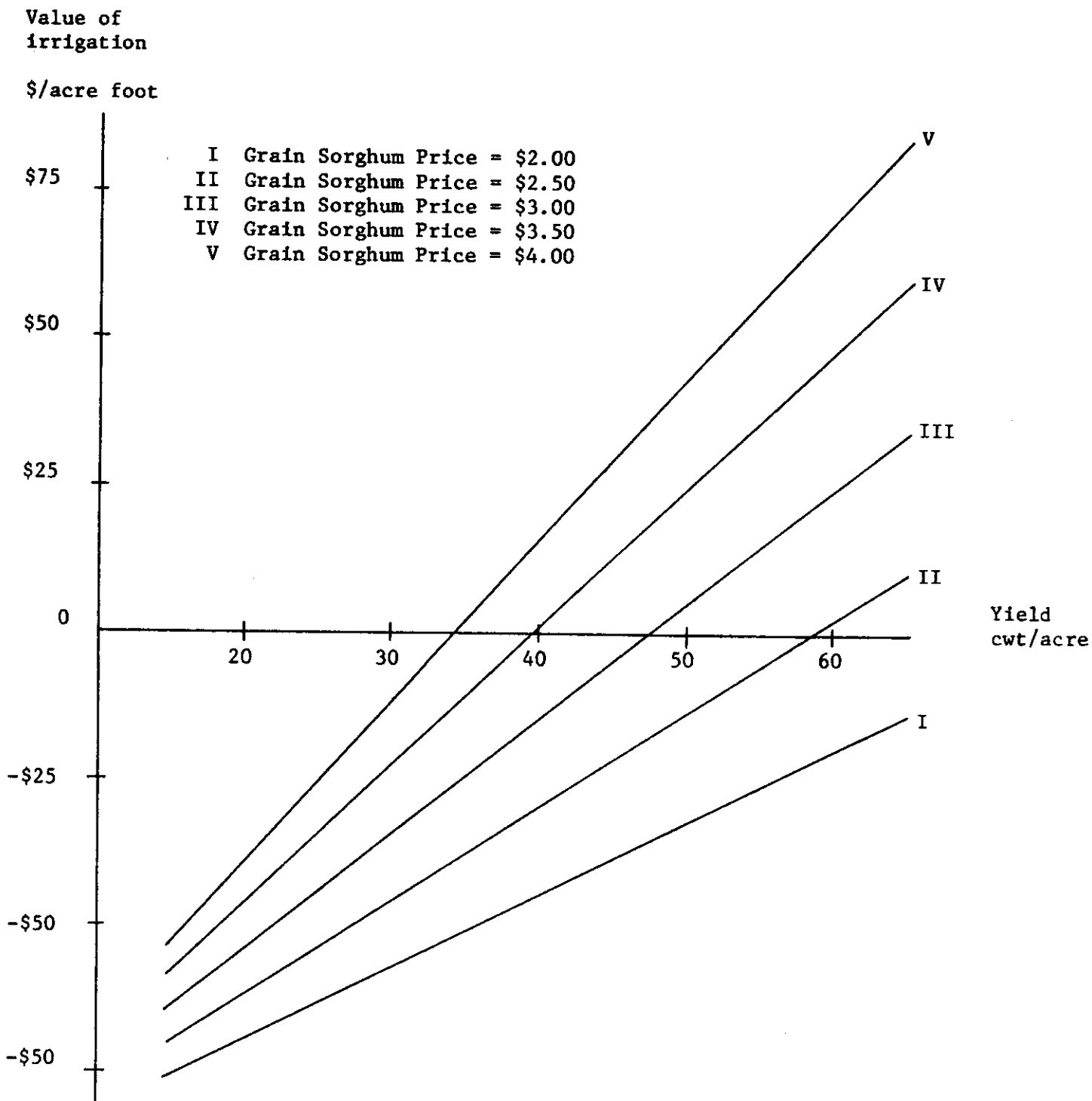


Figure Value of irrigation water applied to Grain Sorghum in Winter Garden for alternative Grain Sorghum prices and yields with expected 1974 costs.

Value of irrigation

\$/acre foot

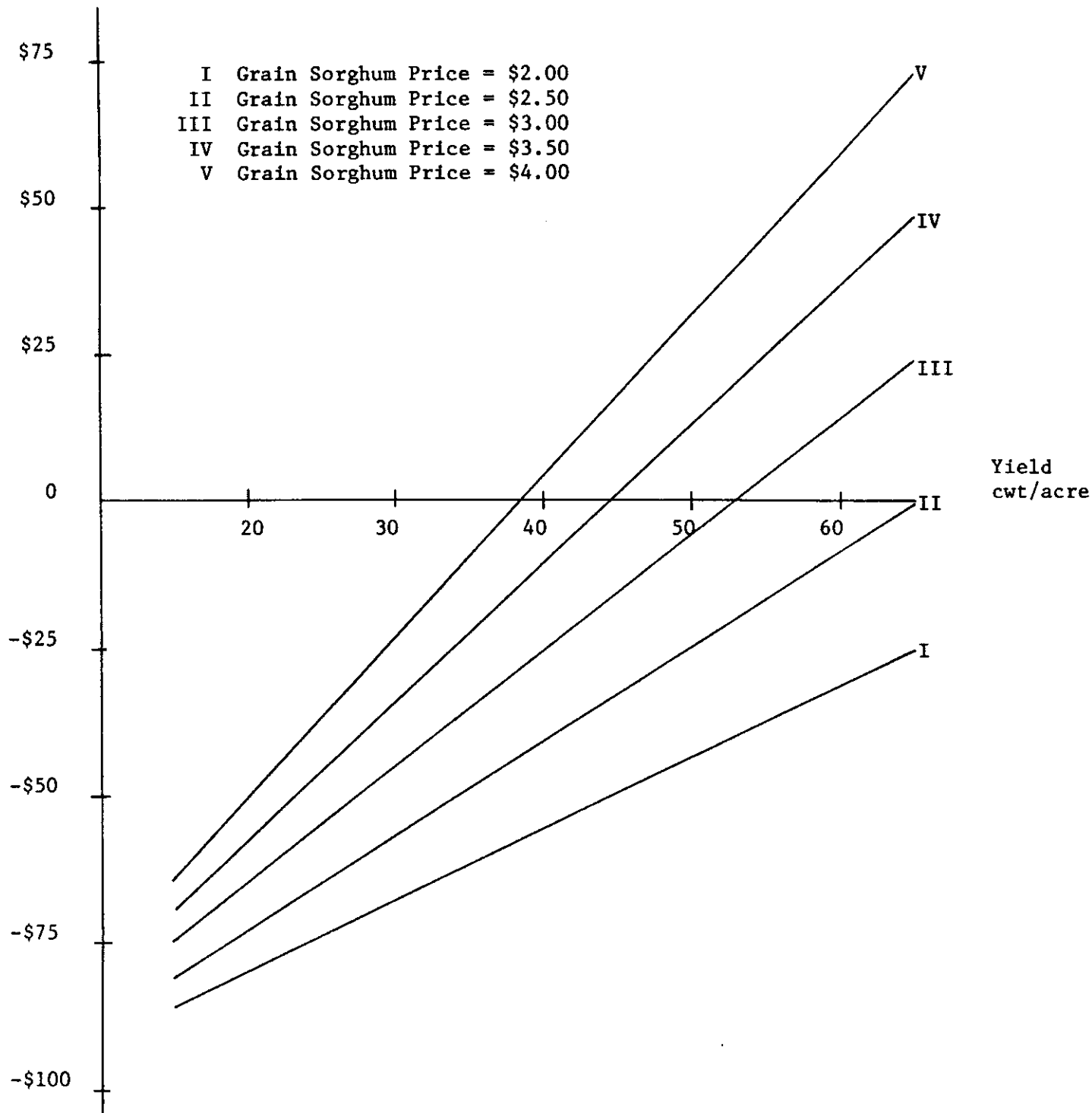


Figure Value of irrigation water applied to Grain Sorghum in Winter Garden for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 10 percent.

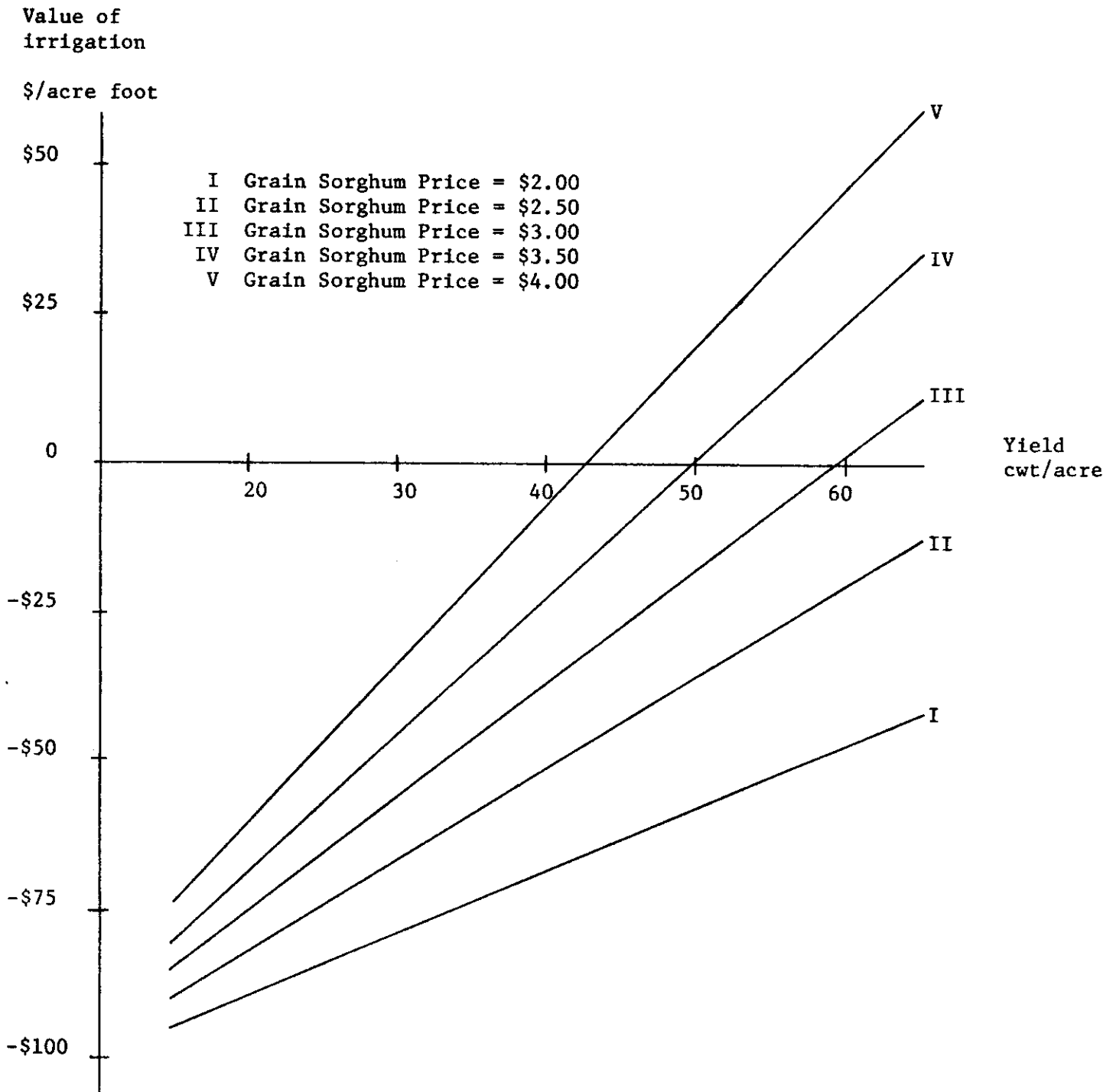


Figure Value of irrigation water applied to Grain Sorghum in Winter Garden for alternative Grain Sorghum prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
LETTUCE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION CARTON PER ACRE				
		200.0	300.0	400.0	500.0	600.0

PRODUCTION COSTS 1974	*					
PRICES	*					
1.000	*	-256.032	-301.245	-346.457	-391.670	-436.883
	*					
1.750	*	-180.234	-187.548	-194.862	-202.176	-209.489
	*					
2.500	*	-104.436	-73.851	-43.266	-12.681	17.904
	*					
3.250	*	-28.638	39.846	108.330	176.814	245.298
	*					
4.000	*	47.160	153.542	259.925	366.308	472.691
	*					

10% COST INFLATION	*					
PRICES	*					
1.000	*	-292.273	-347.326	-402.380	-457.433	-512.486
	*					
1.750	*	-216.874	-234.228	-251.582	-268.936	-286.289
	*					
2.500	*	-141.475	-121.130	-100.784	-80.438	-60.093
	*					
3.250	*	-66.077	-8.031	50.014	108.059	166.104
	*					
4.000	*	9.322	105.067	200.812	296.556	392.301
	*					

20% COST INFLATION	*					
PRICES	*					
1.000	*	-328.515	-393.408	-458.302	-523.196	-588.089
	*					
1.750	*	-253.515	-280.908	-308.302	-335.696	-363.089
	*					
2.500	*	-178.515	-168.408	-158.302	-148.196	-138.089
	*					
3.250	*	-103.515	-55.908	-8.302	39.304	86.911
	*					
4.000	*	-28.515	56.592	141.698	226.804	311.911
	*					

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

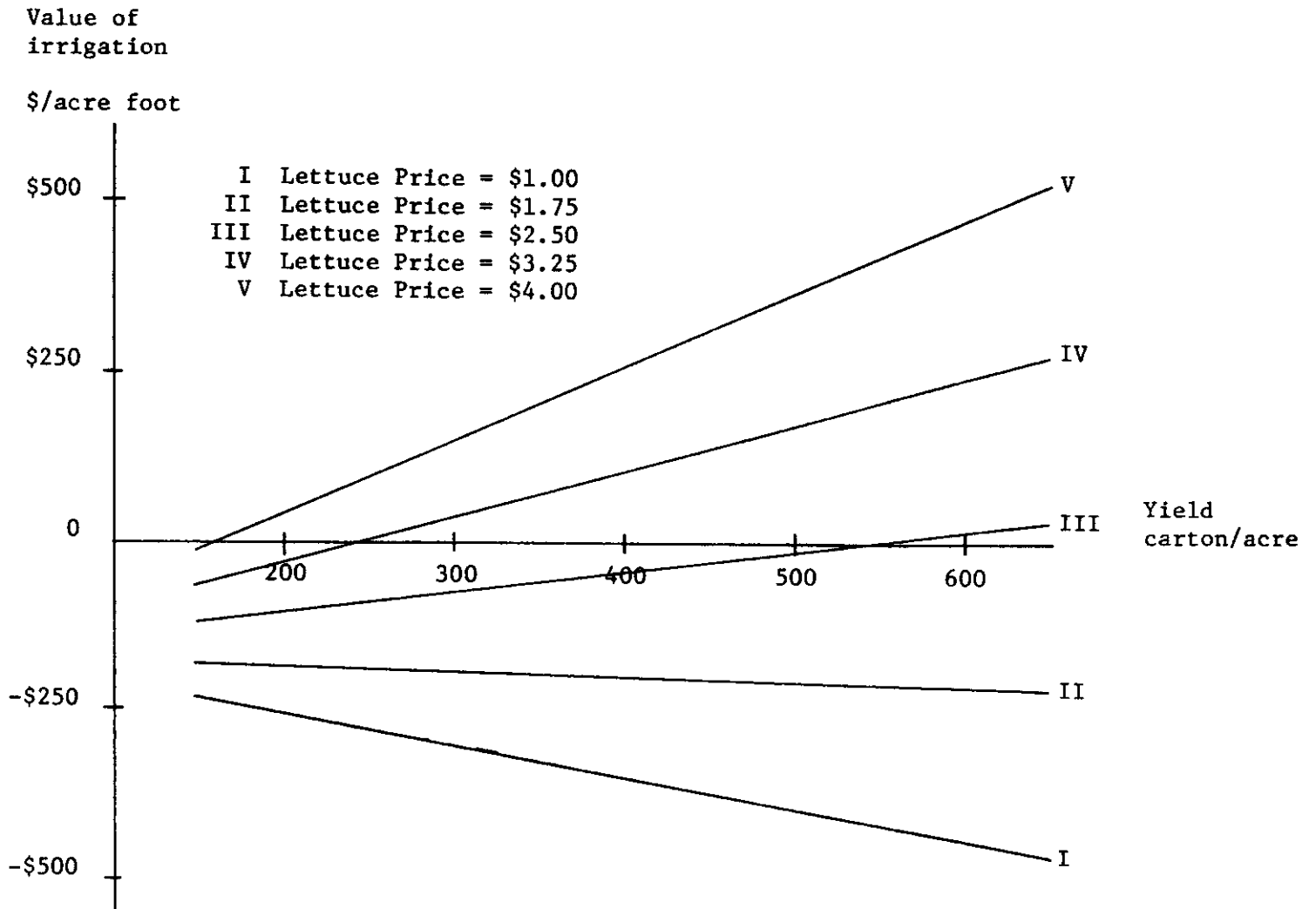


Figure Value of irrigation water applied to Lettuce in Winter Garden for alternative Lettuce prices and yields with expected 1974 costs.

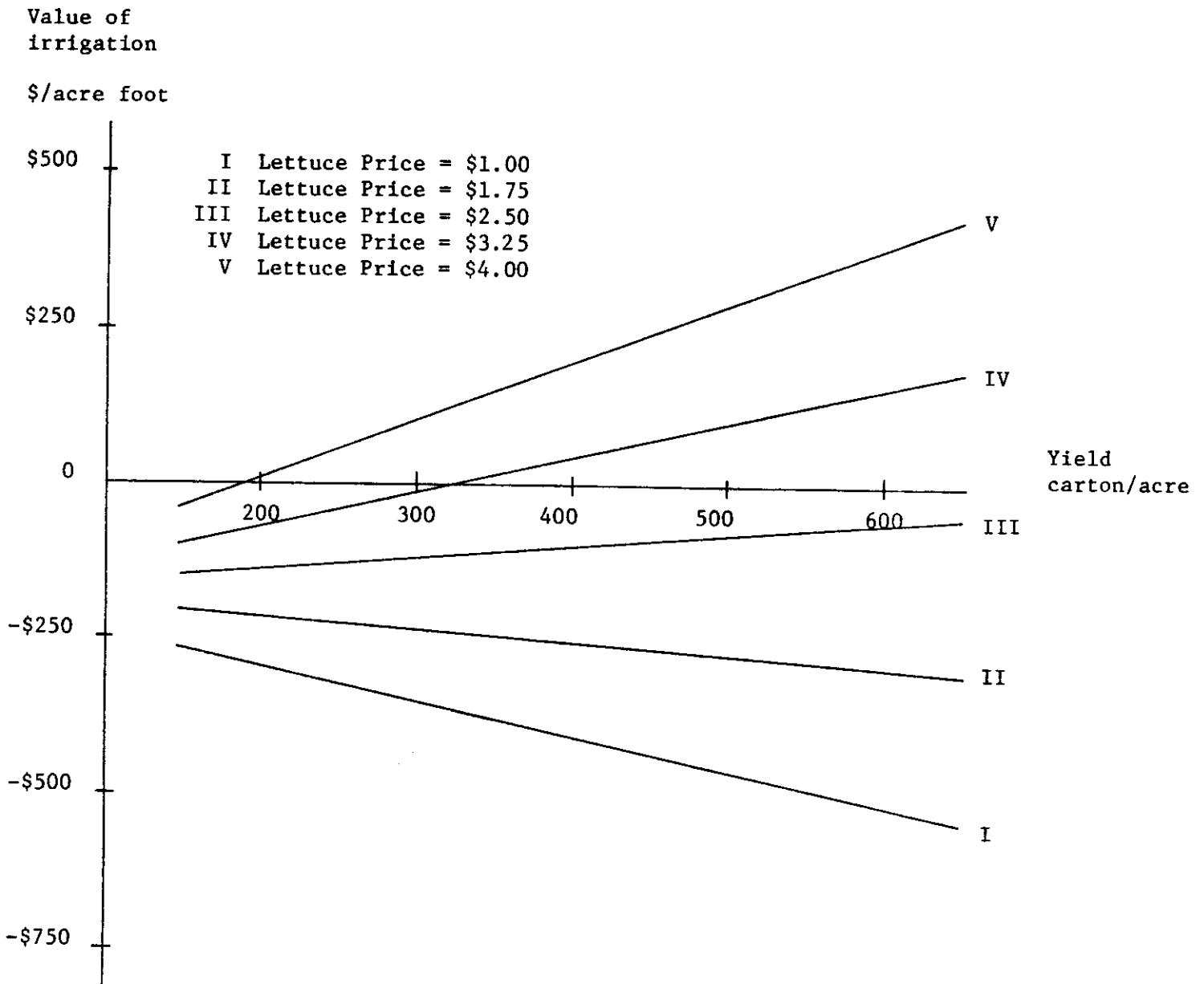


Figure Value of irrigation water applied to Lettuce in Winter Garden for alternative Lettuce prices and yields with expected 1974 costs inflated 10 percent.

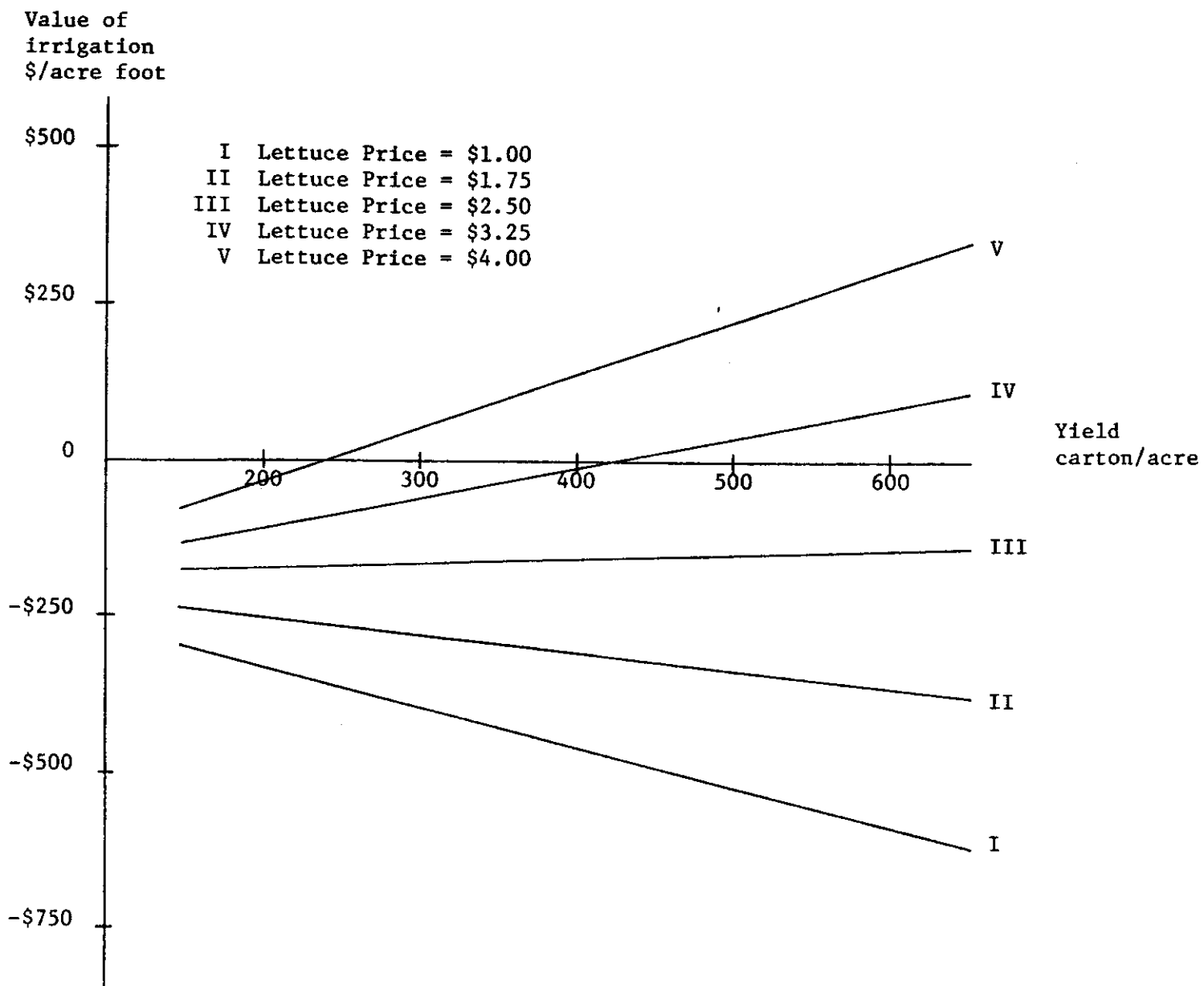


Figure Value of irrigation water applied to Lettuce in Winter Garden for alternative Lettuce prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
ONIONS

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		200.0	350.0	500.0	650.0	800.0
PRODUCTION COSTS 1974	*					
PRICES	*					
1.250	*	-177.320	-220.070	-262.820	-305.570	-348.320
2.250	*	-101.320	-87.070	-72.820	-58.570	-44.320
3.250	*	-25.320	45.930	117.180	188.430	259.680
4.250	*	50.680	178.930	307.180	435.430	563.680
5.250	*	126.680	311.930	497.180	682.430	867.680
10% COST INFLATION	*					
PRICES	*					
1.250	*	-205.052	-259.577	-314.102	-368.627	-423.152
2.250	*	-129.452	-127.277	-125.102	-122.927	-120.752
3.250	*	-53.852	5.023	63.898	122.773	181.648
4.250	*	21.748	137.323	252.898	368.473	484.048
5.250	*	97.348	269.623	441.898	614.173	786.448
20% COST INFLATION	*					
PRICES	*					
1.250	*	-232.784	-299.084	-365.384	-431.684	-497.984
2.250	*	-157.584	-167.484	-177.384	-187.284	-197.184
3.250	*	-82.384	-35.884	10.616	57.116	103.616
4.250	*	-7.184	95.716	198.616	301.516	404.416
5.250	*	68.016	227.316	386.616	545.916	705.216

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
irrigation
\$/acre foot

- I Onion Price = \$1.25
- II Onion Price = \$2.25
- III Onion Price = \$3.25
- IV Onion Price = \$4.25
- V Onion Price = \$5.25

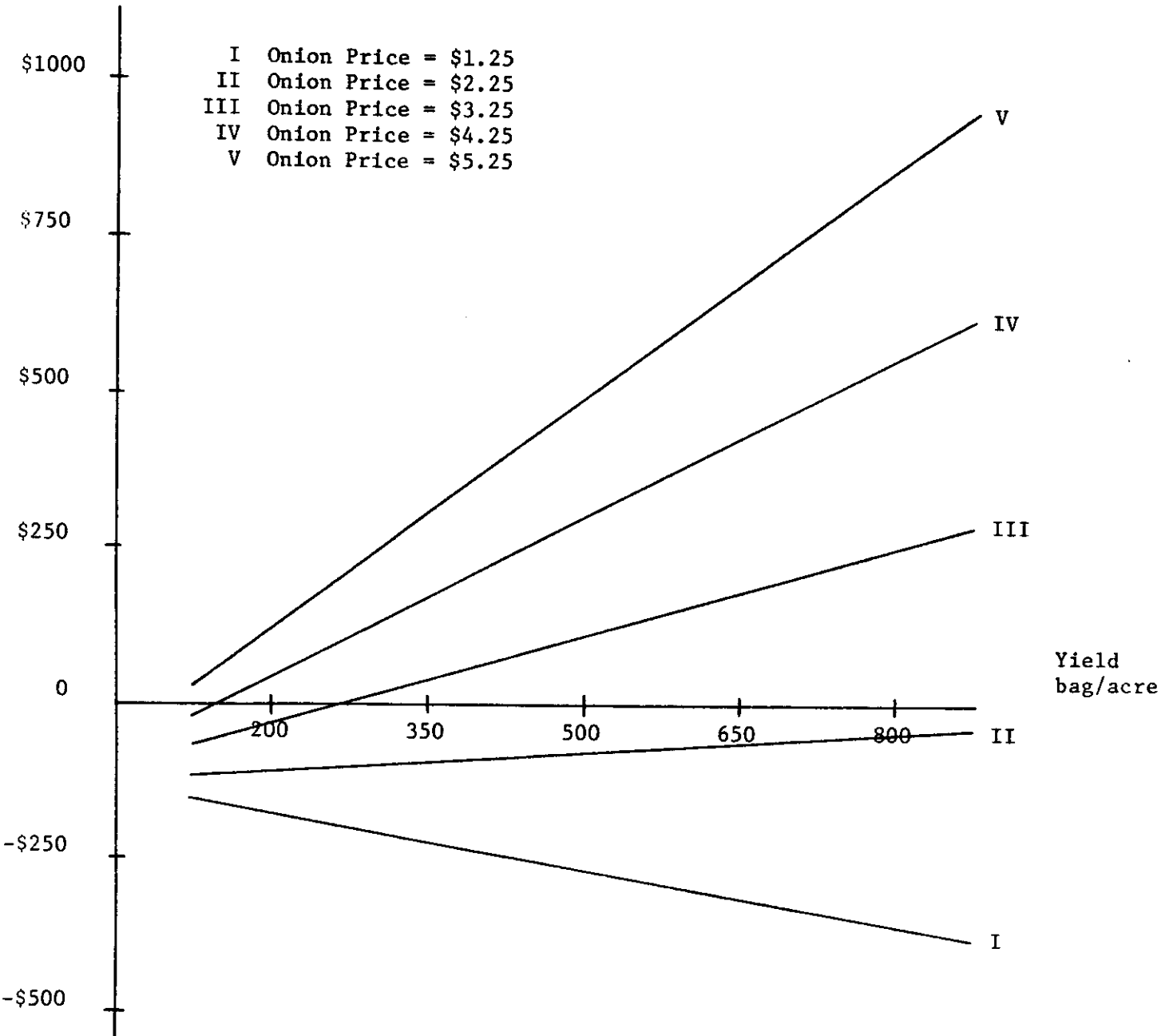


Figure Value of irrigation water applied to Onions in Winter Garden for alternative Onion prices and yields with expected 1974 costs.

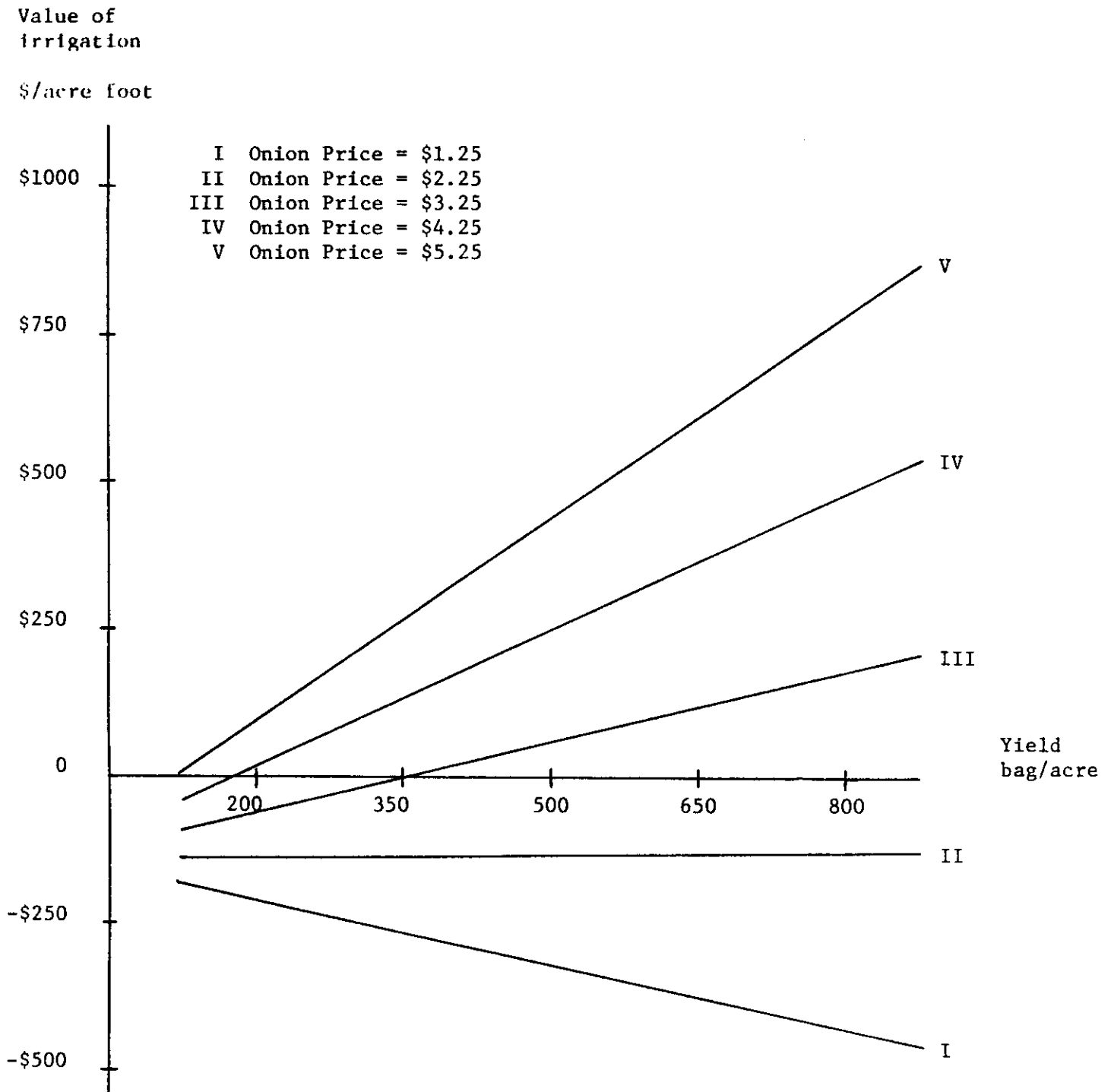


Figure Value of irrigation water applied to Onions in Winter Garden for alternative Onion prices and yields with expected 1974 costs inflated 10 percent.

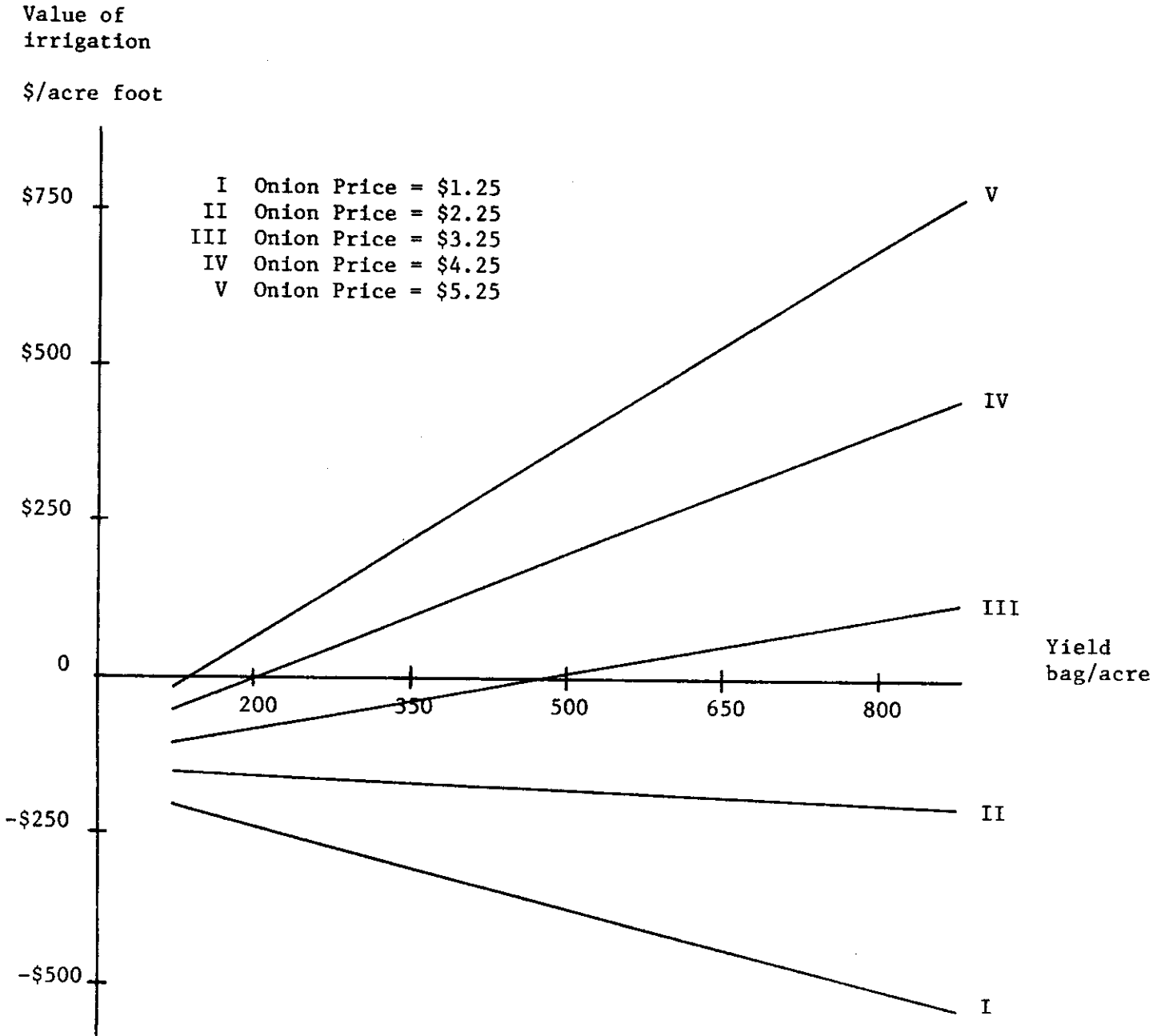


Figure Value of irrigation water applied to Onions in Winter Garden for alternative Onion prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
FRESH SPINACH

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION CARTON PER ACRE				
		250.0	350.0	450.0	550.0	650.0

PRODUCTION COSTS 1974	*					
PRICES	*					
2.000	*	-162.365	-168.353	-174.341	-180.329	-186.317
	*					
3.000	*	-20.150	30.749	81.647	132.545	183.443
	*					
4.000	*	122.066	229.850	337.635	445.419	553.204
	*					
5.000	*	264.281	428.952	593.623	758.293	922.964
	*					
6.000	*	406.497	628.054	849.611	1071.167	1292.724
	*					

10% COST INFLATION						
PRICES	*					
2.000	*	-208.542	-227.105	-245.668	-264.230	-282.793
	*					
3.000	*	-67.075	-29.051	8.973	46.997	85.021
	*					
4.000	*	74.392	169.003	263.614	358.224	452.835
	*					
5.000	*	215.859	367.057	518.254	669.452	820.650
	*					
6.000	*	357.326	565.111	772.895	980.679	1188.464
	*					

20% COST INFLATION						
PRICES	*					
2.000	*	-254.718	-285.856	-316.994	-348.131	-379.269
	*					
3.000	*	-114.000	-88.850	-63.700	-38.551	-13.401
	*					
4.000	*	26.719	108.156	189.593	271.030	352.467
	*					
5.000	*	167.437	305.162	442.886	580.611	718.335
	*					
6.000	*	308.156	502.168	696.180	890.192	1084.204
	*					

 A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

\$/acre foot

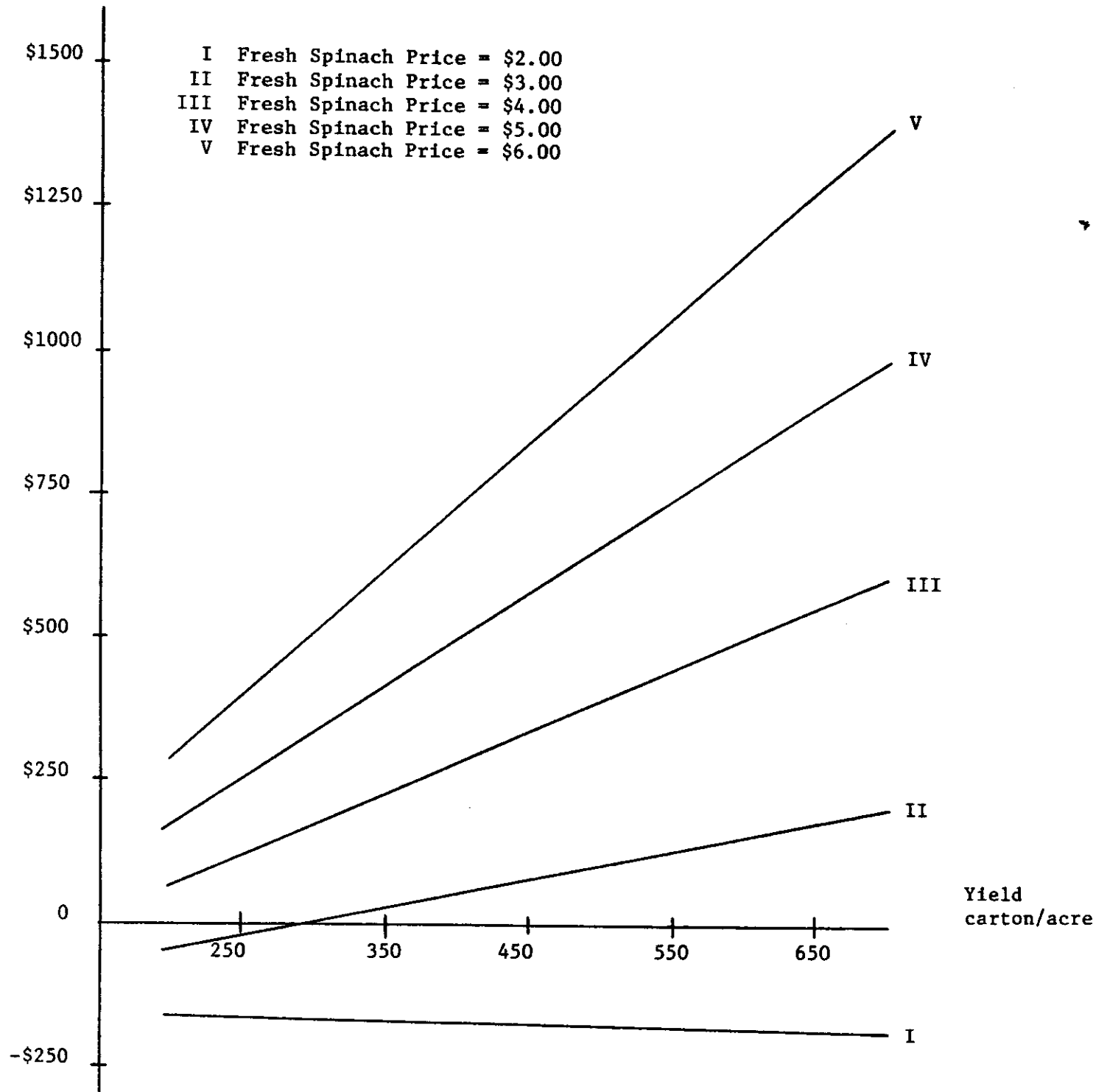


Figure Value of irrigation water applied to Fresh Spinach in Winter Garden for alternative Fresh Spinach prices and yields with expected 1974 costs.

\$/acre foot

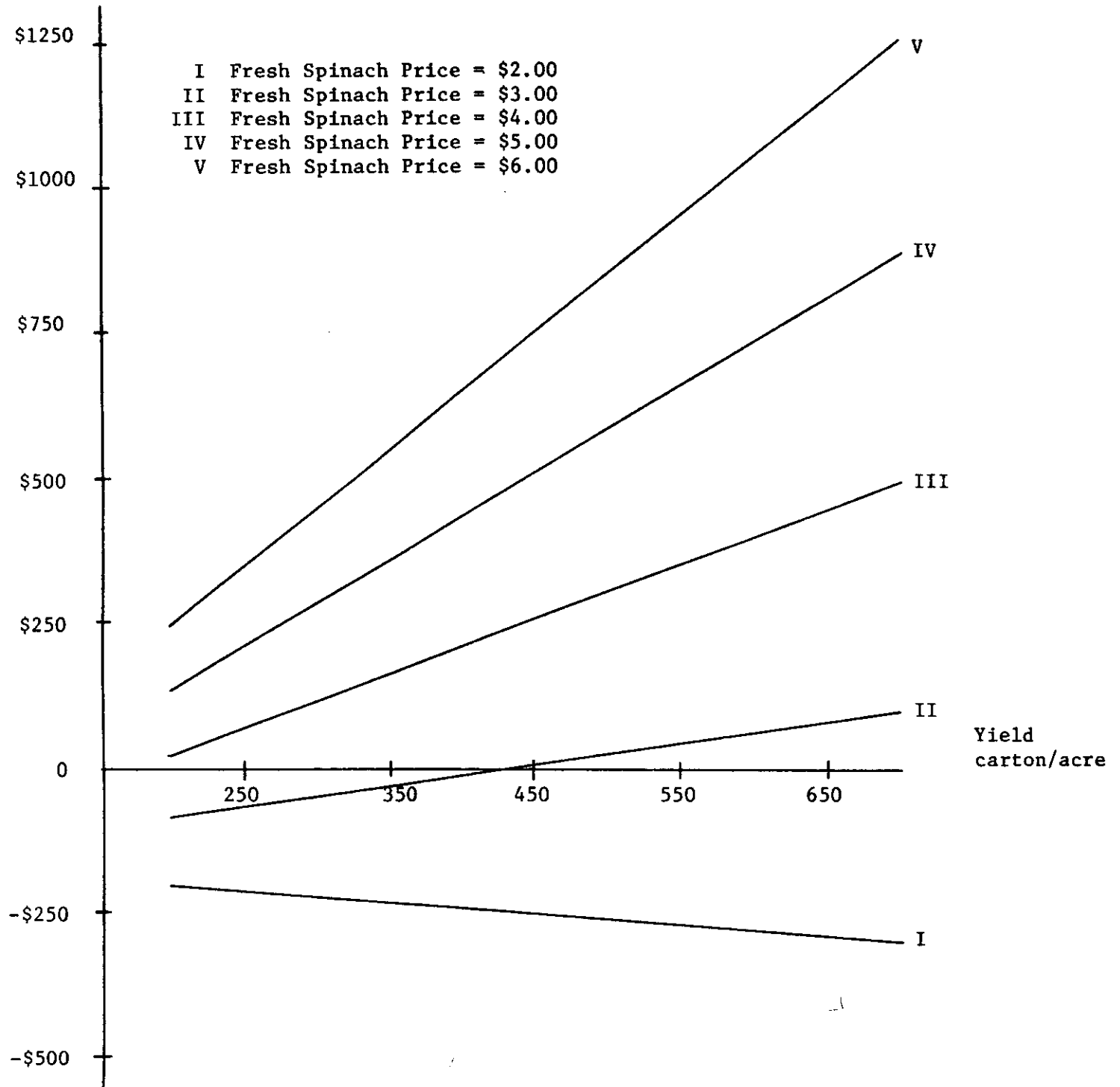


Figure Value of irrigation water applied to Fresh Spinach in Winter Garden for alternative Fresh Spinach prices and yields with expected 1974 costs inflated 10 percent.

\$/acre foot

- I Fresh Spinach Price = \$2.00
- II Fresh Spinach Price = \$3.00
- III Fresh Spinach Price = \$4.00
- IV Fresh Spinach Price = \$5.00
- V Fresh Spinach Price = \$6.00

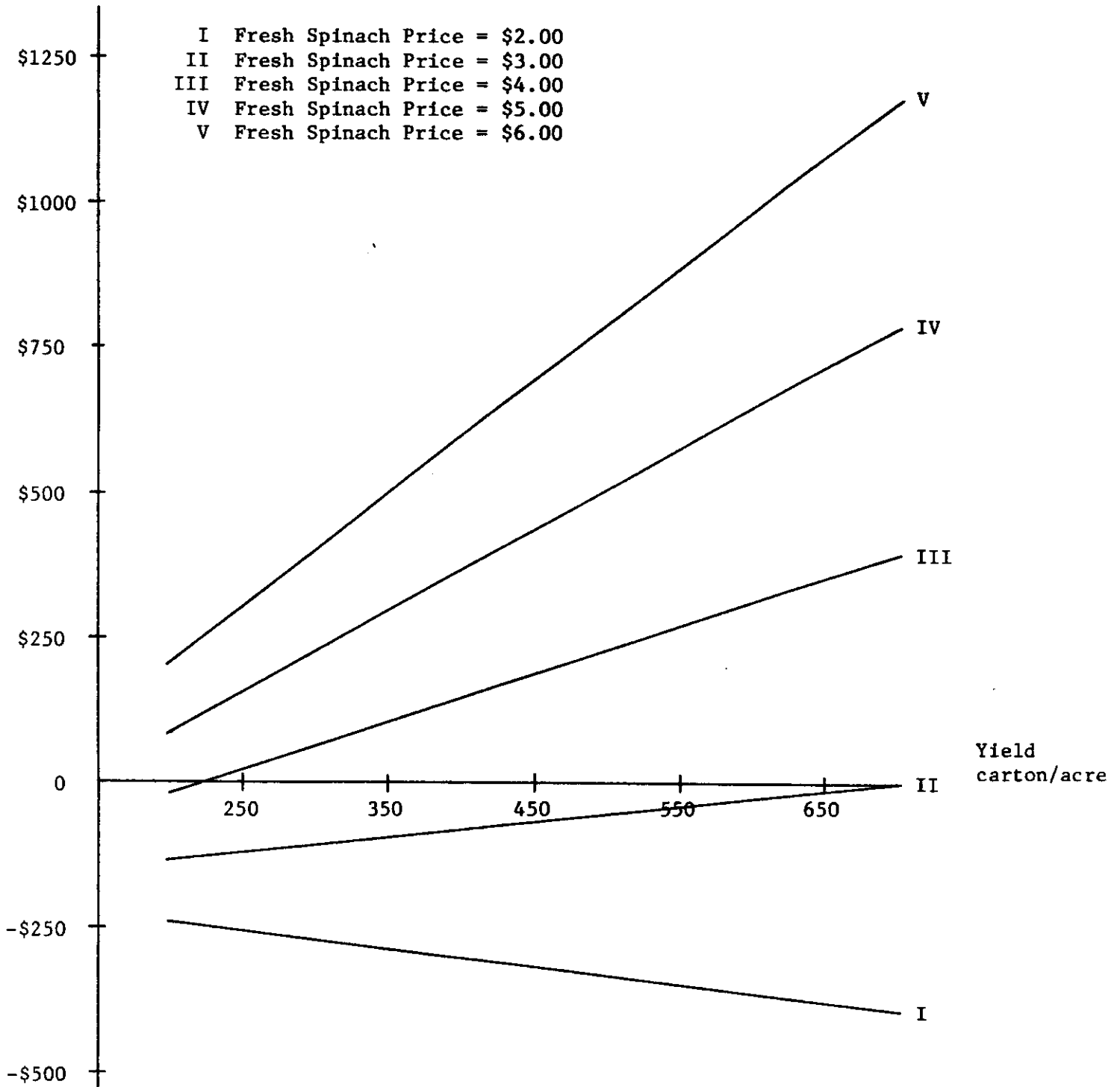


Figure Value of irrigation water applied to Fresh Spinach in Winter Garden for alternative Fresh Spinach prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
PROCESSED SPINACH

PRODUCTION COSTS AND PRODUCT PRICES	YIELD UNDER IRRIGATION				
	6.0	7.5	9.0	10.5	12.0
PRODUCTION COSTS 1974					
PRICES					
30.000	-95.090	-86.399	-77.708	-69.017	-60.326
40.000	-70.627	-55.820	-41.013	-26.206	-11.399
50.000	-46.163	-25.240	-4.318	16.605	37.528
60.000	-21.700	5.339	32.378	59.416	86.455
70.000	2.764	35.918	69.073	102.227	135.382
10% COST INFLATION					
PRICES					
30.000	-112.324	-104.696	-97.067	-89.438	-81.809
40.000	-87.990	-74.277	-60.565	-46.852	-33.140
50.000	-63.655	-43.859	-24.063	-4.266	15.530
60.000	-39.320	-13.440	12.440	38.319	64.199
70.000	-14.985	16.978	48.942	80.905	112.869
20% COST INFLATION					
PRICES					
30.000	-129.559	-122.992	-116.426	-109.859	-103.293
40.000	-105.353	-92.735	-80.117	-67.499	-54.881
50.000	-81.147	-62.477	-43.808	-25.138	-6.469
60.000	-56.941	-32.220	-7.499	17.222	41.943
70.000	-32.735	-1.962	28.810	59.583	90.355

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

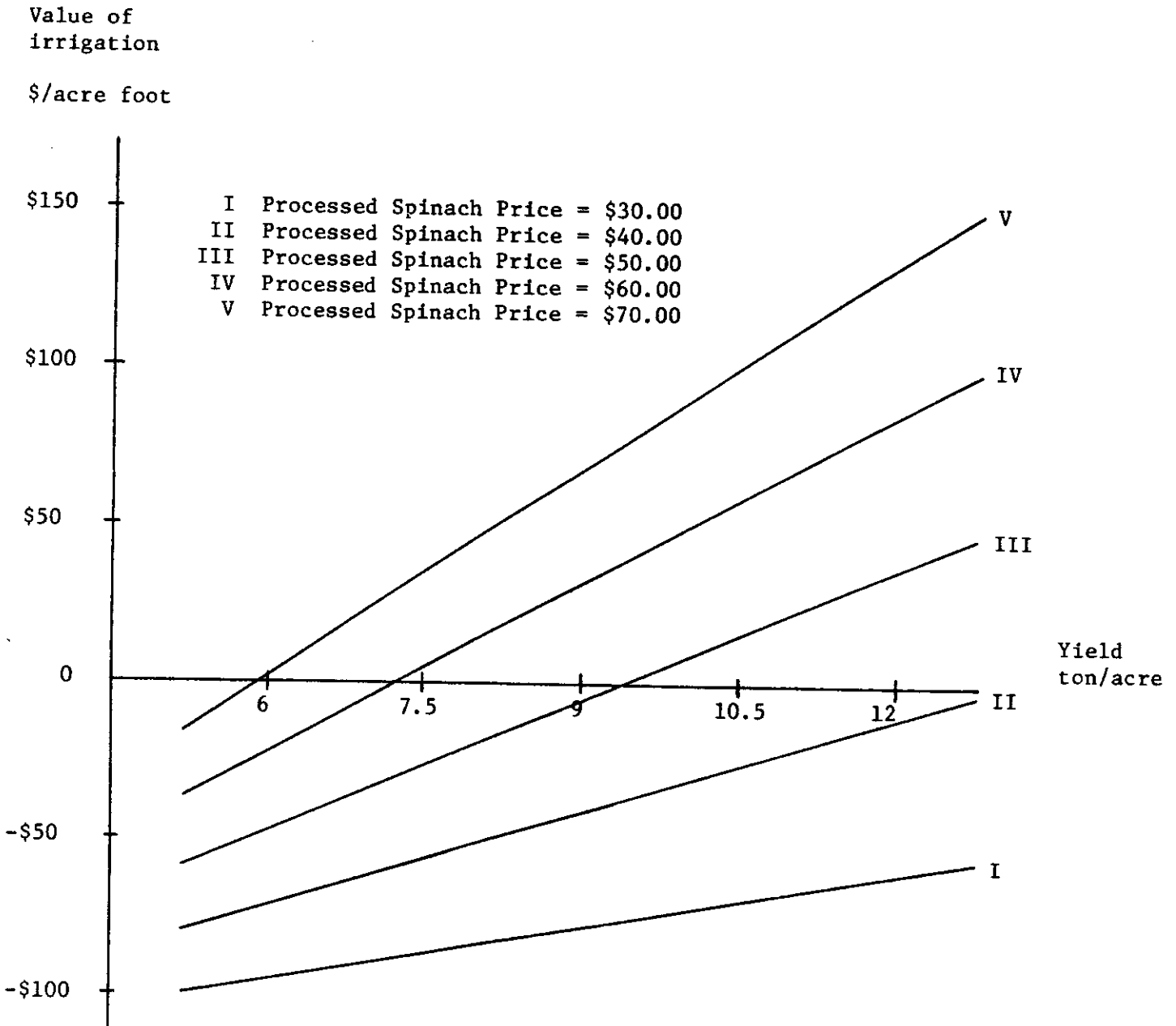


Figure Value of irrigation water applied to Processed Spinach in Winter Garden for alternative Processed Spinach prices and yields with expected 1974 costs.

Value of
irrigation
\$/acre foot

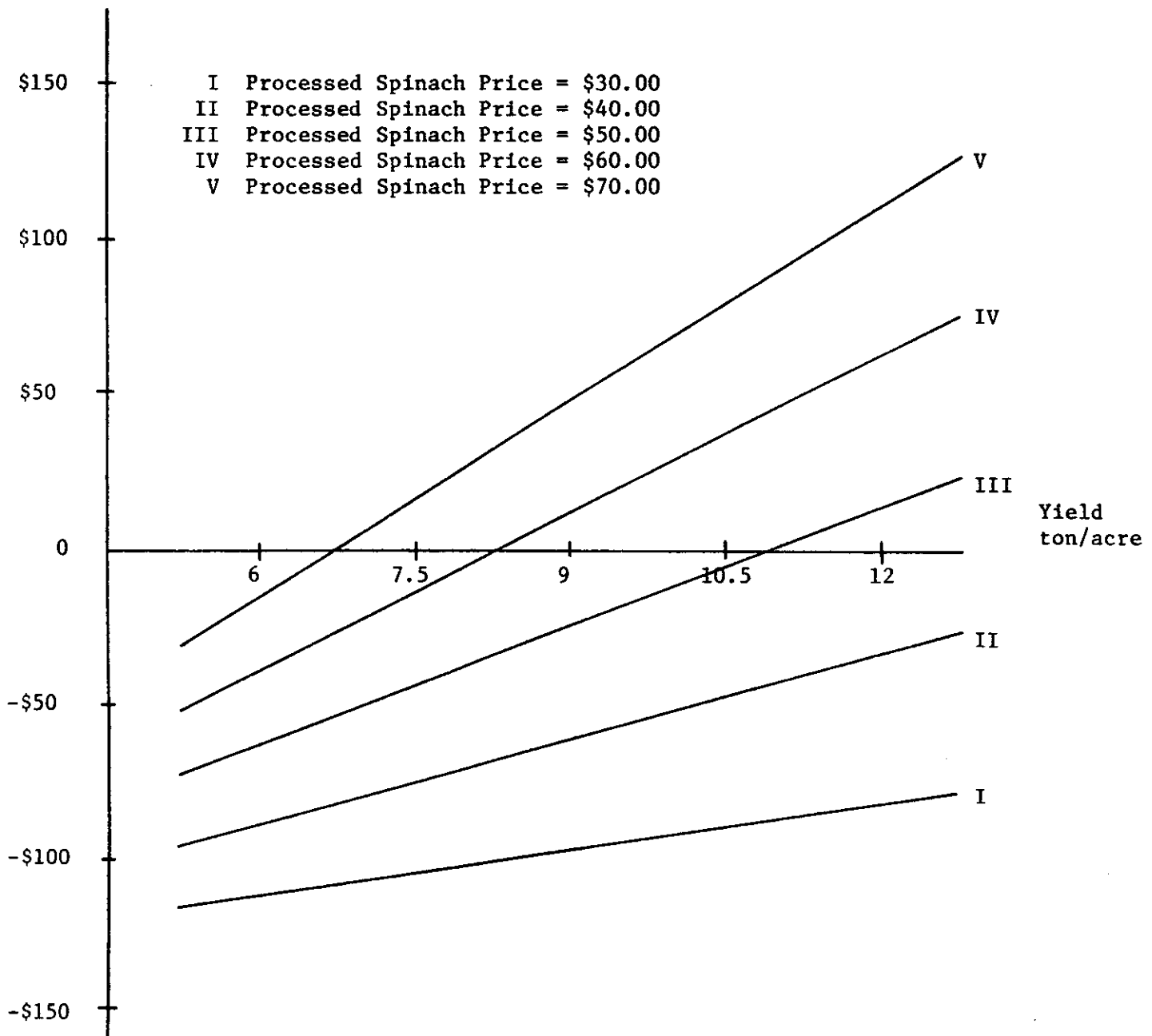


Figure Value of irrigation water applied to Processed Spinach in Winter Garden for alternative Processed Spinach prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation

\$/acre foot

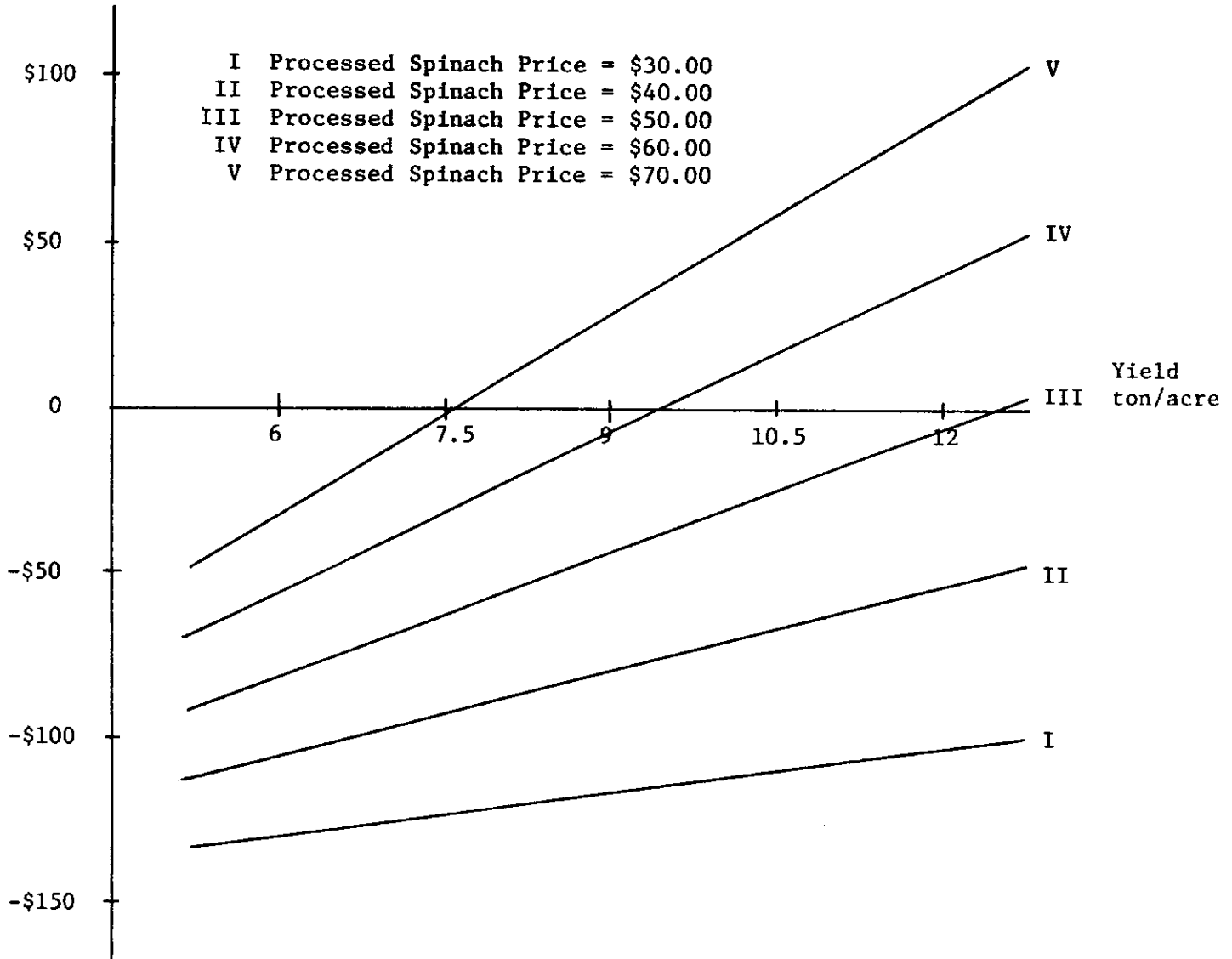


Figure Value of irrigation water applied to Processed Spinach in Winter Garden for alternative Processed Spinach prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
WHEAT

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION BU PER ACRE				
		10.0	20.0	30.0	40.0	50.0
PRODUCTION COSTS 1974						
PRICES	*					
1.000	*	-112.169	-101.807	-91.446	-81.084	-70.723
2.000	*	-100.723	-78.916	-57.108	-35.301	-13.494
3.000	*	-89.277	-56.024	-22.771	10.482	43.735
4.000	*	-77.831	-33.133	11.566	56.265	100.964
5.000	*	-66.386	-10.241	45.904	102.048	158.193
10% COST INFLATION						
PRICES	*					
1.000	*	-124.590	-114.398	-104.205	-94.012	-83.819
2.000	*	-113.205	-91.626	-70.048	-48.470	-26.892
3.000	*	-101.819	-68.855	-35.892	-2.928	30.036
4.000	*	-90.434	-46.084	-1.735	42.614	86.964
5.000	*	-79.048	-23.313	32.422	88.157	143.892
20% COST INFLATION						
PRICES	*					
1.000	*	-137.012	-126.988	-116.964	-106.940	-96.916
2.000	*	-125.687	-104.337	-82.988	-61.639	-40.289
3.000	*	-114.361	-81.687	-49.012	-16.337	16.337
4.000	*	-103.036	-59.036	-15.036	28.964	72.964
5.000	*	-91.711	-36.385	18.940	74.265	129.590

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

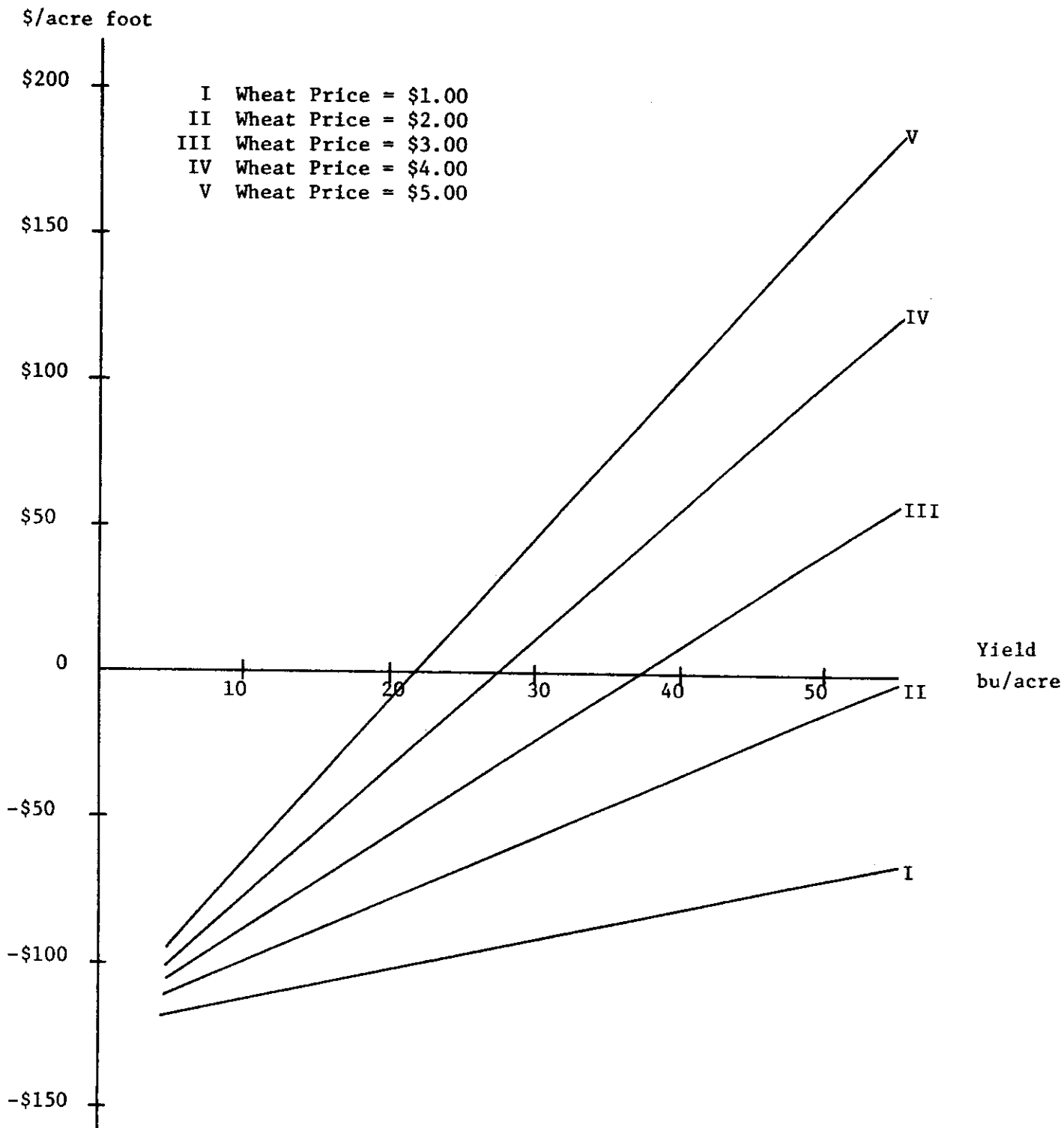


Figure Value of irrigation water applied to Wheat in Winter Garden for alternative Wheat prices and yields for expected 1974 costs.

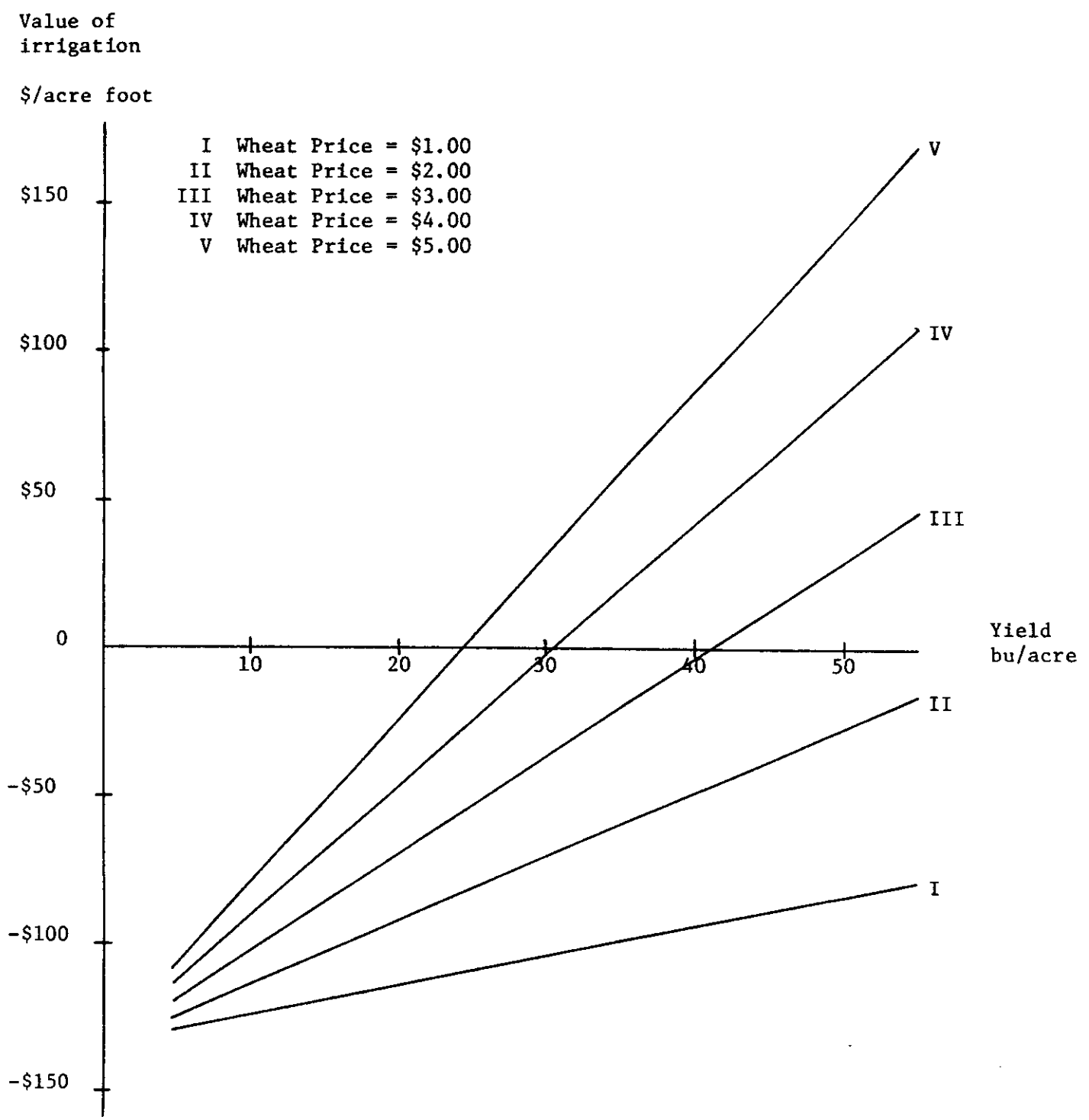


Figure Value of irrigation water applied to Wheat in Winter Garden for alternative Wheat prices and yields with expected 1974 costs inflated 10 percent.

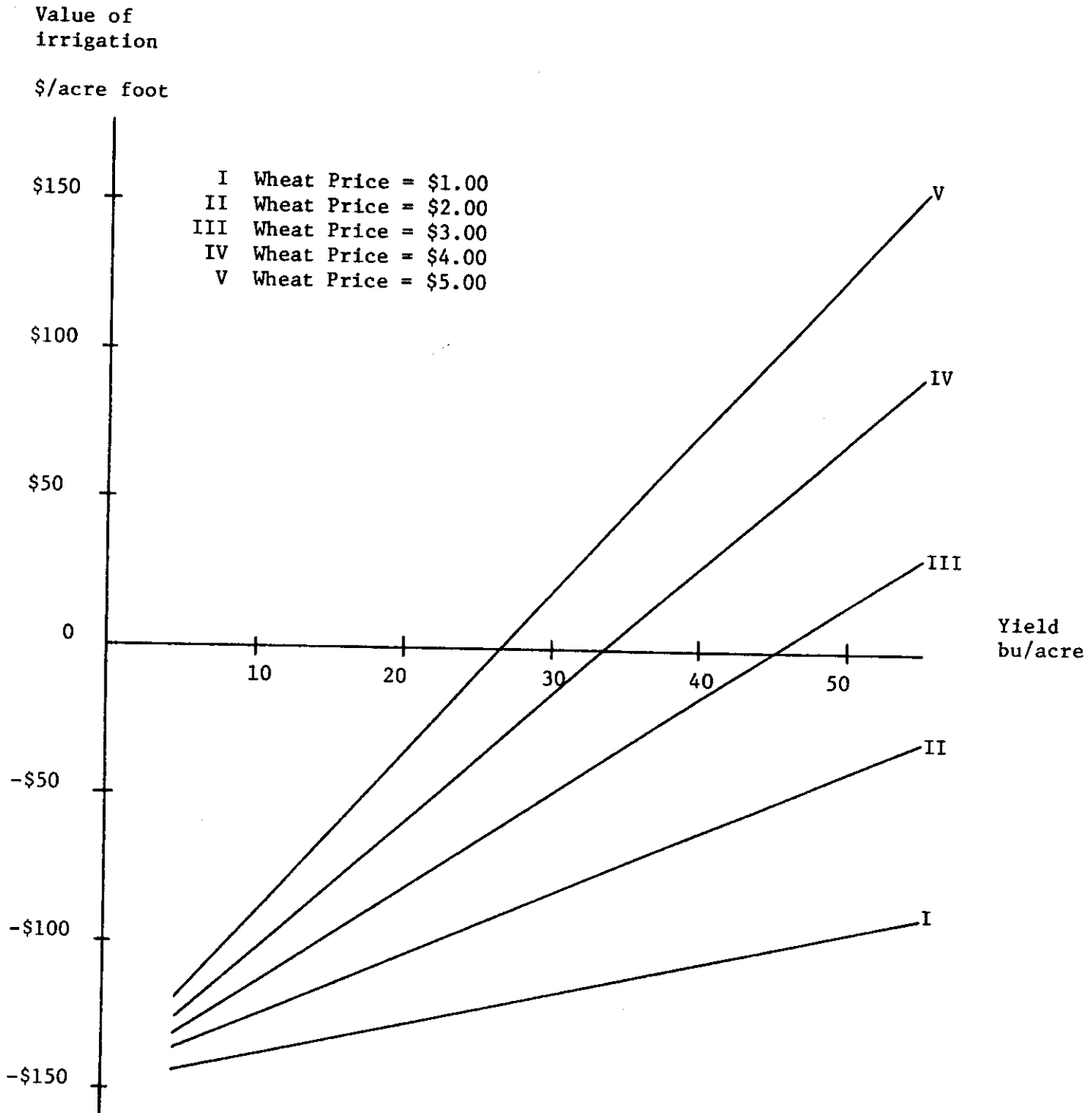


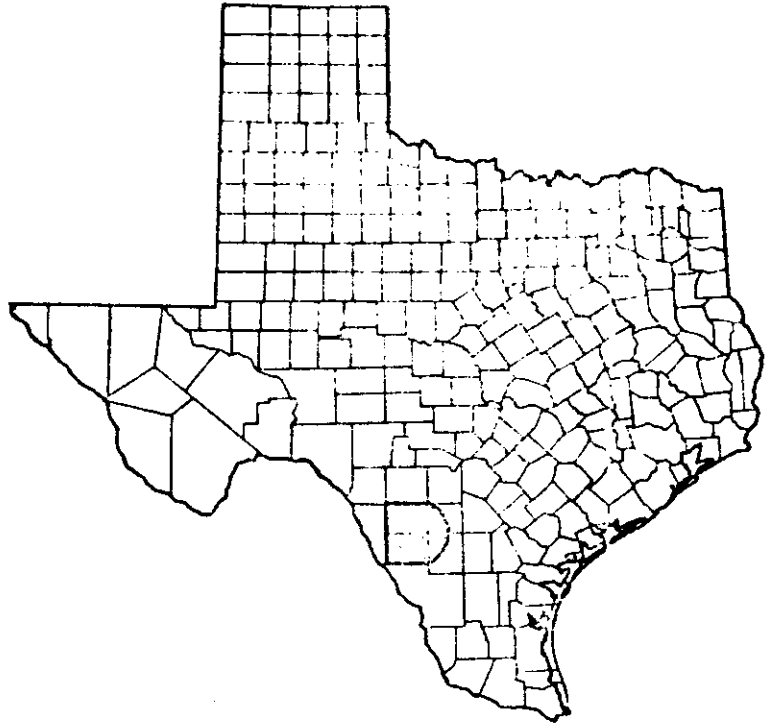
Figure Value of irrigation water applied to Wheat in Winter Garden for alternative Wheat prices and yields with expected 1974 costs inflated 20 percent.

Texas Winter Garden

This area includes Dimmit, Zavala and parts of Frio and LaSalle counties. The majority of the crops are produced under irrigation in the region, due to limited rainfall. Irrigation systems predominately deep well, with a very few acres watered out of the Nueces River.

A land charge of \$20.00 per acre was assessed based on dryland grain sorghum, the only viable dryland crop.

The alternative yields per acre and prices used in this analysis are presented in the following table.



Crop	Unit	Yields					Prices				
		400	500	600	700	800	1.00	2.00	3.00	4.00	5.00
Cabbage	bags	400	500	600	700	800	1.00	2.00	3.00	4.00	5.00
Cantaloupe	crate	50	100	150	200	250	3.50	5.00	6.50	8.00	9.50
Carrots	bag	150	250	350	450	550	3.50	5.00	6.50	8.00	9.50
Corn	bu	50	80	110	140	170	1.75	2.75	3.75	4.75	5.75
Corn silage	ton	5	10	15	20	25	5.00	7.50	10.00	12.50	15.00
Cotton	lbs	200	350	500	650	800	.20	.30	.40	.50	.60
Cucumber	carton	75	150	225	300	375	1.00	2.50	4.00	5.50	7.00
Forage sorghum hay	ton	4	6	8	10	12	25.00	30.00	35.00	40.00	45.00
Grain sorghum	cwt	20	30	40	50	60	2.00	2.50	3.00	3.50	4.00
Lettuce	carton	200	300	400	500	600	1.00	1.75	2.50	3.25	4.00
Onion	bag	200	350	500	650	800	1.25	2.25	3.25	4.25	5.25
Spinach, fresh	carton	250	350	450	550	650	2.00	3.00	4.00	5.00	6.00
Spinach, processing	ton	6	7.5	9	10.5	12	30.00	40.00	50.00	60.00	70.00
Wheat	bu	10	20	30	40	50	1.00	2.00	3.00	4.00	5.00

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
CABBAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION BAG PER ACRE				
		400.0	500.0	600.0	700.0	800.0

PRODUCTION COSTS 1974	*					
PRICES	*					
1.000	*	-280.915	-295.915	-310.915	-325.915	-340.915
	*					
1.500	*	-185.915	-177.165	-168.415	-159.665	-150.915
	*					
2.000	*	-90.915	-58.415	-25.915	6.585	39.085
	*					
2.500	*	4.085	60.335	116.585	172.835	229.085
	*					
3.000	*	99.085	179.085	259.085	339.085	419.085
	*					

10% COST INFLATION	*					
PRICES	*					
1.000	*	-329.006	-350.506	-372.006	-393.506	-415.006
	*					
1.500	*	-234.506	-232.381	-230.256	-228.131	-226.006
	*					
2.000	*	-140.006	-114.256	-88.506	-62.756	-37.006
	*					
2.500	*	-45.506	3.869	53.244	102.619	151.994
	*					
3.000	*	48.994	121.994	194.994	267.993	340.993
	*					

20% COST INFLATION	*					
PRICES	*					
1.000	*	-377.098	-405.098	-433.098	-461.098	-489.098
	*					
1.500	*	-283.098	-287.598	-292.098	-296.598	-301.098
	*					
2.000	*	-189.098	-170.098	-151.098	-132.098	-113.098
	*					
2.500	*	-95.098	-52.598	-10.098	32.402	74.902
	*					
3.000	*	-1.098	64.902	130.902	196.902	262.902
	*					

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

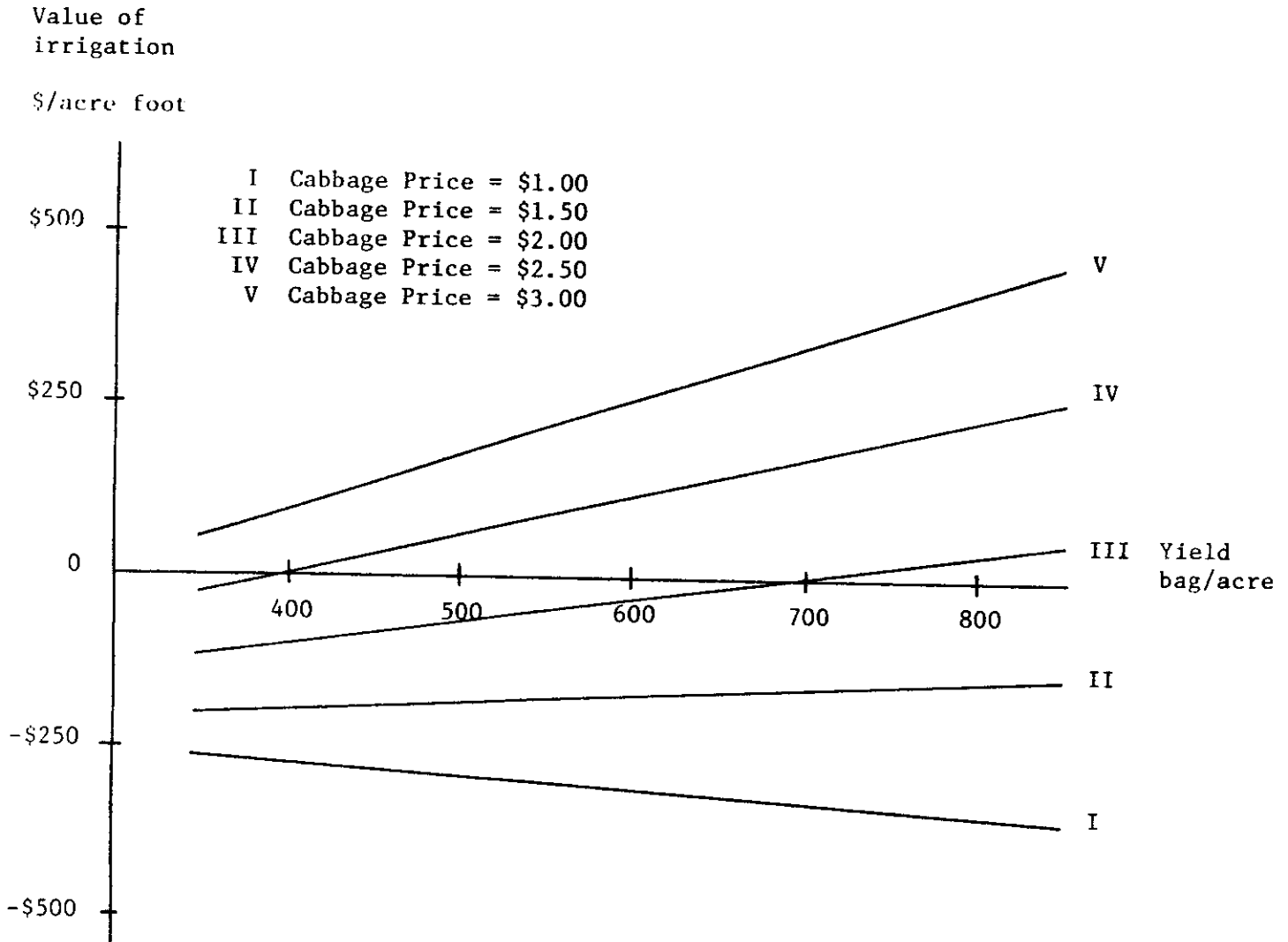


Figure Value of irrigation water applied to Cabbage in Winter Garden for alternative Cabbage prices and yields with expected 1974 costs.

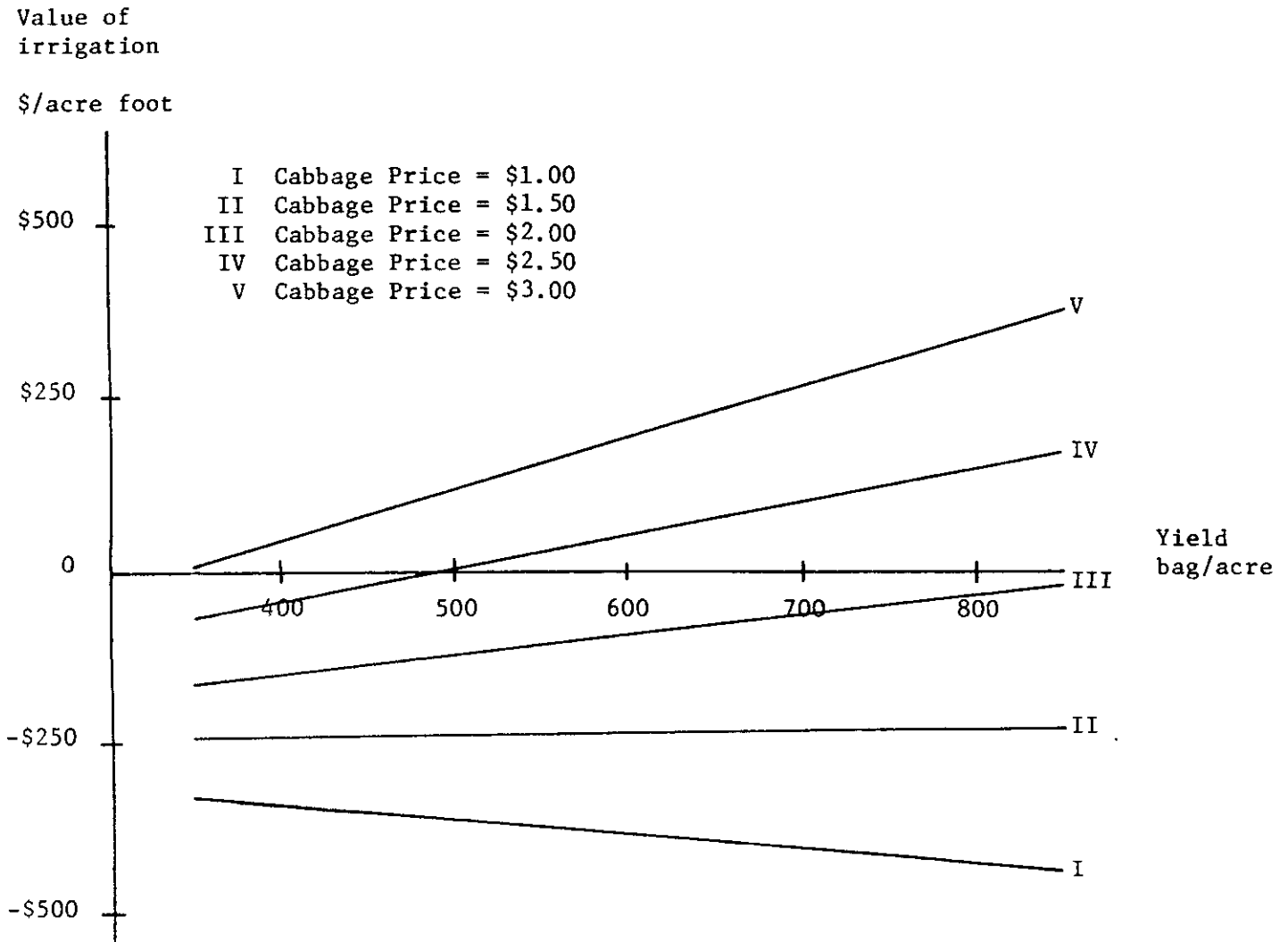


Figure Value of irrigation water applied to Cabbage in Winter Garden for alternative Cabbage prices and yields with expected 1974 costs inflated 10 percent.

Value of
irrigation
\$/acre foot

- I Cabbage Price = \$1.00
- II Cabbage Price = \$1.50
- III Cabbage Price = \$2.00
- IV Cabbage Price = \$2.50
- V Cabbage Price = \$3.00

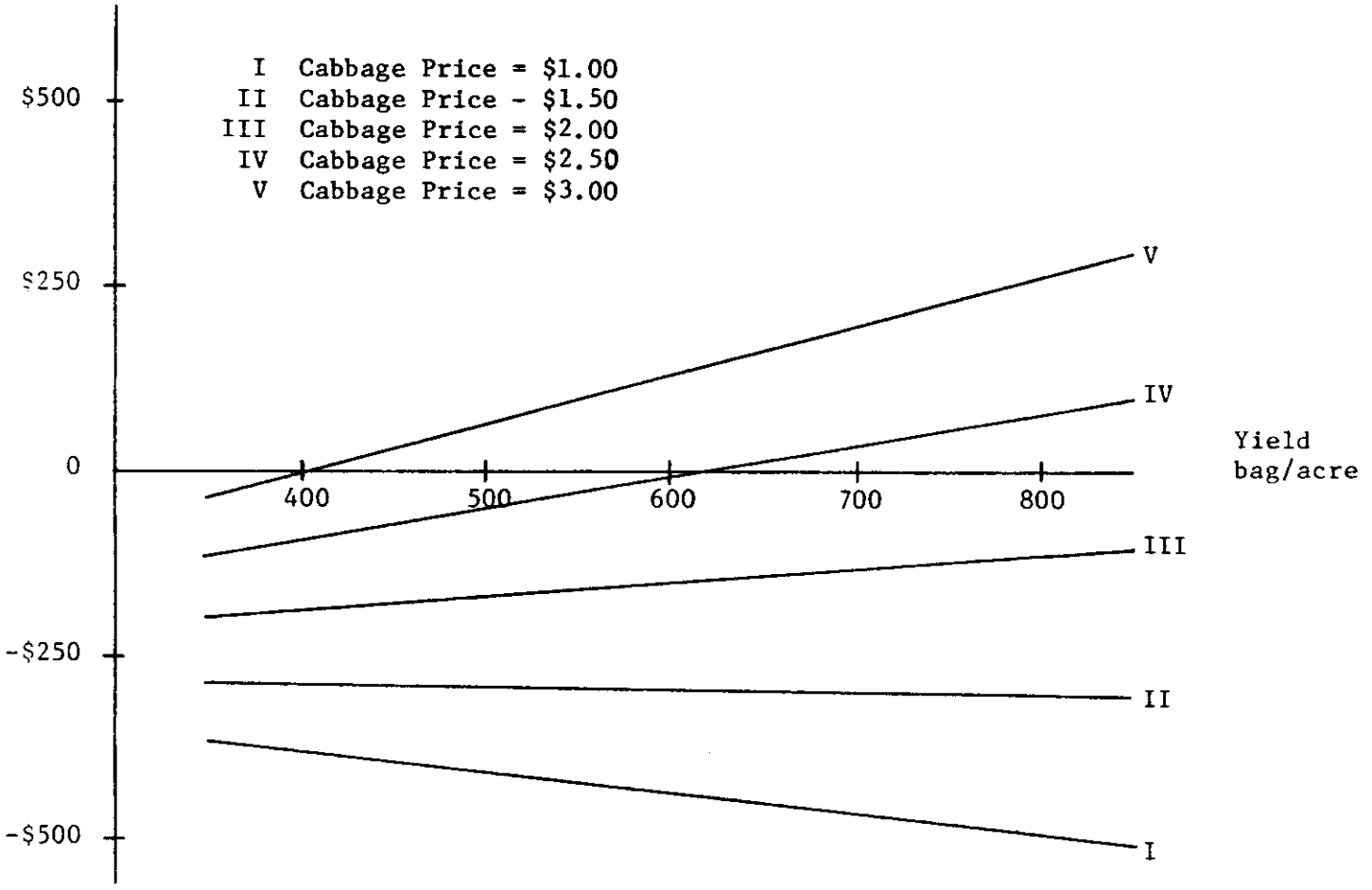


Figure Value of irrigation water applied to Cabbage in Winter Garden for alternative Cabbage prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
CANTALOUPE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		50.0	100.0	150.0	200.0	250.0

PRODUCTION COSTS 1974	*					
PRICES	*					
3.500	*	-191.820	-219.515	-247.209	-274.904	-302.599
5.000	*	-149.156	-134.186	-119.215	-104.245	-89.275
6.500	*	-106.491	-48.856	8.779	66.413	124.048
8.000	*	-63.826	36.473	136.773	237.072	337.371
9.500	*	-21.162	121.802	264.766	407.730	550.695

10% COST INFLATION	*					
PRICES	*					
3.500	*	-221.481	-262.424	-303.367	-344.311	-385.254
5.000	*	-179.041	-177.544	-176.047	-174.550	-173.053
6.500	*	-136.601	-92.664	-48.727	-4.790	39.147
8.000	*	-94.161	-7.784	78.594	164.971	251.348
9.500	*	-51.721	77.097	205.914	334.731	463.549

20% COST INFLATION	*					
PRICES	*					
3.500	*	-251.142	-305.334	-359.525	-413.717	-467.909
5.000	*	-208.927	-220.903	-232.879	-244.855	-256.831
6.500	*	-166.711	-136.472	-106.232	-75.993	-45.753
8.000	*	-124.496	-52.041	20.415	92.870	165.325
9.500	*	-82.280	32.391	147.061	261.732	376.402

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

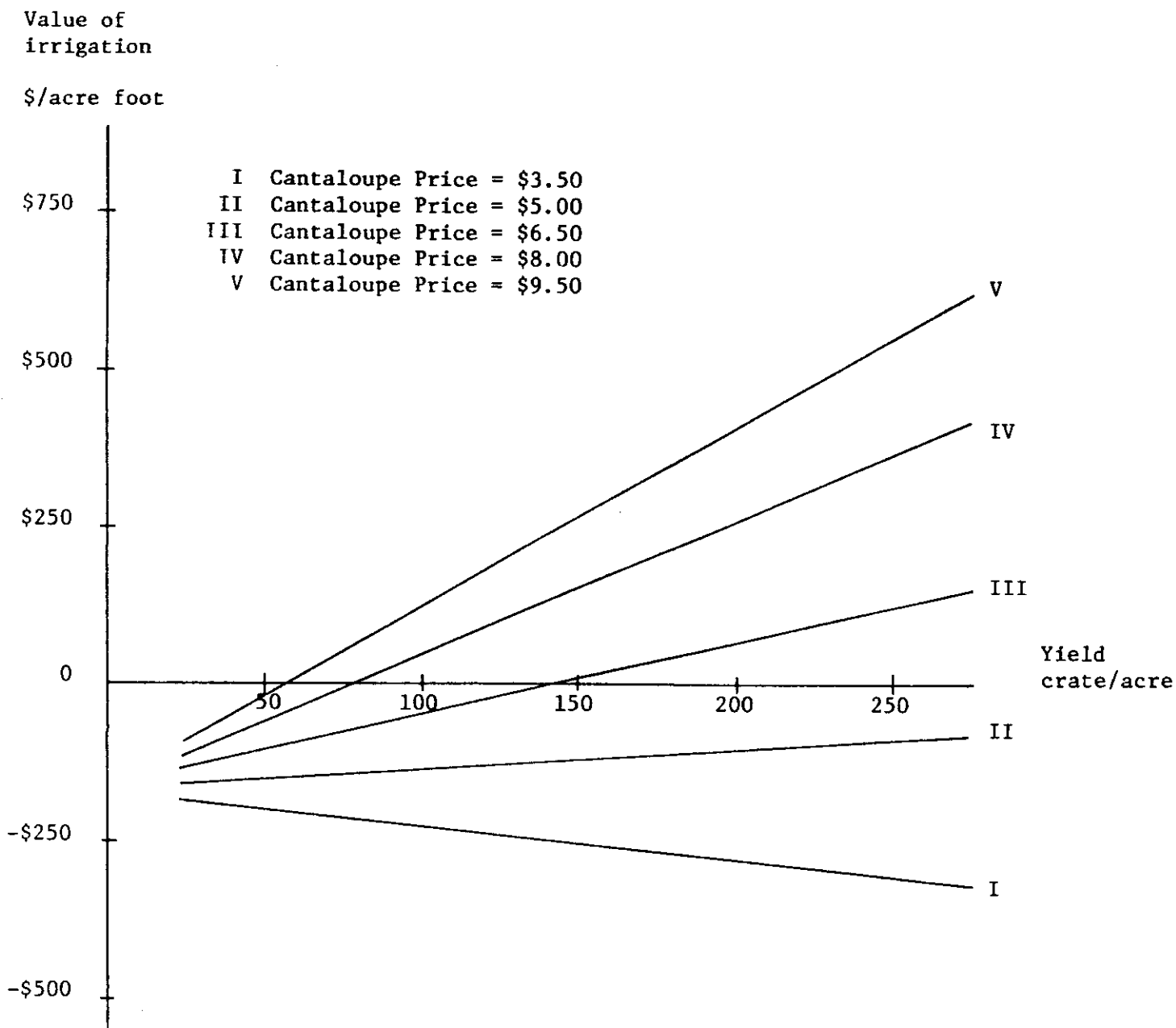


Figure Value of irrigation water applied to Cantaloupes in Winter Garden for alternative Cantaloupe prices and yields with expected 1974 costs.

Value of
irrigation

\$/acre foot

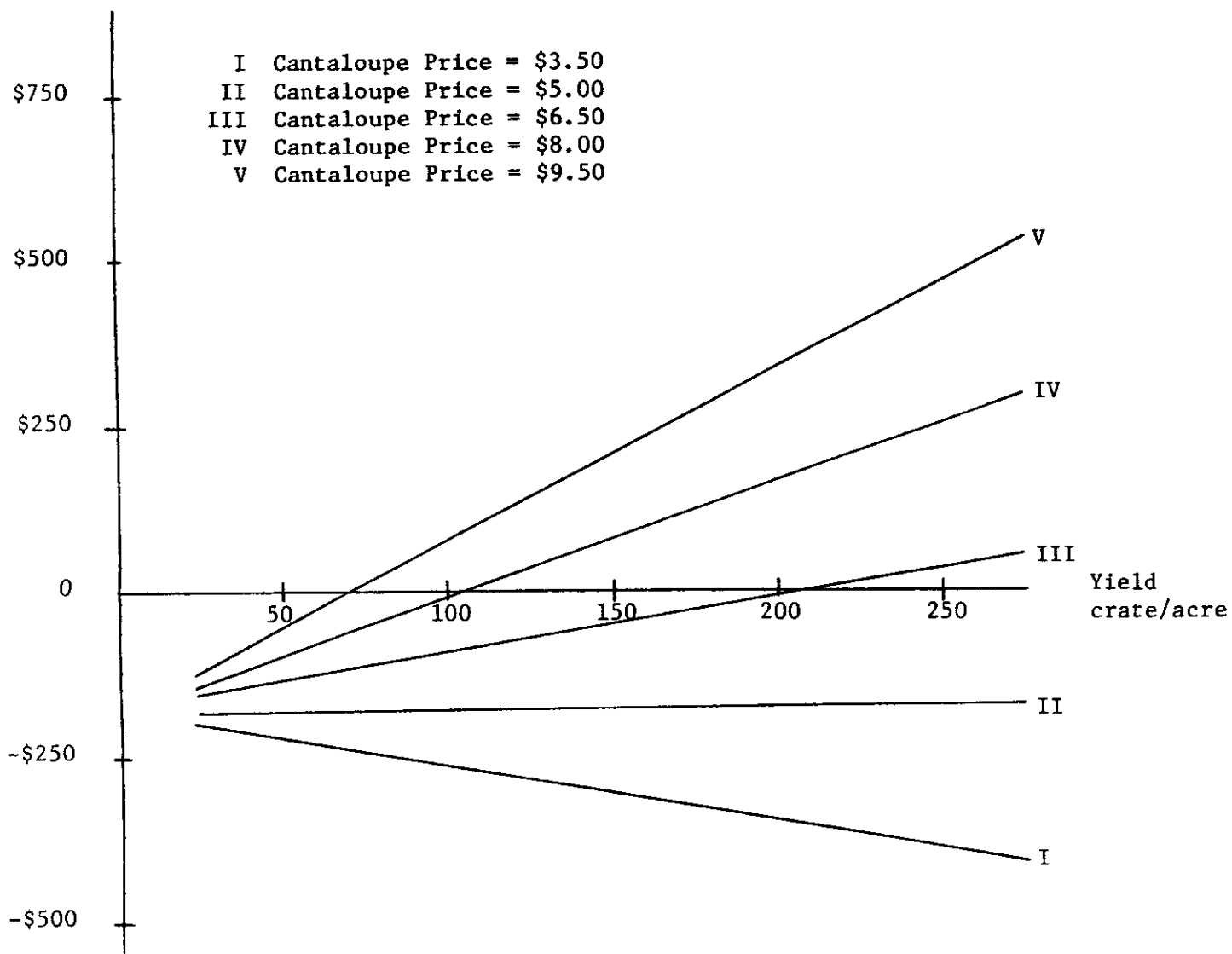


Figure Value of irrigation water applied to Cantaloupes in Winter Garden for alternative Cantaloupe prices and yields with expected 1974 costs inflated 10 percent.

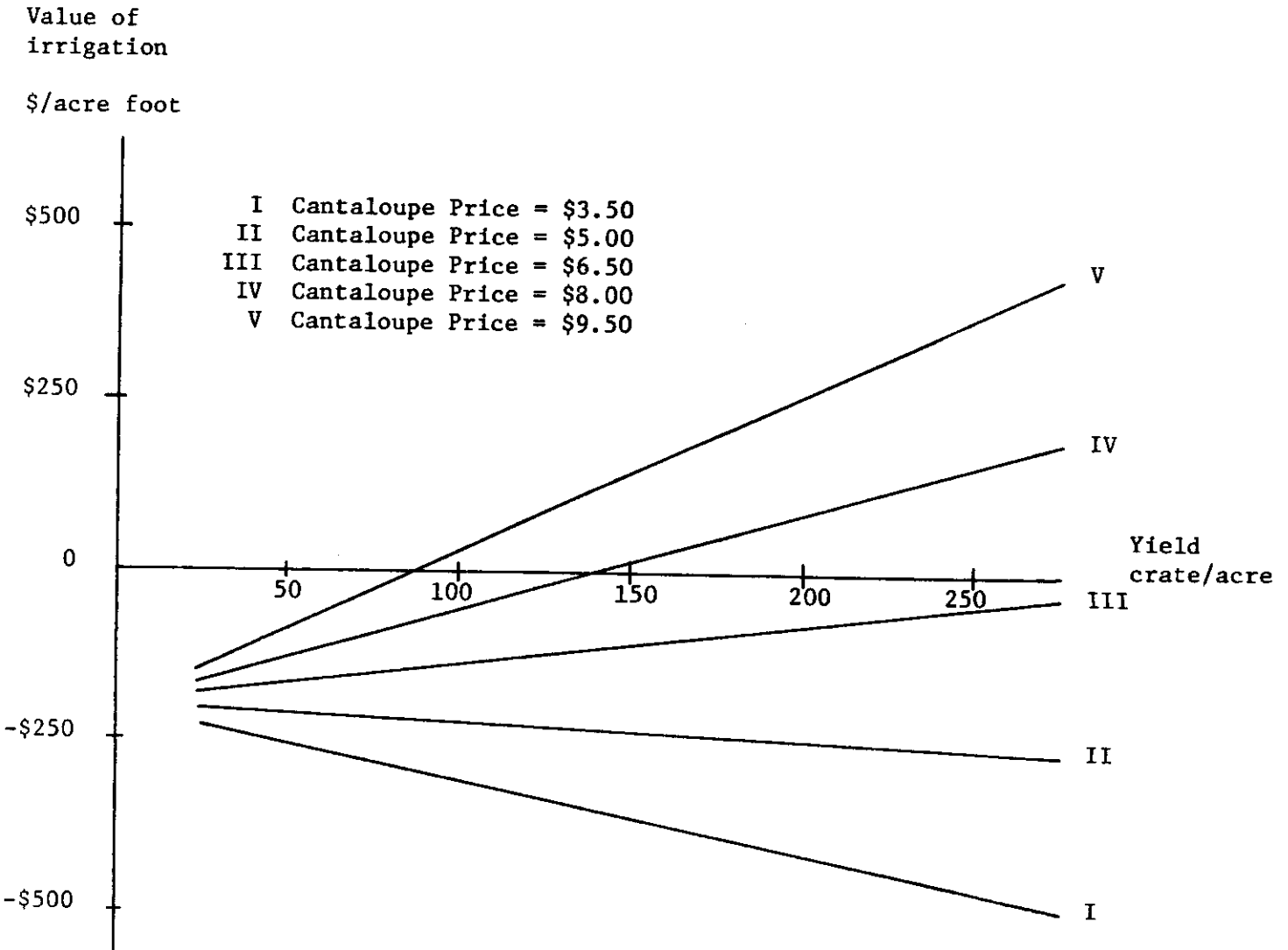


Figure Value of irrigation water applied to Cantaloupes in Winter Garden for alternative Cantaloupe prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
CARROTS

PRODUCTION COSTS AND PRODUCT PRICES	YIELD UNDER IRRIGATION				
	150.0	250.0	350.0	450.0	550.0
PRODUCTION COSTS 1974					
PRICES					
3.500	-102.042	-82.581	-63.120	-43.659	-24.198
5.000	25.952	130.743	235.533	340.323	445.114
6.500	153.946	344.066	534.186	724.305	914.425
8.000	281.940	557.389	832.838	1108.287	1383.736
9.500	409.934	770.712	1131.491	1492.269	1853.048
10% COST INFLATION					
PRICES					
3.500	-143.683	-143.234	-142.785	-142.336	-141.887
5.000	-16.363	68.967	154.296	239.625	324.954
6.500	110.958	281.167	451.376	621.586	791.796
8.000	238.278	493.368	748.457	1003.547	1258.637
9.500	365.598	705.568	1045.538	1385.508	1725.478
20% COST INFLATION					
PRICES					
3.500	-185.324	-203.887	-222.450	-241.013	-259.576
5.000	-58.678	7.191	73.059	138.927	204.795
6.500	67.969	218.268	368.568	518.867	669.167
8.000	194.616	429.346	664.077	898.807	1133.538
9.500	321.262	640.424	959.586	1278.747	1597.909

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

Value of
Irrigation

\$/acre foot

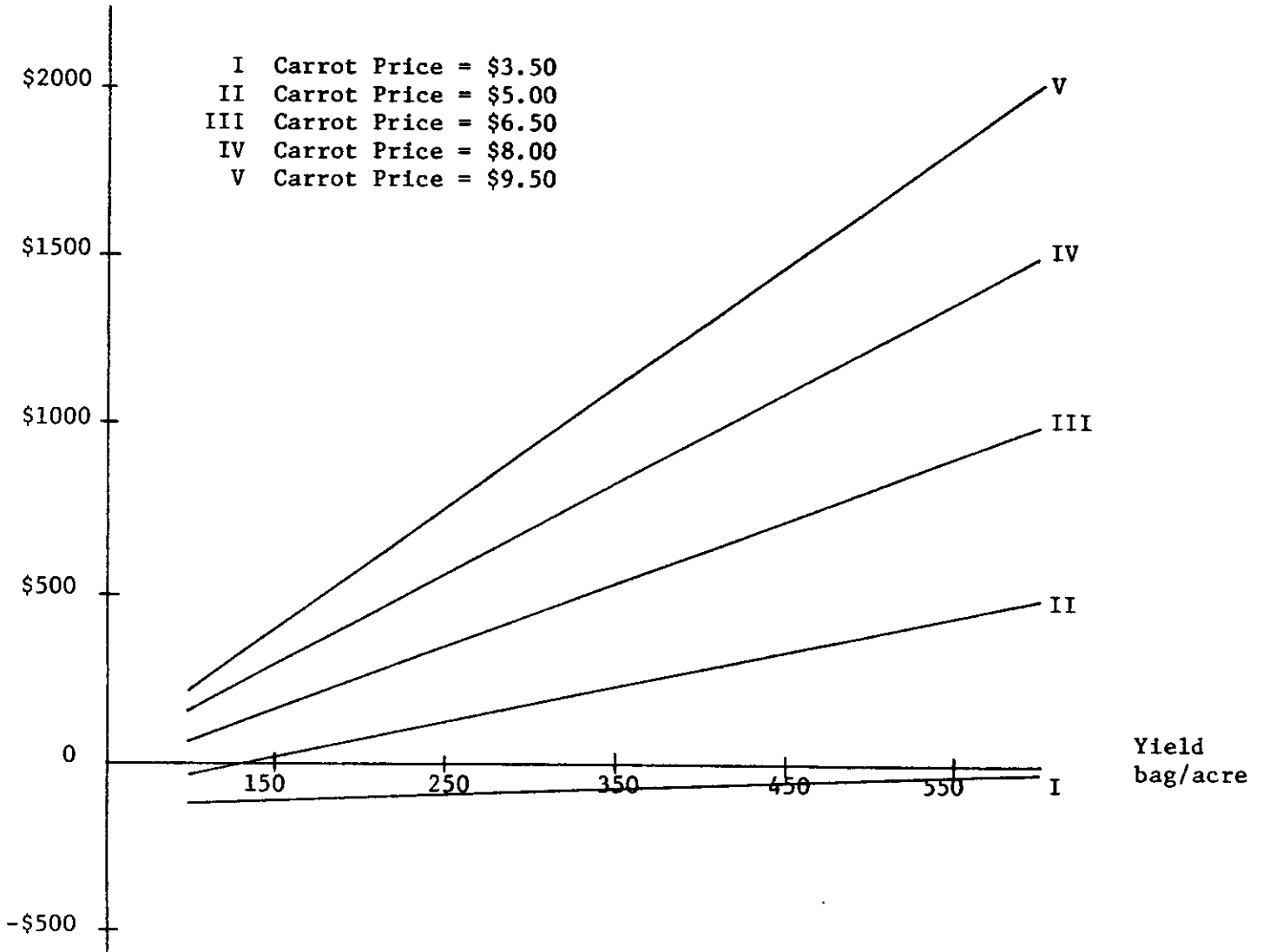


Figure Value of irrigation water applied to Carrots in Winter Garden for alternative Carrot prices and yields with expected 1974 costs.

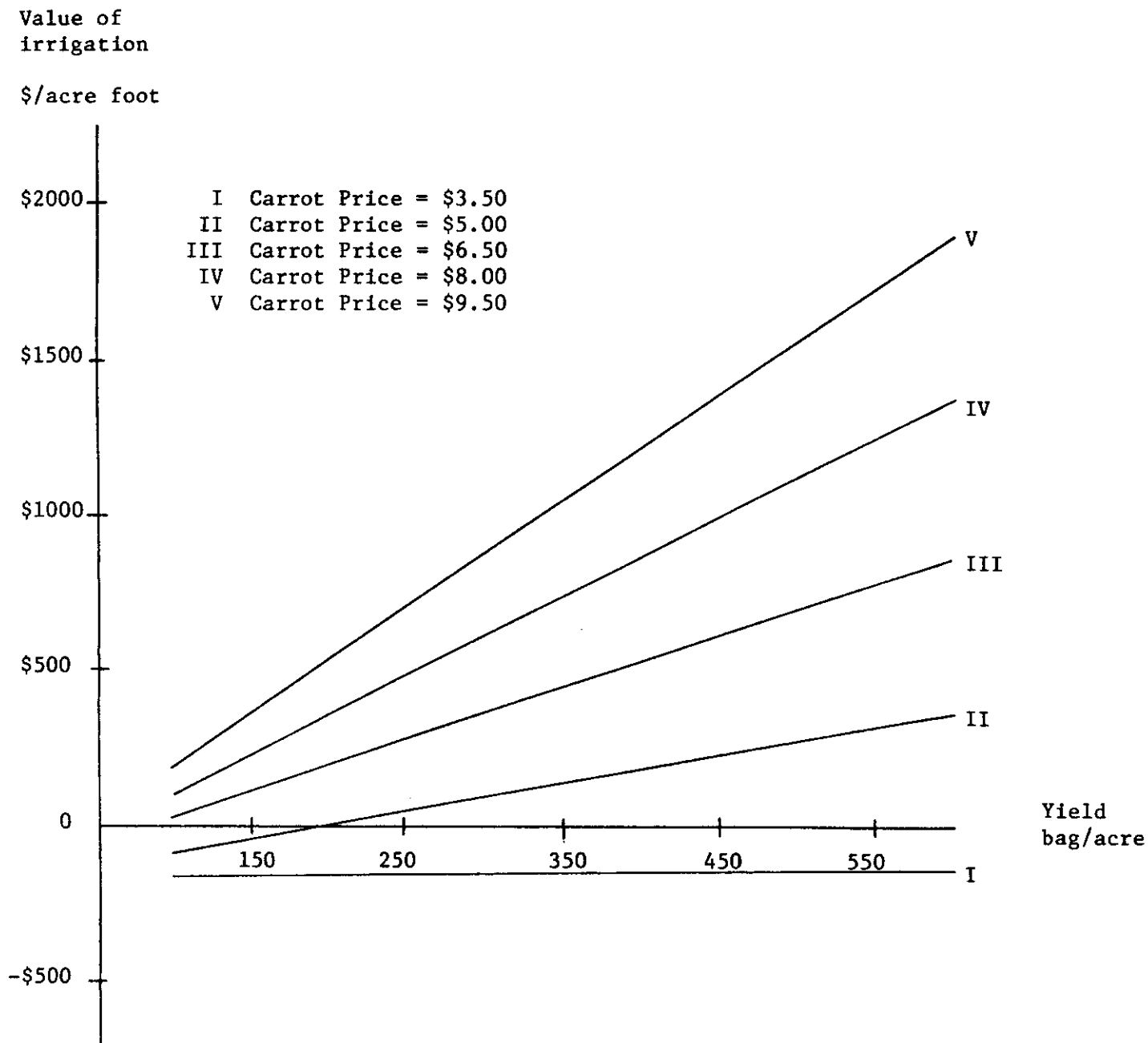


Figure Value of irrigation water applied to Carrots in Winter Garden for alternative Carrot prices and yields with expected 1974 costs inflated 10 percent.

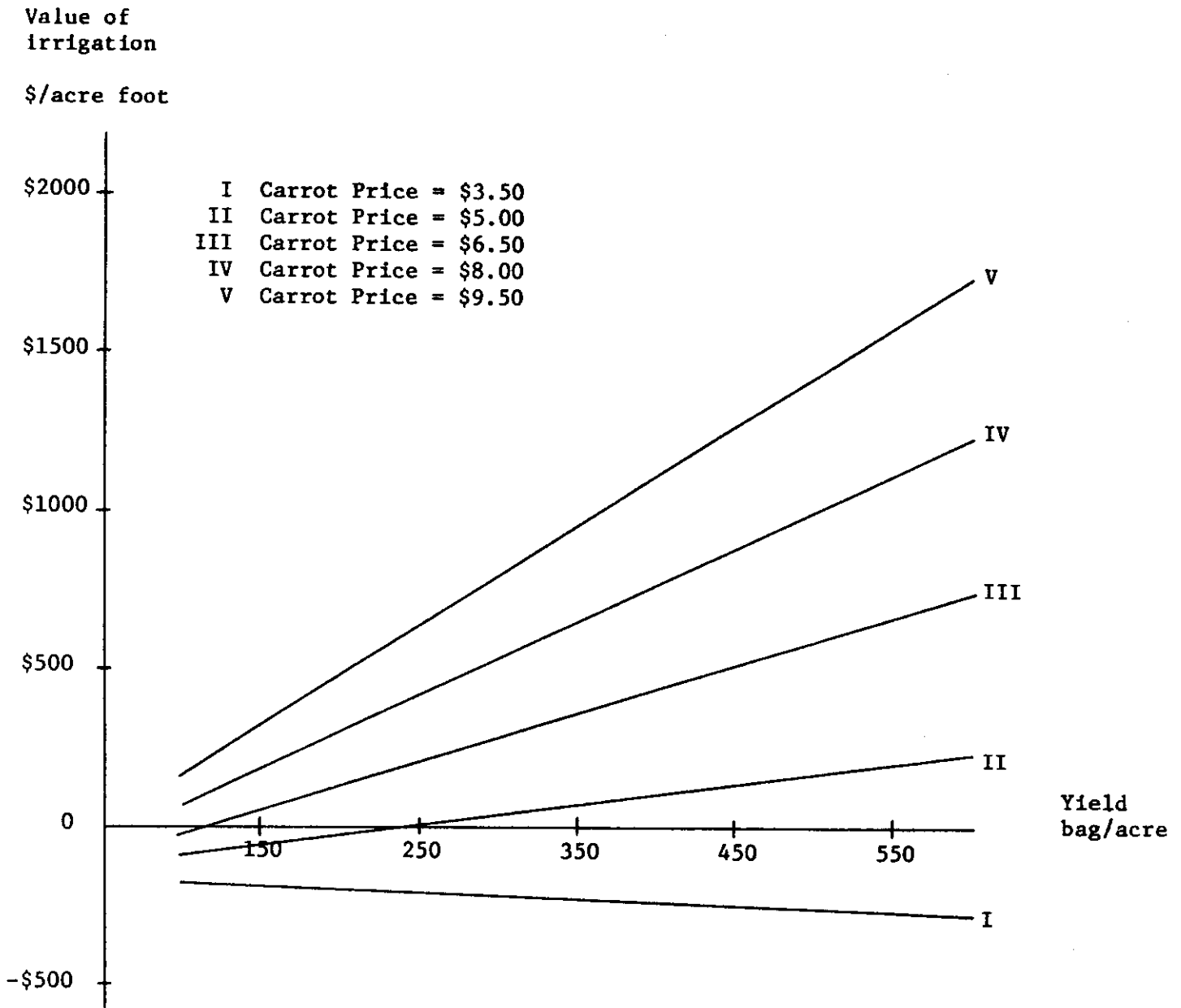


Figure Value of irrigation water applied to Carrots in Winter Garden for alternative Carrot prices and yields with expected 1974 cost inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
CORN GRAIN

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		50.0	80.0	110.0	140.0	170.0
PRODUCTION COSTS 1974	*					
PRICES	*					
1.750	*	-83.009	-56.557	-30.105	-3.653	22.800
2.750	*	-54.566	-11.048	32.470	75.988	119.506
3.750	*	-26.123	34.461	95.045	155.629	216.213
4.750	*	2.320	79.970	157.620	235.270	312.919
5.750	*	30.763	125.479	220.195	314.910	409.626
10% COST INFLATION	*					
PRICES	*					
1.750	*	-96.549	-70.596	-44.642	-18.689	7.265
2.750	*	-68.256	-25.326	17.603	60.533	103.463
3.750	*	-39.963	19.943	79.849	139.755	199.660
4.750	*	-11.669	65.213	142.094	218.976	295.858
5.750	*	16.624	110.482	204.340	298.198	392.055
20% COST INFLATION	*					
PRICES	*					
1.750	*	-110.090	-84.635	-59.180	-33.724	-8.269
2.750	*	-81.946	-39.605	2.737	45.078	87.419
3.750	*	-53.802	5.425	64.653	123.880	183.108
4.750	*	-25.659	50.455	126.569	202.683	278.796
5.750	*	2.485	95.485	188.485	281.485	374.485

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

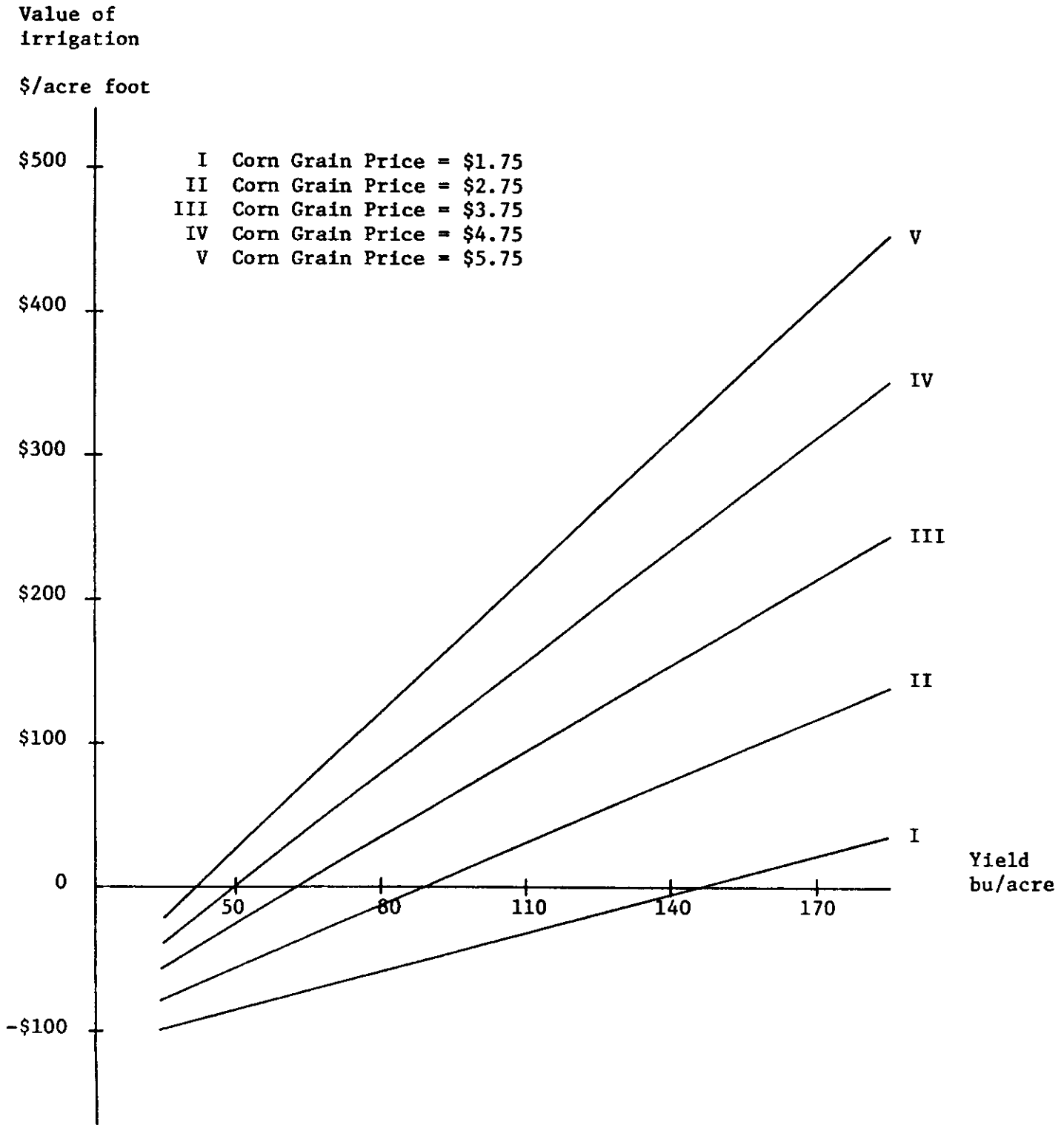


Figure Value of irrigation water applied to Corn Grain in Winter Garden for alternative Corn Grain prices and yields with expected 1974 costs.

Value of
irrigation

\$/acre foot

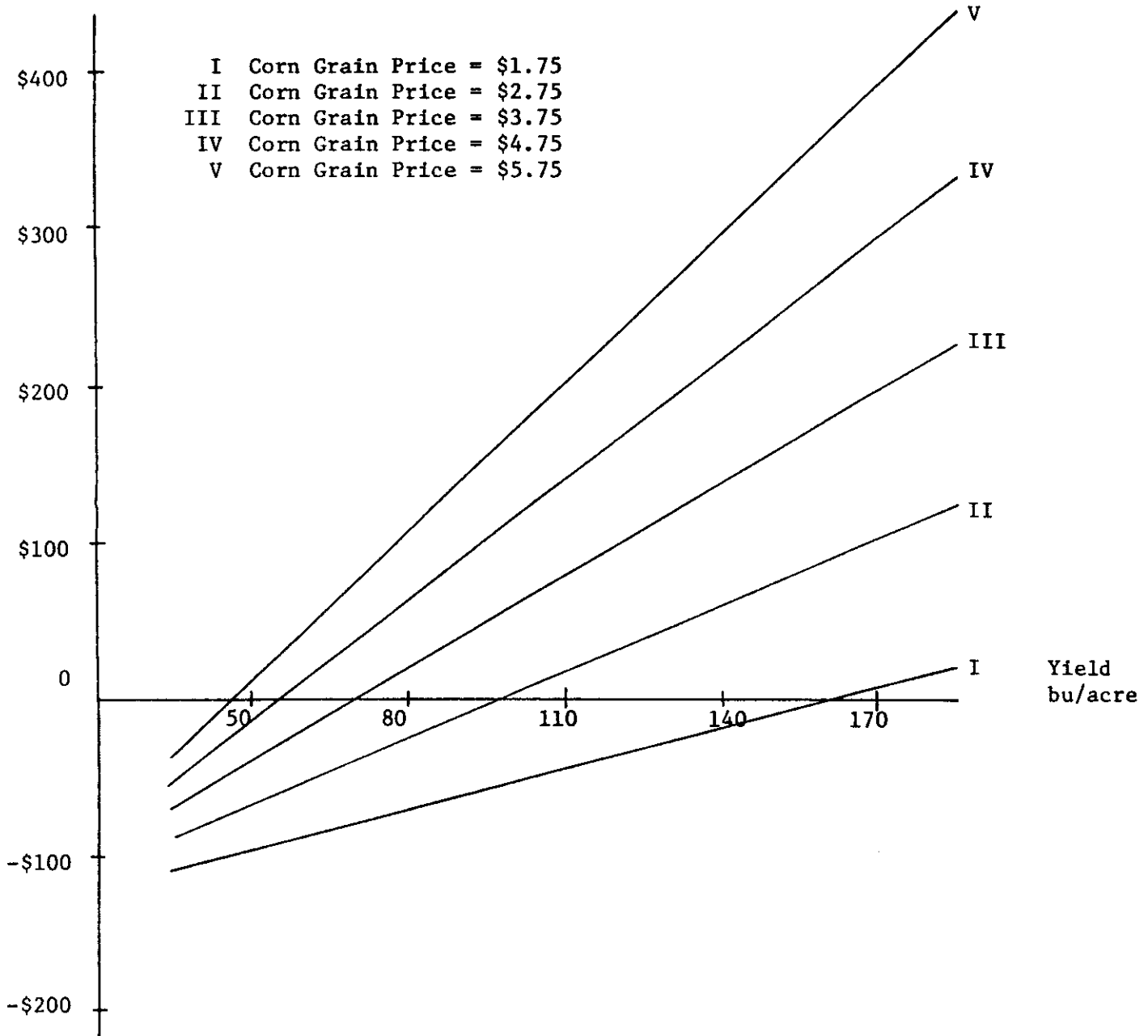


Figure Value of irrigation water applied to Corn Grain in Winter Garden for alternative Corn Grain prices and yields with expected 1974 costs inflated 10 percent.

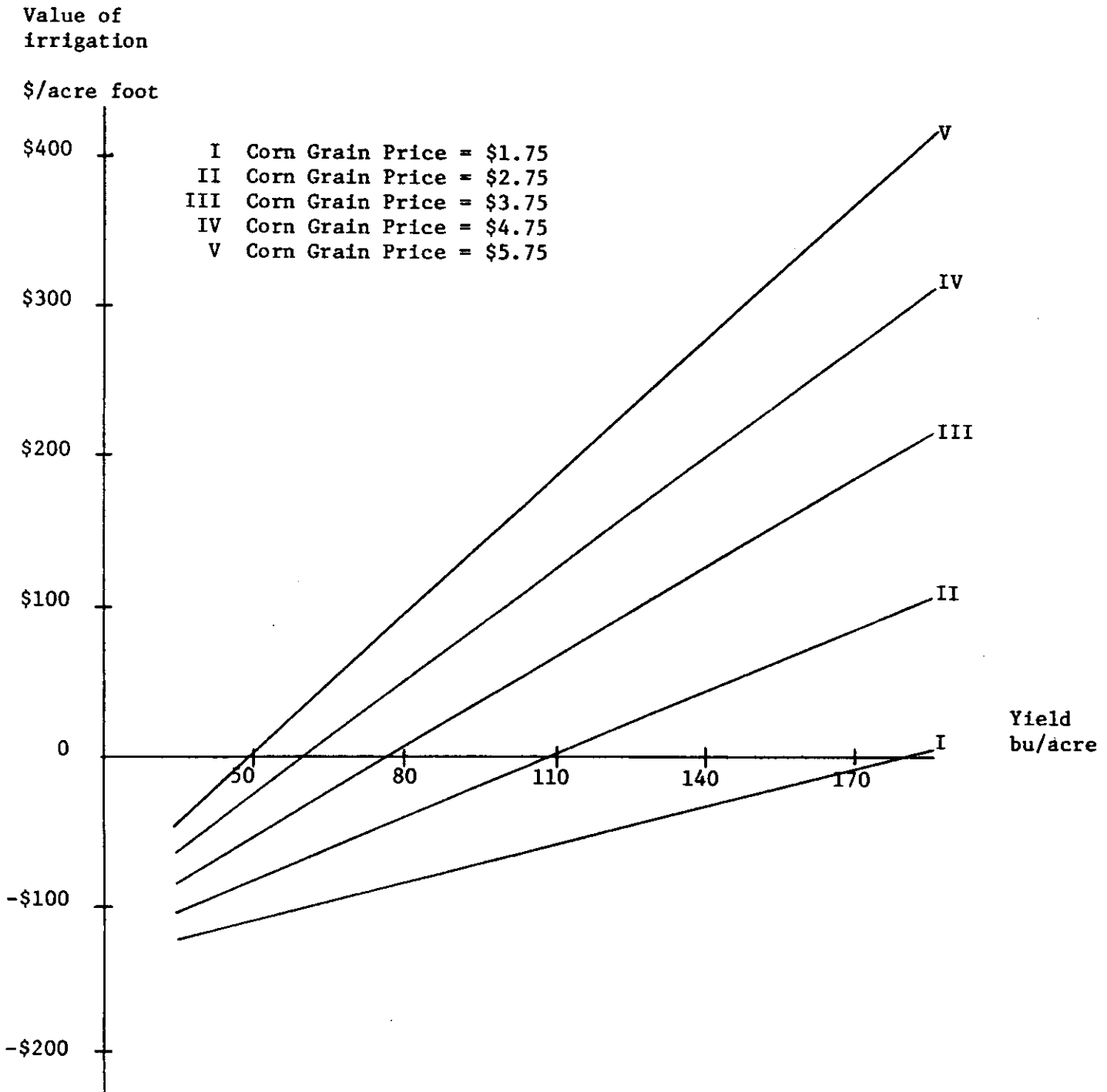


Figure Value of irrigation water applied to Corn Grain in Winter Garden for alternative Corn Grain prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
CORN SILAGE

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		5.0	10.0	15.0	20.0	25.0
PRODUCTION COSTS 1974						
PRICES	*					
5.000	*	-97.323	-83.102	-68.880	-54.659	-40.437
7.500	*	-90.213	-68.880	-47.548	-26.216	-4.883
10.000	*	-83.102	-54.659	-26.216	2.228	30.671
12.500	*	-75.991	-40.437	-4.883	30.671	66.225
15.000	*	-68.880	-26.216	16.449	59.114	101.778
10% COST INFLATION						
PRICES	*					
5.000	*	-108.553	-94.406	-80.259	-66.113	-51.966
7.500	*	-101.479	-80.259	-59.039	-37.819	-16.599
10.000	*	-94.406	-66.113	-37.819	-9.526	18.768
12.500	*	-87.333	-51.966	-16.599	18.768	54.134
15.000	*	-80.259	-37.819	4.621	47.061	89.501
20% COST INFLATION						
PRICES	*					
5.000	*	-119.782	-105.710	-91.638	-77.566	-63.495
7.500	*	-112.746	-91.638	-70.531	-49.423	-28.315
10.000	*	-105.710	-77.566	-49.423	-21.279	6.865
12.500	*	-98.674	-63.495	-28.315	6.865	42.044
15.000	*	-91.638	-49.423	-7.207	35.008	77.224

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

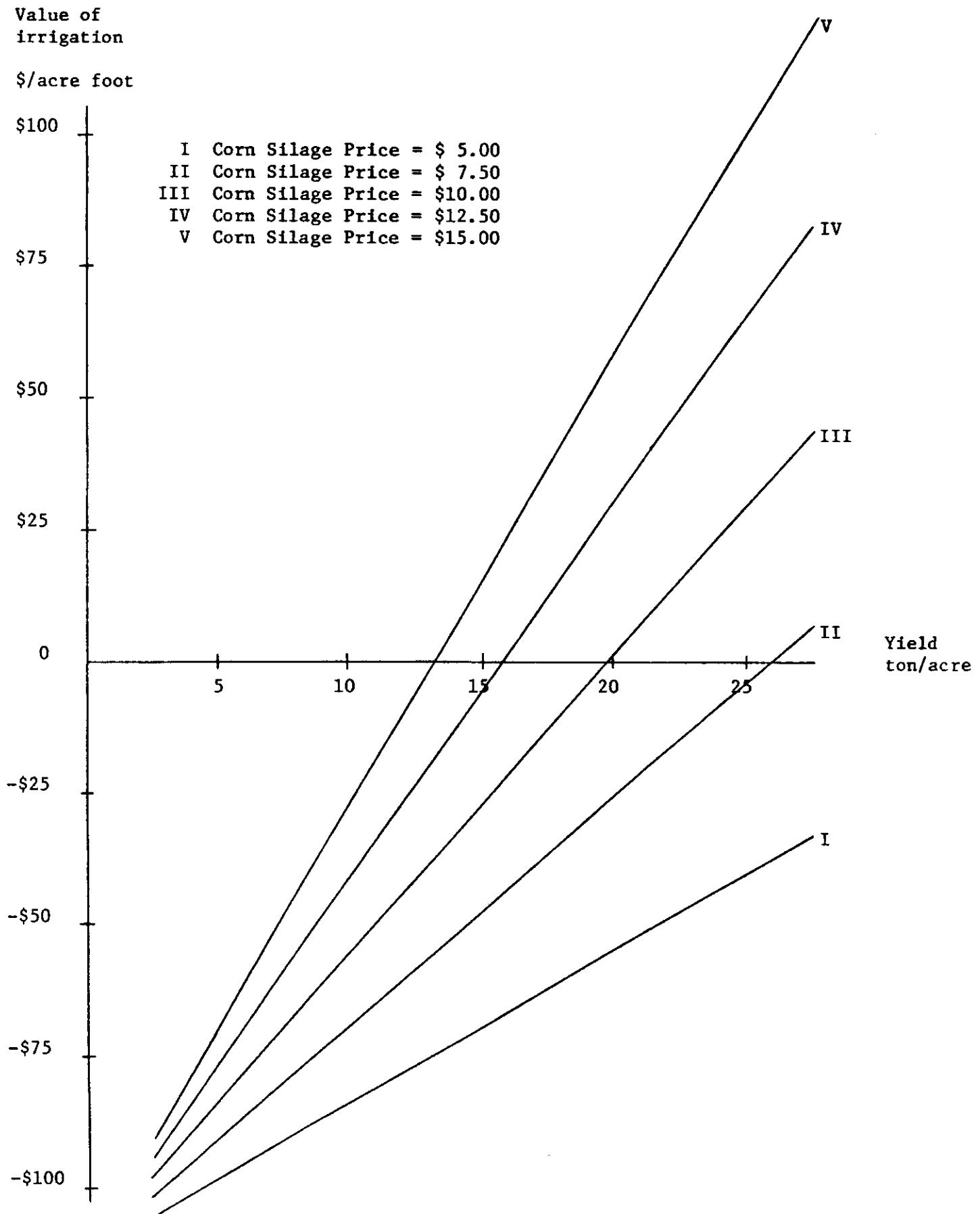


Figure Value of irrigation water applied to Corn Silage in Winter Garden for alternative Corn Silage prices with expected 1974 costs.

Value of irrigation
\$/acre foot

227

- I Corn Silage Price = \$ 5.00
- II Corn Silage Price = \$ 7.50
- III Corn Silage Price = \$10.00
- IV Corn Silage Price = \$12.50
- V Corn Silage Price = \$15.00

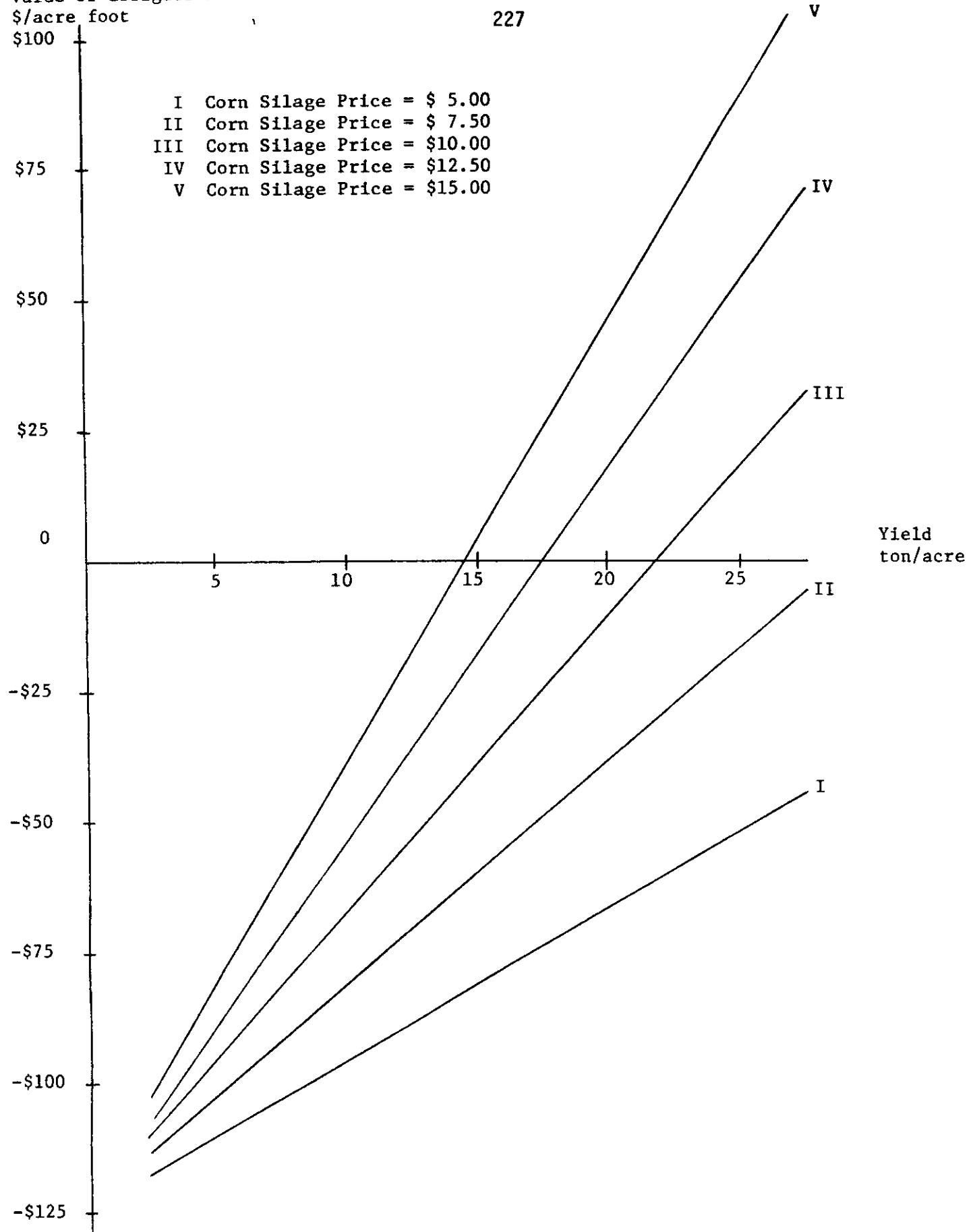


Figure Value of irrigation water applied to Corn Silage in Winter Garden for alternative Corn Silage prices and yields with expected 1974 costs inflated 10 percent.

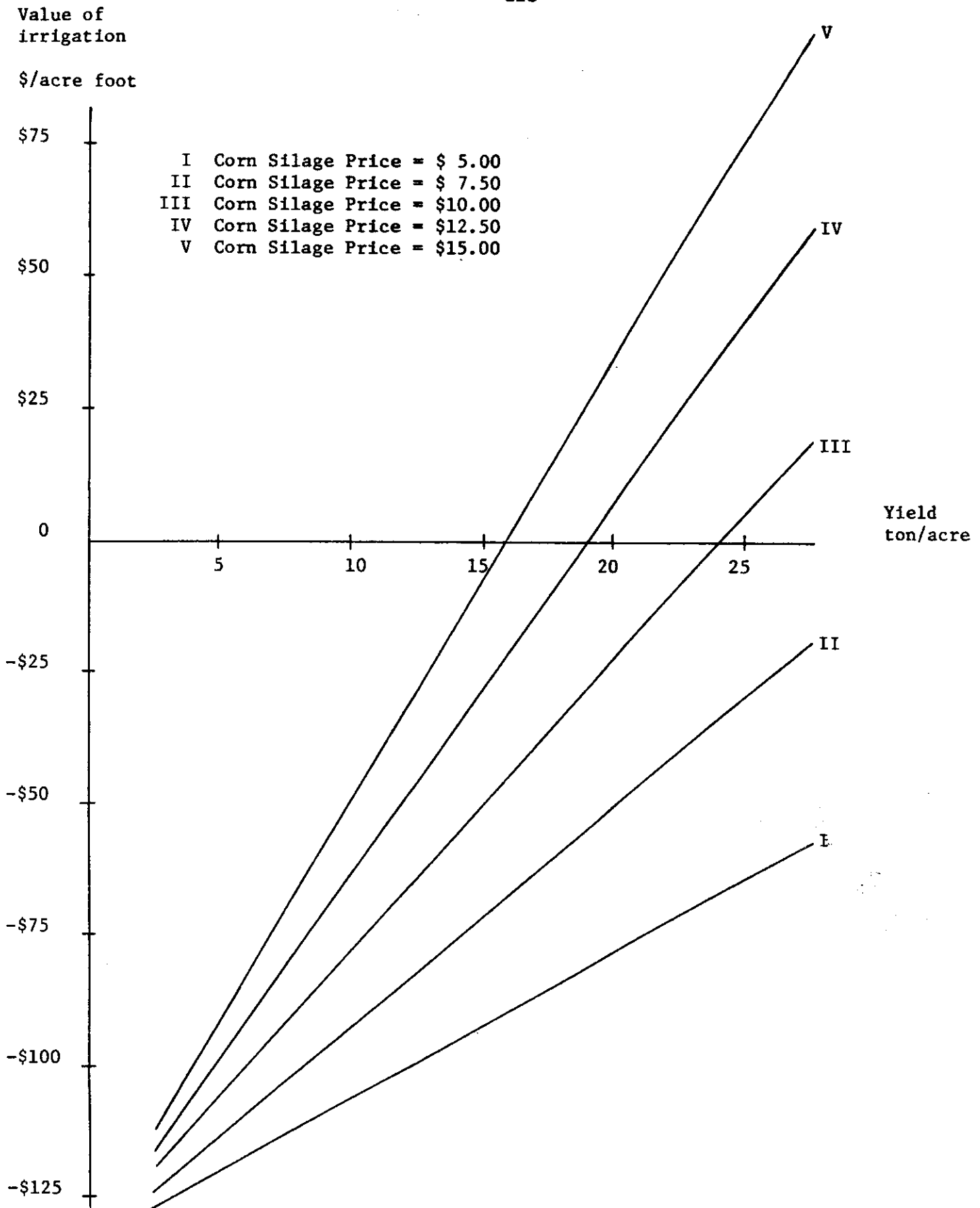


Figure Value of irrigation water applied to Corn Silage in Winter Garden for alternative Corn Silage prices and yields with expected 1974 costs inflated 20 percent.

RETURNS PER ACRE FOOT OF IRRIGATION WATER

WINTER GARDEN
COTTON

PRODUCTION COSTS AND PRODUCT PRICES	*	YIELD UNDER IRRIGATION				
		200.0	350.0	500.0	650.0	800.0
PRODUCTION COSTS 1974	*					
PRICES	*					
0.200	*	-94.281	-84.796	-75.311	-65.826	-56.341
0.300	*	-82.904	-64.886	-46.868	-28.850	-10.832
0.400	*	-71.527	-44.976	-18.425	8.126	34.677
0.500	*	-60.150	-25.066	10.018	45.102	80.186
0.600	*	-48.772	-5.156	38.461	82.078	125.695
10% COST INFLATION	*					
PRICES	*					
0.200	*	-106.680	-98.474	-90.268	-82.061	-73.856
0.300	*	-95.362	-78.668	-61.974	-45.280	-28.586
0.400	*	-84.045	-58.863	-33.681	-8.499	16.683
0.500	*	-72.728	-39.057	-5.387	28.283	61.953
0.600	*	-61.410	-19.252	22.906	65.064	107.222
20% COST INFLATION	*					
PRICES	*					
0.200	*	-119.078	-112.151	-105.224	-98.297	-91.370
0.300	*	-107.820	-92.450	-77.080	-61.710	-46.340
0.400	*	-96.563	-72.750	-48.936	-25.123	-1.310
0.500	*	-85.305	-53.049	-20.793	11.464	43.720
0.600	*	-74.048	-33.348	7.351	48.050	88.750

A DRYLAND RETURN OF 20.000 WAS USED FOR THIS ANALYSIS. COSTS INCLUDE TYPICAL COSTS OF PUMPING AND DELIVERING WATER.

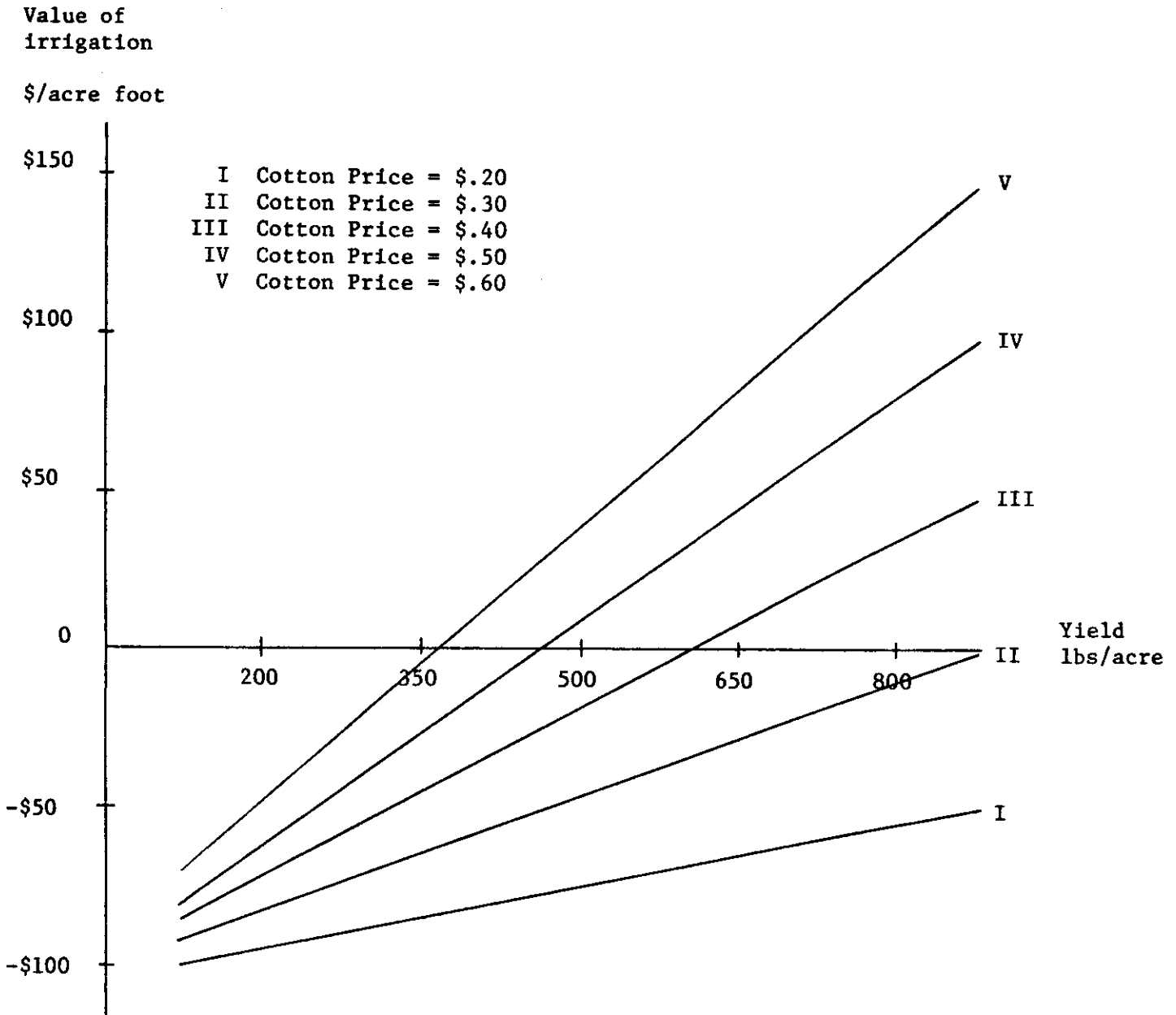


Figure Value of irrigation water applied to Cotton in Winter Garden for alternative Cotton prices and yields with expected 1974 costs.

Value of
irrigation

\$/acre foot

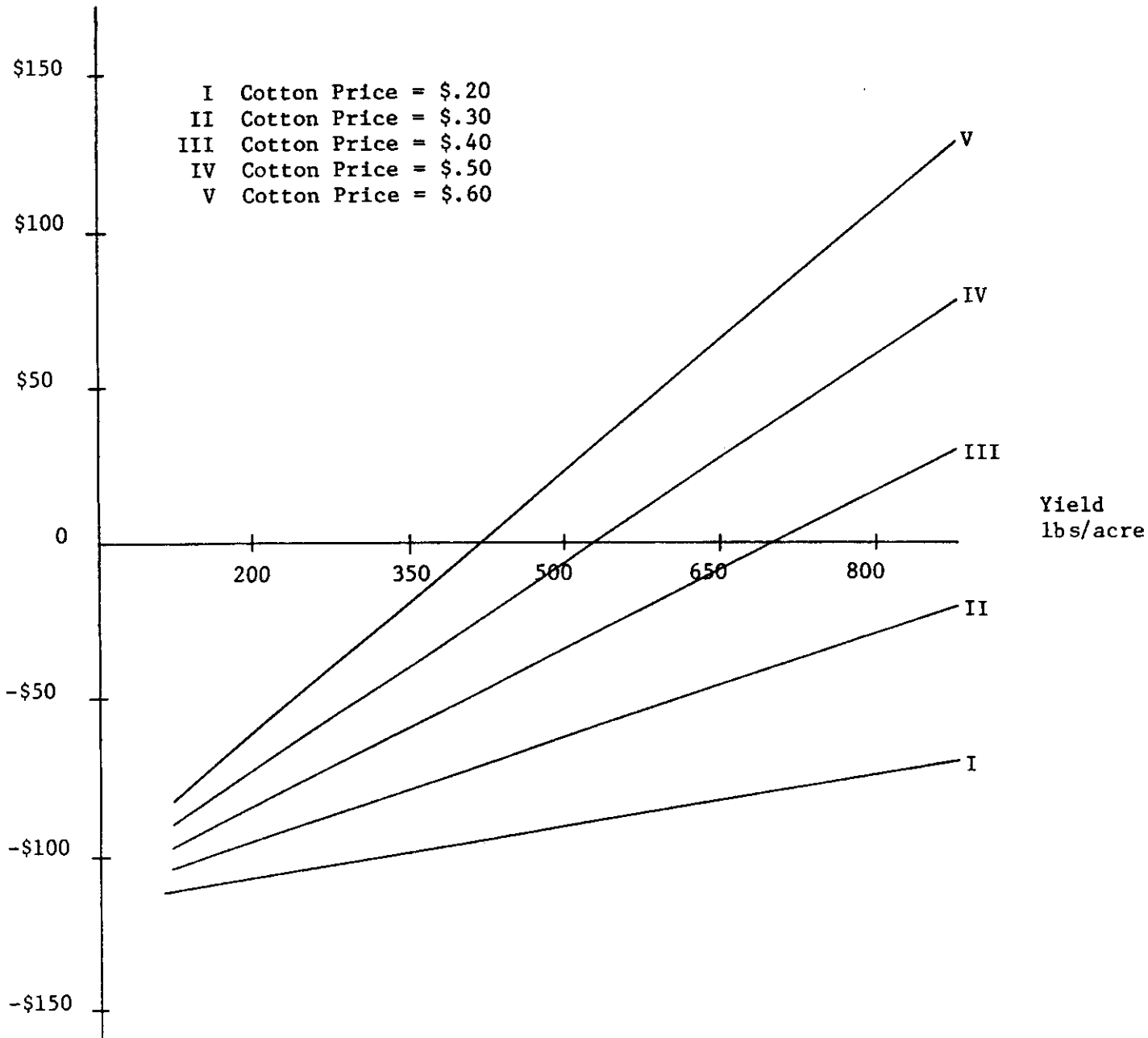


Figure Value of irrigation water applied to Cotton in Winter Garden for alternative Cotton prices and yields with expected 1974 costs inflated 10 percent.