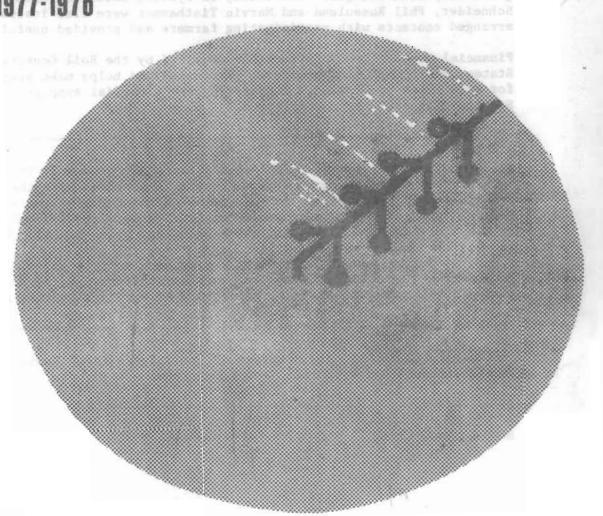
BULLETIN B670, MARCH 1978

COSTS OF PRODUCING CROPS CENTER PIVOT IRRIGATION SOUTHEASTERN WYOMING, 1977-1978

SUGARBEETS CORN FOR GRAIN CORN FOR SILAGE DRY BEANS ALFALFA , BALED ALFALFA , CUBED BARLEY FOR FEED IRRIGATED PASTURE POTATOES



This study was possible only with the cours

AGRICULTURAL EXTENSION SERVICE DIVISION OF AGRICULTURAL ECONOMICS UNIVERSITY OF WYOMING, LARAMIE

ACKNOWLEDGEMENTS

This study was possible only with the cooperation of farmers, farm suppliers and machinery dealers in Southeastern, Wyoming. Their willingness to contribute time and information is gratefully acknowledged. University of Wyoming Extension Agents Robert Quade, Michael Schneider, Phil Rosenlund and Marvin Tisthammer were also instrumental in this work. They arranged contacts with participating farmers and provided useful suggestions.

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by D. E. Agee*loviq Island reban moorg agong visalif aprinklers in southeastern Wyoming are sugar

INTRODUCTION

First

SETT

BYAB

4,100 to 5,300 feet above sea level. Thus,

This report was prepared to accompany and supplement information contained in a companion study, "Costs of Producing Crops, Torrington-Wheatland Area, Wyo., 1977-78."a/

Many farms in southeastern Wyoming have surface or furrow-flood irrigation systems. Other farms have only sprinkler irrigation or both furrow and sprinkler systems.

The predominant type of sprinkler irrigation in southeastern Wyoming is the circle or center pivot system. Sideroll and hand move systems are used to a lesser degree.

Irrigation water for sprinkler systems comes from different sources. Some systems use water pumped from irrigation district canals similar to that used on most furrow irrigated farms, but most sprinkler systems use water pumped from wells. Annual precipitation in southeastern

Irrigation wells in southeastern Wyoming vary widely in depth and volume or yield of water. For example, static water levels in area wells may vary from just a few feet to 300 ft. or more. Yield in gallons/minute may vary from 200 gpm or less up to 2,000 gpm or more.

bosts, dry beans, corn, alfalfa, small grains,

essentially the same crops grown under furrow

potnices, and irrigated pasture. These are

effectively irrigates a circle of about 125

Since about 1960 farmers and ranchers in southeastern Wyoming have installed several hundred center pivot sprinkler systems. These sprinklers, in general, have been installed on lands formerly in native grass, or dry land crops. Only a limited number of circles have been installed on lands formerly irrigated by surface systems. Sprinklers can be used on rolling lands which may be difficult to furrow irrigate.

Center pivot systems vary in size. The most common is the 1/4 section sprinkler that

castern Wyoming lie at elevations of about

^{*} Extension Farm Management Specialist and Associate Professor, Division of Agricultural Economics, University of Wyoming.

a/Costs of Producing Crops, Torrington-Wheatland Area, Wyo., 1977-78, Agric. Ext. Ser., Div. of Agric. Econ., Univ. of Wyo., Bull. 665, May 1978.

effectively irrigates a circle of about 125 to 135 acres. A circle within the boundaries of one-quarter-section of land contains about 125.7 acres. Thus, sprinkler costs in this study are developed for a circle of 125 acres.

Primary crops grown under center pivot sprinklers in southeastern Wyoming are sugar beets, dry beans, corn, alfalfa, small grains, potatoes, and irrigated pasture. These are essentially the same crops grown under furrow irrigation. The major proportion of the potatoes produced in southeastern Wyoming, 6,600 acres in 1977, are grown under sprinkler irrigation. Only a limited acreage is produced using furrow irrigation.

OBJECTIVE

The objective of this report is to gather, organize and report current cost of production data for sprinkler irrigated crops grown in southeastern Wyoming. Budget data can be evaluated to indicate relative profitabilities of sprinkler grown crops and comparisons made with costs for furrow irrigated crops. The relative physical requirements can also be compared and used for planning purposes.

THE STUDY AREA

Sprinkler irrigated lands in southeastern Wyoming lie at elevations of about 4,100 to 5,300 feet above sea level. Thus, frost free growing seasons do vary within the area:

Average dates for 32°Fa/

Station	Last	First	Frost
	spring	fall	free
	freeze	fr e eze	days
Torrington Wheatland LaGrange Lusk Pine Bluffs	May 18	Sept. 22	127
	May 15	Sept. 25	133
	May 24	Sept. 21	120
	May 26	Sept. 18	115
	May 21	Sept. 21	124

Annual precipitation also varies for different locations within the area:

Average precipitation (inches)b/

		April thru August			
Station	Annua1	Inches	% of annual		
Torrington	13.50	9.43	69. 8		
Wheatland	12.45	8.46	67.9		
LaGrange	16.00	10.24	64.0		
Lusk	15.00	10.06	67.1		
Pine Bluffs	14.17	10.20	71.9		

Annual precipitation in southeastern Wyoming averages about 12 to 16 inches.

Source: Becker, Alyea and Eppson, <u>Probabilities of Freeze in Wyoming</u>, Univ. of Wyo., Agric. Exp. Sta. Bull. 381, July 1961. There is a 50-50 chance the last spring freeze will occur after the dates shown and a 50-50 chance the first fall freeze will occur before dates shown.

b/Becker and Alyea, Precipitation Probabilities in Wyoming, Agric. Exp. Sta. Bull. 416, June 1964.

This is one reason southeastern Wyoming is a primary dryland winter wheat area. With supplemental water provided through sprinkler irrigation higher water requirement crops can be grown. About 65 to 70 percent of annual precipitation in southeastern Wyoming is received during the growing season. This significantly reduces the amount of water needed via irrigation.

IRRIGATION WATER REQUIREMENTS

Investment requirements and costs for owning

The amount of water necessary to produce crops under sprinkler irrigation varies by crop and with local seasonal weather conditions. The State Engineer's Office has published calculated consumptive irrigation requirements for crops grown in Wyoming.a/
These calculated irrigation requirements are in addition to effective rainfall received during the growing season. The calculated requirements are useful as guides for planning irrigation systems and average annual crop needs:

Calculated consumptive irrigation requirements in inchesb/

600 Crop 000	Wheat- land			La Grange	
Alfalfa	24.19	23.06	21.86	21.25	20.13
Beans	12.97	11.65	10.98	11.37	11.68
Corn	19.23	17.82	16.45	16.67	16.13
Pasture	22.23	21.12	19.94	19.33	18.46
Potatoes	14.84	14.02	12.80	13.03	12.98
Small grains	13.56	12.02	11.52	11.34	10.84
Sugar beets	17.56	16.66	15.39	15.41	15.43

For this report, irrigators were asked to "estimate the gross amount of water applied to crops for the summer of 1977." These estimates with total energy or electricity charges obtained from suppliers were used to calculate electricity cost to pump and apply one gross acre inch of water.

Gross irrigation water applications multiplied by an irrigation efficiency factor gives net application which can be compared to calculated consumptive requirements. Estimated application efficiency for center pivot systems varies with weather conditions but 80% might be a reasonable figure. Thus, application rates reported by farmers for 1977, shown below, were slightly higher than calculated consumptive rates for beans and sugarbeets but 20 to 25% below calculated rates for other crops. Users of the crop budgets, to be presented subsequently, should therefore use application rates fitting specific cases being analyzed.

The above rates include charges for bookup and for energy consumed. The per acre inch electricity rates are used in calculating energy charges for each crop. For example,

Investments, annual costs and details are shown in

Consumptive Use of Irrigation Water in Wyoming,
Wyoming Water Planning Report No. 5, Water
Resources Series No. 19., published by State
Engineer's Office, Cheyenne, Wyo., July 1970.

 $[\]underline{b}$ Ibid.

Estimated gross application rates for various crops were:

Crop	Acre inches
Alfalfa	22
Beans	16
Corn	16
Pasture	22
Potatoes	14
Small grains	12
Sugar beets	22

ELECTRICITY COSTS

Based on irrigators' estimates of gross water applied to various crops and total power charges, as discussed above, the following rates for pumping and applying water were determined:

Electricity cost to pump and apply water

Static lift in feet	Power cost/gross acre inch applied
100	\$.80
10	\$.65

The above rates include charges for hookup and for energy consumed. The per acre inch electricity rates are used in calculating energy charges for each crop. For example,

the electricity charge for pumping and distributing water onto sugar beets from a 100 ft. well is: 22 acre inches @ \$.80 equals \$17.60/acre. To pump from a surface source or 10 ft. lift, the charge would be: 22 acre inches @ \$.65 equals \$14.30/acre. Power charges included in subsequent budgets are all based on the 100 ft. lift, 100 hp, electric motor system.

SPRINKLER SYSTEM COSTS

Investment requirements and costs for owning and operating center pivot sprinkler systems, as used in the crop budgets are summarized below. The investment requirement shown is estimated for a 5 year old sprinkler system. New systems would cost more than shown here while older systems probably required a lower investment.

A. Investment requirements (5 year old system)

Item	Present value		alvage value	Deprec- iable value
Pump from well, 100 hp:				
Sprinkler & pivot	\$20,800	\$	4,160	\$16,640
Motor, pump, panel,				
hookup	8,136		2,441	5,695
Well (16", 125' deep)	3,000		600	2,400
Mainline pipe, 1320'	4,012		1,605	2,497
Totals		\$		\$27,232
		_	Cont	inued

 $[\]frac{a}{a}$ Investments, annual costs and details are shown in Appendix Worksheet VI.

ected yield gives the The breakeven price resourcesmatiths rates	Present	Salvage	iable
	144491	TO GHIT H	7 100 2 100
Pump from surface, 75 l Sprinkler & pivot		\$ 4,160	\$16,640
Pump from surface, 75 l Sprinkler & pivot Motor, pump, panel,	\$20,800		
Sprinkler & pivot	\$20,800	boys tot	a anzuz
Sprinkler & pivot Motor, pump, panel,	\$20,800 3,800	ds 1,140	2,660

B. Annual costs for sprinkler systems

Pump from well Pump from surface 100'lift, 100 hp 10' lift, 75 hp

s shown in Table 1. The procedul

each crop.	Total	Per acre	Total	Per acre
Depreciation		\$20.48	\$2,096	\$16.77
Interest	1,937	15.49	1,775	14.20
Taxes autroog	179	1.43	150	1.20
Insurance			90	nd 0.72 00
0i1, lube,	the lan	managing	and for	in the land
repairs	402	3.22	346	2.77
Labor	285	2.28	285	2.28
Electricity f	for	qual to ne	amount e	as over b/
22 ac. in.	2,200	17.60 ^a /	1,788	14.30
Total	\$7,670	\$61.36	\$6,530	\$52.24

The procedure for determining net land rent

Sprinkler systems in southeastern Wyoming were financed with funds borrowed from various lending agencies. For cash flow analysis annual costs or charges for depreciation and interest, shown above, might be considered as replacing annual principal and interest payments for borrowed capital.

PERFORMANCE RATES

for potatoes.

Plant

Grow

Machine and labor requirements for crops grown under center pivot sprinklers are shown in Appendix Worksheet I. Performance rates for cultural operations are generally more efficient for sprinkler than for furrow irrigated crops. Fields are generally larger and soils easier to work (more sandy) than the common furrow irrigated "bottom-lands."

INPUT DATA

The machinery complement used in budgeting costs for sprinkler irrigated crops is the same as used for furrow irrigated crops, Appendix Worksheets II, III and IV. However, since performance rates for sprinkler grown crops are more efficient and sometimes fewer operations are required, most costs for specific operations are lower for sprinkler than for furrow irrigated crops.

Shown in Appendix Worksheet V are input prices and application rates used in budgeting costs for sprinkler irrigated crops. The input prices and application rates are the same as for furrow irrigated crops. Specific input

costs for all purchased inputs plus charges

farms. Therefore, a "customary agreement" could not be easily delineated. Users of the budgets

should therefore use the procedure outlined only as a guide for evaluating specific cases.

 $[\]frac{a}{C}$ Charged at \$.80/ac. in. applied.

 $[\]frac{b}{}$ Charged at \$.65/ac. in. applied.

data for potatoes are included in the detailed budget for potatoes (Table 11).

Shown in Appendix Worksheet VI are investment data and costs for owning and operating specialized equipment for sprinkler grown crops. Most of the specialized machines, except for the sprinkler system, are needed for potatoes.

ORGANIZATION OF CROP BUDGETS

All of the sprinkler irrigated crop budgets are organized similarly. Costs are determined for each operation but sub-grouped as follows:

Preplant
Plant
Grow
Harvest
General overhead
Management
Real estate costs
Total production and
opportunity costs.

Total costs include charges for all resources. Thus, if the operator of the farm is an owner-operator the budgets include cash costs for all purchased inputs plus charges to compensate the owner for his labor and management and for providing his machinery-land-improvement-sprinkler investment.

Cost/unit of production or breakeven selling price is calculated at the bottom of each budget. Total costs divided by expected yield gives the breakeven selling price. The breakeven price would cover costs for all resources at the rates charged in the budgets.

Users of the budgets can easily calculate returns above total costs, returns above cash costs, returns above operations costs or returns above all costs except land. The residual in the latter case is return to land. This procedure will be illustrated later. Returns to other resources can also be calculated. The resulting comparative net returns can be useful in evaluating alternative crops.

NET LAND RENT

Net land rent is determined for each crop. This cost as used here is defined as the net cost to the operator for using the land. Another definition of net land rent is the opportunity cost to the owner of the land for his investment in the land and for managing the land-sprinkler investment. This means that the owner of the land, owner-operator or non-operator owner could receive an amount equal to net land rent by leasing the land with sprinkler to a tenant operator.

The procedure for determining net land rent is shown in Table 1. The procedure is based on crop-share-rental arrangements found in the area.

It was observed that rental agreements for land with sprinkler systems varied considerably between farms. Therefore, a "customary agreement" could not be easily delineated. Users of the budgets should therefore use the procedure outlined only as a guide for evaluating specific cases.

Procedure for determining NET LAND RENT, for crops under CENTER PIVOT SPRINKLERS, Southeastern, Wyo., 1977-78. Table 1.

				Ca	se farm	crone							Alternat	ive crops		
	Cuga	r beets	Corn	-grain	Corn-s		Dry	beans	Alfalf	a, baled	Alfalf.	a, cubed		for feed	Pota	toes
. Jago adr es be	Suga	1 beets	COLL	-grain	COTII-S	llage	DIY	Deans	Allali	a, bareu	Allali	a, capea	Builey	TOP TEEU	1020	2000
Acres of each crop	Land	nd4 n	ctac	or for	SISCO	ada v	rec.	ysla	eed be	2 702 B	zab bd	n enold	descrip	madi a	17.9	
Landowner gross rent:		0.511									at the sales				Potatoes	40%
Landowner crop share	Beets	25%	Corn	THE RESERVE OF THE PARTY OF THE	Silage	33 1/3%	Beans	25%	Hay	40%	Hay	40%	Barley			40%
tony bont ton	Tops	0%		33 1/3%	AND ADDRESS OF THE PARTY OF THE	orist !	7			1 200			Straw	33 1/3%		
Expected yield/acre	Tons	20.0	Cwt	55	Tons	22	Cwt	20	Tons	4.5	Tons	4.5	Cwt	40	Cwt	250
and return to	MILL I	ar Jan	Acre	1.0		nama i	L	00		at mand	s doso	ISITEODS	Ton	.75		
Landowner crop share	Tons	5.0	Cwt	18.33	Tons	7.33	Cwt	6.66	Tons	1.8	Tons	1.8	Cwt	13.33	Cwt	100
			Acre	.33				an Property	n70-1	and Thorr	The second second	onto at	Ton	.25		
Price/unit	Ton	\$ 25.00	Cwt	\$ 3.31	Ton	\$ 13.55	Cwt	\$ 21.10	Ton	\$45.17	Ton	\$ 55.17	Cwt	\$ 3.00	Cwt	\$ 2.
based on the	* dox	each c	Acre	\$15.00	BORI J	9)1-			II MEZ	18 Wels	1 0/13	10 MAKE	Ton	\$20.00		
Crop share value	Beets	\$125.00	Corn	\$60.67	Silage	\$ 99.32	Beans	\$105.50	Bales	\$81.30	Cubes	\$ 99.30	Barley	\$40.00	Potatoes	\$200.
menda ana ata	Tops	-	Stalks	\$ 5.00	- FT	5. There							Straw	\$ 5.00		
GROSS RENT	e Minera	\$125.00	hadna	\$65.67	formasi	\$ 99.32	(2)	\$105.50		\$81.30		\$ 99.30		\$45.00	1	\$200
Landowner costs:	Ran	. I sid	aT io	BELLT !	botton	0417 - 1	00		SLIAN	bos val	IEG BI	7 20 DT	Una-tild	1 m 2	1	
Operations costs:	Thus w	tony b	ral a	or tud	behn	test)	id	. 71	NOT DE	OTT THE	andon!	savis :	ca/untr	ling sem	2.3	
Seed Alfalfa (stand)			the same of		1		-		2 030	77				100	- 7	~-
Fertilizer share	1/2	13.77	1/3	15.11	1/3	15.11	35	3.57	2/5	6.64	2/5	6.64	1/3	8.21	ь/	44
Insecticide, fungicide	4	bee .75	ca Ic	lig-nd	1 11 .	تعسيا و	3/2	3.00	243 30	Ludos	a rol	WATER T	d 55 to	CHAPT AD	b/	32
	*	9.45		7 00.4	2 tree	-m/10	rol					-		7707	0 = -	
Electricity	15	8.80	A	6.40	45	6.40	15	6.40	1/2	8.80	35	8.80	15	4.80	All	11
Sprinkler repairs	ACT 6	3.22		3.22	Exact b	3.22		3.22	37.7	3.22	1	3.22		3.22	c/	5
	rwo bez		ORIA		5-67		[3]		2/5 bal		2/5 CH	be 27.00	bale 1/		bin @ 6c	6
	bers T		a serie	2.54	280	2.54	10	1.66	70-1	3.57	14 90	4.68	er ha ve	1.89	0.55	10
Subtotal, oper. costs	JAXAS I	40.00	2 15 X II		280	27.27	111	17.85	10077	38.43	4.0	50.34	4 - 5	20.37	1000	110
Real estate costs:	Jako	40.00	Thon	27.27	80 39V	Oct 20 33	PW	17.05	edi lo	30173	STATE OF	30.00	MI3 10	1 30000	HIO	
Improvements:	on Lan	d own	a wal	oful ros	t for	COL 3	BUCY.	31	ad tilsa	amusas o	als als	31 .8	repair	rinkler	TB .	
Depreciation		a/						a/	a market	a/	has held	a/		a/	5-9	a/
Interest on investment		<u>a</u> /		<u>a</u> /	.svli	<u>a</u> /	2.00	<u>a</u> /	2 3 10 (0.1)	3 2/ 10	AF 2.3.17.3	and a	211 THEM	<u></u> /		
Insurance & taxes			N.		1				5H .	(1101 4)	1.301	(52-25	while a	un Surra	L BLCI	
Repairs (landowner)	da ho	hat well	keen	5 Leeds	states	12 in	0		CVET	STORES	to and	ida akid	neont o	als blo	- bruz	
Utilities & labor (oper.)			4-1-1				Sec				P.P.	- b b			and a	
Sprinkler system:	oj be	ISCIBL	DD BI	pered	DIN DUA	T. 21915.7	.8	169.3	BJUY I	MIS HUGS	MRTTP:	den mra	urbur u	DELLA - MI	100	
Depreciation & alf. stand	abo za	20.48	anlag	20.48	ET "	20.48	127	20.48	get fo	29.11	uni ba	29.11	en ajso	20.48	320	20
Interest on investment					no ton	15.49	1.7	15.49		17.22		17.22	.579	15.49	T de	15
Insurance & taxes	ti limit	The second secon		2.29		2.29		2.29		2.29		2.29		2.29		2
		2.29			1					2.29		2.04		2.04		2
Land taxes:	Take I	2.04		2.04	Epode	40.30		2.04	as in	50.66	estat	50.66	nwobms.l	40.30		40
Subtotal, real estate		40.30	- NO	40.30		-		40.30	shult		Bud vs		the fe	40.30	150	_40
the second secon					EGG - 29 J.J.J.		9.22		O MANY TITLE	MI JES	Marine Sta	A.C. LIGHE MICH	City College	11-1- 10-21-01-0	the state of the s	
TOTAL 11		90.20					1.5	EU 16		90 00	A comment of the	101 00		60 67	100	150
TOTAL landowner costs (2 +)		80.30		67.57	gnlis	67.57	şΑ	58.15	restma	89.09	DVB III	101.00	ion, in	60.67	deg	150
adinies adin	3)	80.30	eauls	67.57	ating to la	67.57	gA es	4-14	emisay nluqa		on aver	C. District Margaret	ion, in	and the second second	de Lt.	
TOTAL landowner costs (2 + :	3)	80.30	alues estae	67.57				47.35	estme sprin			C. District Street, St	taxes	(15.67)	lap Tit	150 49

^{-/} It is assumed that costs associated with shop, housing and sheds are provided by tenant operators. The landowner would pay taxes on land and

and assumed equal yields not tent for cubed

irrigation water charges if any,

 $[\]frac{b}{}$ Landowner provides fertilizer, insecticides, herbicides and fungicides for blight.

Landowner pays sprinkler repairs and operates the sprinkler.

d/ Numbers in parenthesis are negative. for SALED HAY. With this price differential

The procedure might be clarified by examining the item descriptions and data for feed barley shown in Table 1 and following these steps:

- 1. The landowner crop share is assumed to be one-third of the barley crop. In this illustration it is also assumed that the landowner gets one-third of the baled straw if it is sold.
- 2. One-third of the barley and straw times price/unit gives landowner gross rent. In this example gross rent includes \$40 for barley and \$5 for straw for a total of \$45/acre.
- 3. Landowner operations costs are assumed to be one-third of the fertilizer, one-half of the electricity and all of the sprinkler repairs. It is also assumed that the landowner pays one-third of the cost for baling the straw (\$2.25 for 1/4 ton). He would also incur his share of general overhead which includes miscellaneous and interest on cash costs as included in the budget for feed barley.
- 4. Landowner real estate costs as included in the feed barley budget, include depreciation, interest on average investment, insurance, taxes and repairs for the sprinkler system. The operator, or tenant, is assumed to provide all costs for other improvements. The landowner would pay taxes on land and irrigation water charges if any.
- 5. Landowner gross rent minus operations and real estate costs equals NET LAND RENT.

Again, net land rent is defined as the cost to the operator for using the land. It does not matter if the operator is a tenant or owner-operator. If the landowner is a non-operator, net land rent is return to his investment in land and return to his management of the land-sprinkler investment.

Net land rents for each crop, based on the stated price-yield-crop share assumptions and costs developed in subsequent budgets are shown on the bottom line of Table 1. Readers should be reminded that net land rents will vary directly with any changes in prices and/or yields. For example, if the price for feed barley was \$1.50/cwt higher, say \$4.50 rather than \$3/cwt, net land rent for feed barley would be \$4.33/acre profit rather than \$15.67 loss. Also, if landowner costs were higher, net rent would be lower and if yields were lower net rent would be lower. Obviously net rent for sprinkler grown barley at \$3/cwt is negative.

Readers should keep in mind that the situation budgeted is considered to be "above average." Yields, prices and production technologies could be higher than area averages.

It should also be noted that land can appreciate or decline in value over time. Appreciating land values would increase average returns to land investment, if it were sold. Declining land values would reduce average rate of return to land if, or when, it is sold.

It is important to note that THE PRICE for CUBED HAY is set at \$10/ton HIGHER than for BALED HAY. With this price differential and assumed equal yields net rent for cubed

	ba1	es who	en analy		specific			ıs.		Table			producing	U	MILO N	BALED),
Σg		a wint	, when the	CROP	BUDGETS	Timel	box13	tion	303	danti	and taltas		-algmi	3	3877	Operation(u)
	Todal	modence	adul.	7.0	- I sent	1907	17/2/0-2 9	ayuod	RANDS	m 1 1 -			producing	ALFA	LFA (C	CUBED),
		The	detaile	ed ent	erprise	budge	ets sh	nowing			page	17.				120
	COS				ops und				160	100			3 shark E		125	ubsoil) .2 sare
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	08.		-36	53.	24.	àd.	1.07	002.	200		costs	of	producing	IRRI	GATED	PASTURE,
	Tab	le 3.	Costs	of pr	coducing	CORN	for (GRAIN,	1:542		page :					rabioan, jane
			page 1	2.							lb mend		yor 8		ot	
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		1e 4.			coducing	COKN	ior s	TLAGE,	101.2				1.57	10	100	MOTTER
	20.	1.3	page 1	.3.				.025			these di	125	u03 0	10	2.0	2. 7
	1.82	17.29	2.05	3.22	10.	16-	1.125	454	450							tal, plant
	Tab	le 5.	Costs	of pr	coducing	DRY	BEANS,	page							0.0	prevent blowing
	58.1.3		14.			49.	287	362			1990 mad		regulates		0.9.	straided ave
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Table 2. Per acre costs of producing SUGAR BEETS, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 20 tons/acre, 125 acre enterprise.

		F		Physic	al data	1		Powe	r unit	costs	Imple	. costs	Mater-		
	Trac-	E	Imple-	Materials		Trac-				Repair,		Repair,	ials &		Total/
Operation(s)	tor	L	ment	description	Truck	tor	Man	Fixed	Fuel	lube	Fixed	1ube	custom	Labor	acre
					miles	hours	hours				\$/	acre			
Preplant:															
Rip (subsoil) .2 acre	125	Н	3 shank			.091	.091	.49	.30	.20	.32	.05		.36	1.72
Spread fertilizer	70	L	custom	150; 100; 50; S20		.079	.159	.21	.10	.11			55.10	.64	56.16
Disk	100	Н	15'			.182	.182	.68	.52	.32	.92	.57		.73	3.74
Plow & pack	125	Н	4-18's			.454	.454	2.43	1.49	1.01	1.68	1.39		1.82	9.82
Roller harrow	100	Н	15'			.200	.200	.75	.57	.35	.63	.33		.80	3.43
Level	125	Н	14'			.200	.200	1.07	.66	.45	.47	.36		.80	3.81
Shank in nematocide	100	Н	custom	cost for .6 acre		.136	.136	.51	.39	.24			37.80	.54	39.48
Roller harrow	100	H	15'			.200	.200	1.07	.66	.45	.47	.36		.80	3.81
Subtotal, preplant						1.542	1.622	7.21	4.69	3.13	4.49	3.06	92.90	6.49	121.97
Plant:															
Plant and	70	Н	6 row	2.5 lb seed		.417	.417	1.12	.82	.60	1.51	.93	10.37	1.67	17.02
incorporate herbicide		-	6 row	10 lb herbicide							1.59	1.06	6.30		8.95
Replant 6% of acres:											l				
Roller harrow	100	Н	15'			.012	.012	.06	.04	.03	.03	.02		.05	.23
Plant	70	Н	6 row	.15 lb seed		.025	.025	.07	.05	.04	.09	•05	.62	.10	1.02
Subtotal, plant						.454	.454	1.25	.91	.67	3.22	2.06	17.29	1.82	27.22
Grow:							-	, Ph. 142	3 7.87						
Rough, prevent blowing	40	L	stripper	2 times over		.454	.454	.87	.66	. 57	.82	.38		1.82	5.12
Post emerg herbicide	40	L	6 row	cost for .2 acre		.045	.045	.09	.06	.06	.12	.09	1.91	.18	2.51
Cultivate, 1st	70	L	6 row			.357	.357	.96	.45	.51	.51	.69		1.43	4.55
Thin, hand labor		_		hoes \$1, thin \$30									31.00		31.00
Cultivate, 2nd	100	L	6 row	rolling		.227	.227	.85	.43	.40	.56	.14		.91	3.29
Layby herbicide	40	L	6 row	cost for .2 acre		.045	.045	.09	.06	.06	.12	.09	.50	.18	1.10
Cultivate, 3rd	100	L	6 row	rolling		.227	.227	.85	.43	.40	.56	.14		.91	3.29
Weed, hand labor		-		- -									15.00		15.00
Cultivate, 4th	100	L	6 row	rolling		.227	.227	.85	.43	.40	•56	.14		.91	3.29
Irrigate, 22 acre in.			circle	elec. @ \$.80/ac. in.		~-	.570				~-	3.22	17.60	2.28	23.10
Weed, hand labor, 2nd		_		cost for .6 acre									9.00		9.00
Association dues		-		6¢/ton									1.20		1.20
Pickups		-	½ ton		35.0	~-	1.167	5.21	1.82	2.52]		4.67	14.22
Spray for mildew		_	air	cost for .25 acre								}	3.00		3.00
Subtotal, grow			1		35.0	1,582	3.319	9.77	4.34	4.92	3.25	4.89	79.21	13.29	119.67

CONTINUED NEXT PAGE

Table 3. Per acre costs of producing CORR for CENTES PIVOT SPRIMILIS INDICATION, Southeestern, Nov., 1972-78. Vield goal 35 cur (98 bu)/acre, 125 acre outroprise.

Table 2. (CONTINUED) Per acre costs of producing SUGAR BEETS, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 20 tons/acre, 125 acre enterprise.

	1.72	d7 .	U	350 m	132	05.	Phy	sical data	160"		Powe	r unit	costs	Imple	. costs	Mater-	and been	102
Operation (a)	9.02	Trac-	E	Imple-	42.1	Materi	- 300	Truck	Trac-	Man	Fixed	Fuo1	Repair, lube	Fixed	Repair, lube	ials & custom	Labor	Total
Operation(s)	47.5	tor	L	ment	387	descrip	LION	miles	hours	hours		ruei			acre	Cuscom		
larvest: Cop, top saver	11.00	100	Н	6 row	13.1	194		NI - P80	.909	.909	3.41	2.58	1.60	14.19	5.18	ela <u>nd</u> a 1	3.64	30.6
ull and load		125	Н	3 row				V-1	.909	.909	4.86	2.98	2.03	18.31	9.13	100 100	3.64	40.9
laul to dump		15.44	0.51	2 ton	0.1	6.9 mi/8	tons	17.3	126.	2.727	15.48	1.78	6.04	-	-	21100,010	10.91	34.2
Subtotal, harves	t							17.3	1.818	4.545	23.75	7.34	9.67	32.50	14.31		18.19	105.7
Subtotal, prepla	nt thro	ugh har	vest			Pu	35.0;	Tk 17.3	5.396	9.940	41.98	17.28	18.39	43.46	24.32	189.40	39.79	374.6
General overhead:	Au 58	100	200			05.		00.	353				1,12,52,52	2 2 0	O.T.	10000	- now have to	140
discellaneous at 5	% of ab	ove sub	total	1	3.5	1090	1.7	.9	.270	.497	2.10	.86	.92	2.17	1.22	9.47	1.99	18.7
interest on cash o	osts at	10% for	r 6 1	mo's		1.8-1		VR'15 TA98		0.05		.91	.96		1.28	9.94	2.09	15.1
Subtotal, genera	1 overh	ead	12,8	1 53.5			1.7	.9	.270	.497	2.10	1.77	1.88	2.17	2.50	19.41	4.08	33.9
Subtotal, prepla	nt thru	genera	1 ove	erhead		Pu	36.7;	Tk 18.2	5.666	10.437	44.08	19.05	20.27	45.63	26.82	208.81	43.87	408.5
Management: at 5%	of exp	ected g	ross	(20 tons	at \$2	25 plus to	ops 20	tons @ \$	2 = \$540	0 .05)			ani I	NY -			anle	27.0
Subtotal, all or	eration	s costs																435.5

15:451 150:	5			000.0	A110 K ALV X X	100-1		Subtotals, real e	state	Annual Contractor
.45 30.19	2	Net land	Deprec-	Inter-	Insurance	Repairs,	Water &	Rent, deprec-	-Change	ad and tantage Intuited
Real estate costs:	51 115	rent	iation	est	& taxes	utilities	drainage	iation, interest	Other	sharofunou Tarturait
Land		44.70			2.04	232 701		44.70	2.04	46.74
Shop, metal	18.0	-E -L - BL	1.00	2.25	.78	1.25	-1	3.25	2.03	5.28
Machine shed, frame	TIB		.75	1.12	. 36	.26		1.87	.62	haufrang larger Latordup 2.49
Labor house	2 00		.83	3.12	.65	2.89	0.0 /2	3.95	3.54	no could toutowen Laterton 7.49
Labor house, beets		. OB 42 80	.64	3.33	. 23	2.10		3.97	2.33	6.30
Sprinkler			13.31	9.98	1.60	a/	SCALE THE PERSON	23.29	1.60	24.89
Motor, pump, panel (100 hp)			4.56	1.83	.69	a/		6.39	.69	7.08
Well			1.28	1.44				2.72		2.72
Mainline pipe		HAC BRICK	1.33	2.24				3.57		3.57
Subtotal, real estate costs	3	44.70	23.70	25.31	6.35	6.50	UNTURK -19	93.71	12.85	106.56
		The state of the s			and the second	A P. P. T. SALE. THE		the problem later		28 3 8 8 5 2 6 3 6 3 6 5 1 8 5 1

Total cost/acre \$542.09 minus credit for tops at \$40/acre equals cost for 20 tons beets \$502.09

7.89	5.1.1 100.0	
Cost/ton or breakeven selling price at:	20 tons/acreb/	witesd .savod rod 25.10
1.60 =/ 12	22 tons/acre	22.91
d	18 tons/acre	(4/ 001) Examp among to 10 27.79

Subtoral, real matate costs

TOTAL PRODUCTION AND OPPORTUNITY COSTS ---

lmple, couts light-

Repair, electricity and labor costs for the sprinkler system are included with growing costs.

 $[\]frac{b}{}$ These breakeven prices are after allowing a credit of \$2/ton of beets or \$40/acre for tops.

c/ Fuel use rates are: high (H), medium (M) and low (L) based on draft for the operation. See pages 25 and 26 for details.

Table 3. Per acre costs of producing CORN for GRAIN, CENTER PIVOT SPRINKLER TRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 55 cwt (98 bu)/acre, 125 acre enterprise.

		Ţ-		r				F						F	
		U		Phys	ical da	ıta		Power	r unit	costs	Imple.	costs	Mater-		ĺ
	Trac-	E	Imple-	Materials		Trac-				Repair,		Repair,	ials &		Total/
Operation(s)	tor	L	went	Description	"ruck	tor	Man	Fixed	Fuel	lube	Fixed	lube	custom	Labor	acre
Preplant:				-	miles	hours	hours				\$/	acre			
Rip (subsoiler) .2 acre	125	Н	3 shank			.091	.091	.49	. 30	.20	. 32	.05		. 36	1.72
Spread fertilizer	70	L	custom	N130; P80; Z5		.079	.159	.21	.10	.11			45.34	.64	46.40
Plow & pack	125	Н	4-18's			.417	.417	2.23	1.37	.93	1.54	1.28		1.67	9.02
Disk	100	Н	15'			.182	.182	.68	.52	.32	.92	.57	~-	.73	3.74
Roller harrow	100	H	15'			.200	.200	.75	.57	.35	.63	.33		.80	3.43
Subtotal, preplant						.969	1.049	4.36	2.86	1.91	3.41	2.23	45.34	4.20	64.31
Plant:															
Subtotal, plant	70	М	4-32"	20 lb seed @ 60¢		.303	. 303	.81	.48	.43	1.10	.67	12.00	1.21	16.70
Grow:															
Cultivate 1st	70	L	rolling			.357	.357	.96	.45	.51	.88	.22		1.43	4.45
Spray weeds	40	L	sprayer	1 lb 2, 4-D	~-	.159	.159	. 30	.23	.20	.44	.33	2.44	.64	4.58
Cultivate-ditch	100	L	4 row		~	.227	.227	.85	.43	.40	. 32	.44		.91	3.35
Pickup, season		-	\ ton		26.0		.867	3.87	1.35	1.87				3.47	10.56
Irrigate, 16 acre in.		-	circle	elec @\$.80/ac.in		~	.570					3.22	12.80	2.28	18.30
Subtotal, grow					26.0	.743	2.180	5.98	2.46	2.98	1.64	4.21	15.24	8.73	41.24
Harvest:															
Combine			14' SP				.454	7.42	1.41	4.33				1.82	14.98
Haul corn		_	2 ton	22 mi/140cwt	8.6		.908	7.70	.88	3.00				3.63	15.21
Subtotal, harvest				1	8.6	~~	1.362	15.12	2.29	7.33				5.45	30.19
Subtotal, preplant thr	u harv	est		Pu 26.0; T	k 8.6	2.015	4.894	26.27	8.09	12.65	6.15	7.11	72.58	19.59	152.44
General overhead:															
Miscellaneous at 5% of a	bove s	ubt	otal	1.3	.4	.101	.245	1.31	.40	.63	.31	.36	3.63	.98	7.62
Interest on cash costs a	t 10%	for	6 mo's						.43	.66		.37	3.81	1.03	6.30
Subtotal, general over				1.3	. 4	.101	.245	1.31	.83	1.29	.31	.73	7.44		
Subtotal, preplant thr		ral	overhea	Pu 27.3; T	k 9.0			27.58	8.92	13.94	6.46	7.84	80.02	21.60	166.36
Management: at 5% of ex				cwt @ $\frac{3.31}{1}$	5 for s						•		1		9.85
Subtotal, all operation															176.21

							Subtotals, real	estate	
	Net land	Deprec-	Inter~	Insurance	Repairs,	Water &	Rent, deprec-		
Real estate costs:	rent	iation	est	& taxes	utilities	drainage	iation, interest	Other	
Land	(1.90)			2.04				2.04	2.04
Shop, metal		1.00	2.25	.78	1.25		3.25	2.03	5.28
Machine shed, frame		.75	1.12	.36	.26		1.87	.62	2.49
Labor house		.83	3.12	.65	2.89		3.95	3.54	7.49
Labor house, beets									
Sprinkler		13.31	9.98	1.60	a/		23.29	1.60	24.89
Motor, pump, panel (100 hp)		4.56	1.83	.69	a/		6.39	.69	7.08
Well		1.28	1.44				2.72		2.72
Mainline pipe		1.33	2.24	~~			3.57		3.57
Subtotal, real estate costs	(1.90)	23.06	21.98	6.12	4.40		45.04	10.52	55.56

TOTAL PRODUCTION AND OPPORTUNITY COSTS------ 231.77

Total cost/acre \$231.77, minus cost for stalk pasture, \$15 equals cost for corn \$216.77

Cost/unit or breakeven selling price at: | Yield | Cost/cwt | Yield | Cost/bu | 55 cwt | 3.94 cr | 98bu | 2.21 | 65 cwt | 3.38 or 116bu | 1.89 | 45 cwt | 4.76 or | 80bu | 2.67

A/Repair, electricity and labor costs for the sprinkler system are included with growing costs.

Table 4. Per acre costs of producing CORN FOR SILAGE, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 22 tons/acre, 62 acre enterprise.

110000	Mater-	missoy .vi	F	W.76	00 720	l'over i	Dharata	al data	White Tit	Figuito	A STATE OF THE STA		adams.			10.1		1
Labor sers		Nepalr	-	Fingale	-			ar data			Powe	r unit		Imple	. costs	Mater-		-
	302013	Trac-	E	Imple-	13425	Material	Balata carried		Trac-		NAT TOWN	-	Repair,		Repair,	ials &	Mark Control	Total,
Operation	(s)	tor	L	ment		lescripti	on	Truck	tor	Man	Fixed	Fuel	lube	Fixed	lube	custom	Labor	acre
Preplant:	107 AT			14	DI	16.	100	miles	hours	hours	125		200000	\$/	acre			
Rip (subsoiler)	.2 acre	125	H	3 shank	52.3	PC s	100	0.187	.091	.091	.49	.30	.20	. 32	.05	6	.36	1.7
Spread fertilize	r	70	L	custom	N.	130; P80;	25	0077	.079	.159	. 21	.10	11.11			45.34	.64	46.40
Plow & pack	11.25	125	H	4-18's	10-00				.417	.417	2.23	1.37	.93	1.54	1.28	111	1.67	9.0
Disk		100	H	15'	137	25	200	0085	.182	.182	.68	. 52	.32	.92	.57		.73	3.7
Roller harrow	25.53	100	Н	15'	19.5	54.7		100-	.200	.200	.75	. 57	.35	.63	.33	distant of	.80	3.4
Subtotal, prep	lant								.969	1.049	4.36	2.86	1.91	3.41	2.23	45.34	4.20	64.3
Plant:		100		80.	100		000		0.5+				100	- 101				
Subtotal, plan	16.1.91	70	M	4-32"	20 :	lb seed @	60c	LOCA	.303	.303	.81	.48	.43	1.10	.67	12.00	1.21	16.70
Grow:	01.91	19.	OLG	12.	15.50	ALC: A	2.05	1007	0.11									
Cultivate, 1st		70	L	rolling	200		ray.		.357	.357	.96	.45	.51	. 88	.22		1.43	4.4
Spray weeds		40	L	sprayer	100	1 1ь 2, 4	-D	101	.159	.159	.30	.23	.20	.44	.33	2.44	.64	4.5
Cultivate - dito	h	100	L	4 row	100	Et.	222	1000	.227	.227	.85	.43	-40	.32	.44		.91	3.3
Pickup, season	62.5		_	s ton	1000	-	1,341	26.0		.867	3.87	1.35	1.87				3.47	10.5
Irrigate, 16 acr	e in.		_	circle	elec	@ \$.80/a	c. in.		0.45	.570			-	400	3.22	12.80	2.28	18.30
Subtotal, grow		5.22		CITCIC	0100	C 4.0076	-570	26.0	.743	2.180	5.98	2.46	2.98	1.64	4.21	15.24	8.73	41.2
Harvest:	00.51	-				100	100.00	20.0	.,,,,	2.100	3.30	2.40	2.70	2,04	4.21	13.24	0.75	77.2
Chop	32.30	125	н	2 row	2,73	LE:0	2,269	465.	.769	.769	4.11	2.52	1.71	10.45	7.13	MAKE AT	3.08	29.00
Haul, 3 trucks			_	2 ton		6 m1/6T		22.0		2.307	19.69	2.27	7.68	20.43			9.23	38.8
Pack	-55	100	M	blade	62	0 111,01	.000	22.0	.769	.769	2.88	1.81	1.35	1,21	.29	Session	3.08	10.6
Subtotal, harv	est	100	OF.	Diade	125	ee.	ope.	22.0	1.538	3.845	26.68	6.60	10.74	11.66	7.42		15.39	78.4
Subtotal, prep		harvest		EE-A	14-3	D., 1	6.0: Tk		3.553	7.377	37.83	12.40	16.06	17.81	14.53	72.58	29.53	200.7
General overhead	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 4 5	FA.	00.1	132	14 2	0.0, IK	22.0	3.333	1.311	37.03	12.40	10.00	17.01	14.55	72.30	29.33	200.7
discellaneous at		ove subt	ota	1 64		1.07	1.3	01.1	.178	.369	1.89	.62	.80	.89	.73	3.63	1.48	10.04
Interest on cash		Alleria Professora Rivertania		The same of the sa			6,2651	3.246	86 X 107	10.22		.65	.84	WYLLE IN	.76	3,81	1.55	7.6
Subtotal, gene				alo 5			1.3	1.1	.178	.369	1.89	1.27	1.64	.89	1,49	7.44	3.03	17.6
Subtotal, prep			OV	erhead	18.	-	7.3; Tk		3.731		39.72	13.67	17.70	18.70	16,02	80.02		218.3
anagement: at					ar \$1				3.731	7.740	37.12	13.07	17.70	20.70		1	32.30	14.9
Subtotal, all	Se of ext	ecced gr	038	(LL COIIS	at 9	13.33 - 9	230.10	x .05)	7.1.	A . I					bestrove I	POLICION 12	ayophiye.	233.29

						(50) × (5246 ×	Subtotals, real	estate	es to IC da identification	
705-70	Net land	Deprec-	Inter-	Insurance	Repairs,	Water &	Rent, deprec-	and the same of th	transferre tre transcope	
	rent	iation	est	& taxes	utilities	drainage	iation, interest	Other		
Real estate costs:		t, depret-	120/1	N TRIBNI	milenel son	winest -reini	Mat Land Duprec-			
Land	31.75	on, intere	116/	2.04	LILLIA NO	881 Aug 282	31.75	2.04	181800 e3838b [1.68	33.79
Shop, metal	2.04	1.00	2.25	.78	1.25	25.5	3.25	2.03	Chup, meral	5.28
Machine shed, frame	77-22	.75	1.12	.36	.26	W	1.87	.62	Machine which I your	2.49
Labor house	A2.2	.83	3.12	.65	2.89	20 511	3.95	3.54	asped toda.	7.49
Labor house, beets	116.4		-	(***			wreed , seemed roots!	
Sprinkler	00.7	13.31	9.98	1.60	a/	03.1 44 81.9	23.29	1.60	Sprinkler	24.89
Motor, pump, panel (100 hp)	8-6	4.56	1.83	.69		88, - CE 3	6.39	.69	Moror, pump panel LLUS	7.08
Well		1.28	1.44			Hal	2.72		11,000	2.72
Mainline pipe		1.33	2.24			and the second	3.57		many noticing	3.57
Subtotal, real estate costs	31.75	23.06	21.98	6.12	4.40	71-9-11	$\frac{3.57}{76.79}$	10.52	STATEMENT LANGUES OF STREET	87.31
TOTAL PRODUCTION AND OPPORTUNITY	COSTS									320.60

a! Repair, electricity and labor costs for the sprinkler system are included with growing costs.

Cost/ton or breakeven selling price at: 22 tons/acre

24 tons/acre

20 tons/acre

14.57

13.51

Table 5. Per acre costs of producing DRY BEANS, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 20 cwt/acre, 62 acre enterprise.

				1											
		F		Discrete 1					r unit c		Imala	acata	W		I
	_	U		Physical	l data			Power	r unit c			costs	Mater-		Total/
A	Trac-	Ε	Imple-	Materials	m 1	Trac-	.,	771	г - 1	Repair,		Repair,	ials &		· ·
Operation(s)	tor	L	ment	description	Truck	tor	Man_	Fixed	Fuel	lube	Fixed	<u>l</u> ube	custom	Labor	acre
Preplant:					miles	hours	hours			20	\$/ac				
Rip (subsoiler) .2 acre	125	Н	3 shank			.091	.091	.49	.30	.20	. 32	.05		.36	1.72
Spread fertilizer	70	L	custom	N18; P46; Z3		.079	.159	.21	.10	.11			14.28	.64	15.34
Plow & pack	125	Н	4-18's			.417	.417	2.23	1.37	.93	1.54	1.28		1.67	9.02
Roller harrow	100	Н	15'			.200	.200	.75	.57	.35	.63	.33		.80	3.43
Spray on herbicides		-	custom	apply \$2.50					~-				11.25		11.25
Roller harrow	100	Н	15'			.200	. 200	.75	.57	.35	.63	.33		.80	3.43
Subtotal, preplant						. 987	1.067	4.43	2.91	1.94	3.12	1.99	25.53	4.27	44.19
Plant:															_
Haul seed		-	2 ton		.26		.060	.23	.03	.09				.24	.59
Plant	70	M	6 row	70 1ь. @ 23¢	~-	. 303	.303	.81	48	.43	1.10	.67	16.10	1.21	20.80
Subtotal, plant					. 26	.303	. 363	1.04	.51	. 52	1.10	.67	16.10	1.45	21.39
Grow:				1							1				1
Spike harrow	40	Н	24 *			.182	.182	.35	.39	.23	.26	.26		.73	2.22
Cultivate, 1st	70	L	6 row			.357	.357	.96	.45	.51	.51	.69		1.43	4.55
Cultivate, 2nd	100	L	6 row	rolling		.227	.227	.85	.43	.40	.56	.14		.91	3.29
Pull weeds		_		cost for .5 acre									7.50		7.50
Pickup, season		_	ton ½		28.0		.933	4.17	1.46	2.02				3.73	11.38
Irrigate, 16 acre in.	~-	_	circle	elec. @ \$.80/acre inch			.570					3.22	12.80	2.28	18.30
Spray for mildew		_	custom	air									12.00		12.00
Subtotal, grow					28.0	.766	2,269	6.33	2.73	3.16	1.33	4.31	32.30	9.08	59.24
Harvest:															
Cut & rod weed	70	Н	6 row			.500	.500	1.34	.99	.71	2.03	1.86		2.00	8.93
Rake	40	L	8'			.500	.500	.95	.72	.62	1.40	.59		2.00	6.28
Combine		_	14' SP				.454	7.42	1.41	4.33				1.82	14.98
Haul beans		_	2 ton	21.7 m1/140 cwt	3.1		.908	2.77	.32	1.08				3.63	7.80
Subtotal, harvest			2 0011	2217 1112,210 0112	3.1	1.000	2.362	12.48	3.44	6.74	3.43	2.45		9.45	37.99
Post harvest: Field cult.	125	Н	15'			.200	.200	1.07	.66	.45	2.86	.56		.80	6.40
Subtotal, preplant thru po				Pu 28.0; 1	rk 3.36	3.256	6.261	25.35	10.25	12.81	11.84	9.98	73.93	25.05	169.21
General overhead:	, oc narv			14 20.0,	11. 3.30	3.230	0,201	23.33	10.123	12101	12.04	7170	,30,75	-	207.22
Miscellaneous at 5% of above	subtot	ا ه		1.4	.17	.163	.313	1.27	.51	.64	.59	.50	3.70	1.25	8.46
Interest on cash costs at 10			1.						.54	.67		.52	3.88	1.32	6.93
Subtotal, general overhead		, Inc	3	1.4	.17	.163	.313	1.27	1.05	1.31	.59	1.02	7.58	2.57	15.39
Subtotal, preplant thru ge		\112A~	head	Pu 29.4; 7					11.30	14.12		11.00		27.62	184.60
, Management: at 5% of expect					rr 2.12	3.419	0.574	20.02	11.30	14.12	122.47	11.00	01.31	127.02	21.10
Subtotal, all operations of															$\frac{21.10}{205.70}$
Subcotar, arr operations (.0518														203.70

							Subtotals, real e	state	
	Net land	Deprec-	Inter-	Insurance	Repairs,	Water &	Rent, deprec-		
Real estate costs:	rent	iation	est	& taxes	utilities	drainage	iation, interest	Other	
Land	47.35			2.04			47.35	2.04	49.39
Shop, metal		1.00	2.25	.78	1.25		3.25	2.03	5.28
Machine shed, frame		.75	1.12	.36	.26		1.87	.62	2.49
Labor house		.83	3.12	.65	2.89		3.95	3.54	7.49
Labor house, beets									
Sprinkler		13.31	9.98	1.60	a/		23.29	1.60	24.89
Motor, pump, panel (100 hp)	~	4.56	1.83	.69	a/		6.39	.69	7.08
Well		1.28	1.44				2.72		2.72
Mainline pipes		1.33	2.24				3.57		3.57
Subtotal, real estate costs	47.35	23.06	21.98	6.12	4.40		92.39	10.52	102.91

Cost/unit or breakeven selling price at: 20 cwt/acre (33.3 bu) $$18\ \text{cwt/acre}$$ (30.0 bu)

15.43 17.07

22 cwt/acre (36.6 bu) 14.08

 $[\]frac{a}{}$ Repair, electricity and labor costs for the sprinkler system are included with growing costs.

Table 6. Per acre ADDED COSTS of ESTABLISHING ALFALFA STAND, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Alfalfa drilled into stubble after harvesting barley or oats.

14.50		F	Physi	cal dat	a	2 marketin	Powe	r unit	costs	Imple	. costs	Mater-		
fals & Total/	Trac-	Ballion I. W. W. Command	Materials	m	Trac-	nT.	711	F 1	Repair,	Edmad	Repair,	ials &	Labor	Total/
Operation(s)	tor	1 ment	description	Truck	tor	Man	Fixed	Fuel	lube	Fixed	lube	custom	12001	acre
Plant:	22.00	19.	213	miles	hours	hours				\$/	acre			+
Spread fertilizer	70	L custom	0-40-0		.079	.159		.10	.11			6.52	.64	7.37
Drill alfalfa seed	40	L 12'	12 1b. @ \$1.70		.303	.303		.53	. 38		.21	20.40	1.21	22.73
Subtotal, plant		1.8	. 01	-311	.382	.462		.63	.49		.21	26.92	1.85	30.10
Grow:	20.0	2563	757 277 003	- 000			SEVAR	a mate	a fresh	- /4	MAY/C	at was	ACT THE	101100
Irrigate, 4 acre in.	3,22	- circle	elec. @ \$.80/ac.in			.142		- 12011	BAUTAN			3.20	.57	3.77
Pickups		- ½ ton	-1 PI-1 05-E EE	6.5	- 0.	.217		.34	.47				.87	1.68
Subtotal, grow	21.53	E07 20	02 4.24 1.81 2.	6.5	H	. 359		.34	.47			3.20	1.44	5.45
Subtotal, plant thru gro	w		I	u 6.5	. 382	.821		.97	. 96		.21	30.12	3.29	35.55
Interest: on cash costs a	t 10% for	3 mg's	-				ChAN DO	.03	.02		.01	,75	.08	.89
ADDED COSTS to establish a				Pu 6.5	. 382	.821	1117.5	1.00	.98		.22	30,87	3.37	36.44

mmary of	<u>Item</u>	costs to e	Units/acre	Owner- operator	Land- owner \$/acre	Tenant operator	1.1				Nobtotal, grow thru harvest Cameral overhead: Miscellaneous at 51 of above sub Interest on cash costs at 107 fo
Tract	or and	drill:	.382 hr	15. 84.	-21						Subrotel, general overhead
or Fue	2	1 222.70	.66 3.92	.63	745 14.45	.63	Fu 23.1			bandyo	Subtotal, grow thru general ov
Rep	air & 1	.ube		.70		.70	01.26 x .05	17 - 52	CAR 9 mmo	rest (6.5)	Management: at 5% of expected g
Picku	ips:		6.5 mi								Subtotal, all operations costs
Fue			eraras Iner	# f # 3 0 3 d . 34		. 34					
Rep	air & 1	ube	-50	195h . 18.47	Water &	.47	Insurance	-TOINI	Deprec-	Mer land	
Labor			.821 hr	3.29	minathab i	3.29	Hexaz à	289	nolusi	33000	TRIBOS SIBIRE [AB]
Elect	ricity		4 acre in.	3.20	1.60	1.60	2.04			(27.79)	
Alfal	fa seed		12 1ь @ \$1.70	20.40	20.40	T. 25	.78	2.25		1000	Shop; metal
Ferti	lizer		40 units P ₂ 0 ₅	6.52	3.26	3.26	3.6		7.5		Machine shed, frame
Inter	est on	cash	10% for 3 mo's	.89	.63	. 26	co.	3.1.2		-	heard model
TOTAL	costs	for STAND	1.60	36.44	25.89	10.55	1.60	86.6	IE.EI		Sprinklar
NUAL cos	ts for	STAND:		2,72	-	-		04.1	1.28		Well
The second second		401 11	-	TR. E	277		0.000	2.24	1.33	1000	Mainline pipe
Depre	ciation	3 years	1000	12.15	8.63	3.52	-	1.73	E0.8	10. Ac-	(lights stand (landowner)
65.92		3) care				0.4.4		23.71	21.69		Subtotal, real estate costs
Inter	est on	ave. inv.	\$36.44 + 12.15	(.10) 2.43	1.73	.70					TOTAL PRODUCTION AND OFFORTUNITY
16.57			2		発達は新されない	0.00 130	apling price	ion nove	10.020	Cost/unit	
25.34	ANNU	JAL costs f	or STAND	14.58	10.36	4.22					

a/It is assumed that annual fixed costs for machinery and the sprinkler system are charged to the barley crop. Thus, costs shown are "added" for establishing the alfalfa stand.

Table 7. Per acre costs of producing ALFALFA (BALED), CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 4.5 tons baled hay/acre, 3 cuttings.

		F		P	hysica	al dat	а		Powe	r unit	costs	Imple	. costs	Mater-		
	Trac-	u e Imple-	M	aterials			Trac-				Repair,		Repair,	ials &		Total/
Operation(s)	tor	1 ment		scription	ı '	Truck	tor	Man	Fixed	Fuel	lube	Fixed	lube	custom	Labor	acre
Plant:				· ·		miles	hours	hours				\$/	acre			
Establish stand			oper	ator shar	·e				1							4.22
Grow:			· -		-											
Spread fertilizer	70	L custor	P80	; K10; S2	!5		.079	.159	.21	.10	.11			16.60	.64	17.66
Roller harrow	100	н 15'					.200	.200	.75	.57	.35	.63	.33		.80	3.43
Irrigate, 22 acre in.		- circi	e elec.	\$.80/ac.	in.			.570					3.22	17.60	2.28	23.10
Pickups, season		- ½ to:	ı			22.0		.733	3.28	1.14	1.58				2.93	8.93
Subtotal, grow						22.0	.279	1.662	4.24	1.81	2.04	.63_	3.55	34.20	6.65	53.12
Harvest:														· '		
Swath, 3 times		- custor		time over	•									15.00		15.00
Bale, 3 times		- custor	ı	\$9/ton					 					40.50		40.50
Stack bales, 3 times		- custor	ı	\$5/ton	_									22.50		22.50
Subtotal, harvest			'		_				<u> </u>					78.00		78.00
Subtotal, grow thru harv	est					22.0	. 279	1.662	4.24	1.81	2.04	.63	3.55	112.20	6.65	131.12
General overhead:																
Miscellaneous at 5% of abo	ve subt	otal				1.1	.014	.083	.21	.09	.10	.03	.18	5.61	.33	6.55
Interest on cash costs at	10% for	6 mo's			_					09	11		.19	5.89	.35	6.63
Subtotal, general overhe					_	1.1			.21	.18	21	.03	.37	11.50	. 68_	13.18
Subtotal, grow thru gene						23.1		1.745	4.45	1.99	2.25	.66	3.92	123.70	7.33	144.30
Management: at 5% of expe	cted gr	oss (4.5 t	ons @ \$4.	5.17 = \$2	03.26	x.05)									10.16
Subtotal, all operations	costs															158.68
										-	ubtotals,		state			
		Net land	Deprec-			rance	Repair	,	iter &		ent, depr		_			
Real estate costs:		rent_	iation	est		axes	utilit	ies dr	rainage	ia	tion, int	erest	Other			
Land		(7 .79)			2.								2.04			2.04
Shop, metal			1.00	2.25		78	1.2				3.25		2.03			5.28
Machine shed, frame			.75	1.12		36	. 2				1.87		.62			2.49
Labor house			.83	3.12		65	2.8				3.95		3.54			7.49
Sprinkler			13.31	9.98	1.		- <u>a</u>				23.29		1.60			24.89
Motor, pump, panel (100 h	ıp)		4.56	1.83	•	69	- <u>a</u>	_/	~-		6.39		.69			7.08
Well			1.28	1.44		-					2.72					2.72
Mainline pipe			1.33	2.24		-					3.57					3.57
Alfalfa stand (landowner)			8.63	1.73						_	10.36					10.36
Subtotal, real estate co		<u>(7.79)</u>	31.69	23.71	6.		4.4	0		_	55.40		10.52			65.92
TOTAL PRODUCTION AND OPPOR	TUNITY															224.60
		Cost/unit	or brea	keven sel	ling	price										49.91
								0 tons/								46.32

 $[\]frac{\overline{a'}}{}$ Repair, electricity and labor costs for the sprinkler system are included with growing costs.

4.0 tons/acre

Table 8. Per acre costs of producing ALFALFA (CUBED), CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 4.5 tons cubes/acre, 3 cuttings.

		F			nysical da			Powe	r unit		1mple	. costs	Mater-		
Not see	Trac-	e Imple-	L-102 7690	terials			- Snate	ord .		Repair,		Repair,	ials &		Total,
Operation(s)	tor	1 ment	des	cription	Truck	tor	Man I	Fixed	Fuel	lube		1ube	custom	Labor	acre
Plant:	d lube	exi7 nd	Fuel St	Fined	miles	hours h	ours -				\$/	acre			
Establish stand				tor share	B STUDEN	mod= estin									4.22
Grow:	60	SE. OS.	00.	81.	180 19	20.			100	1.0	indir I	125 1	2012.53	X- 435	300000
Spread fertilizer	70	L custom	P80;	K10; S25	9 159 6	.079	.159	.21	.10	.11	0.1223	1 405	16.60	.64	17.66
Roller harrow	100	H 15'	1.37	2-23	7 mm 412	.200	. 200	.75	.57	.35	.63	.33		.80	3.43
Irrigate, 22 acre in.	360	- circle	elec.	\$.80/ac.	in 0	0.6	.570				10 E	3.22	17.60	2.28	23.10
Pickups, season	0 HH	- 15 ton	2.91	64.4	22.0	H	.733	3.28	1.14	1.58				2.93	8.93
Subtotal, grow					22.0	.279 1	.662	4.24	1.81	2.04	.63	3.55	34.20	6.65	53.12
Harvest:	1000	II.	E01	-29	1064	- 661				- Th	10.2				
Swath, 3 times	15-	- custom	\$5/t	ime over	7 303	00		120.5	3 <u>11</u> 0	11	127	-61	15.00		15.00
Tube, 3 times (4.5T)	15-	- custom	0.00	15/ton	3 167	00- 00-	-						67.50		67.50
Haul cubes		- 2 ton		1/4.5 to	ns 3.3		.550	2.95	. 34	1.15				2.20	6.64
Pile cubes	10 70	L ft '1d	26.00	T/5 hr	8 77.28	.500	.500	1.35	.62	.71	.78	.68		2.00	6.14
Subtotal, harvest		BE.	1:14 11	85.0	3.3		.050	4.30	.96	1.86	.78	.68	82.50	4.20	95.28
Post harvest:	3.22		~	100	075	.300 1	.030	4.50	.,,,	1.00			02.50	7.20	Inter
Load cubes	70	L ft '1d	45	T/2.5 hrs	103-11-9	.250	.250	.67	.31	.36	.39	.34		1.00	3.0
Subtotal, grow thru po			1 43	Pu 22.0	-		.962	9.21	3.08	4.26	1.80	4.57	116.70	11.85	151.47
General overhead:	ost Harves		10.00	ru 22.0	1K 3.3	1.029 2	. 902	7.21	3.00	4.20	1.00	4.37	110.70	11.00	131.47
reneral overneau.		. See . II.	# 17-J	1.1	.2	.051	140	1.6	1 6	21	.09	.23	5.84	.59	7.57
Hanallananus at 5% of a	have auch	a h a 1				. 0.2.1	.148	.46	.15	.21	. 09	23	1 3.04		1.01
	The state of the s	otal		76.5	I GWY A		211	1000	16				6 12	62	7 2
Interest on cash costs a	at 10% for	otal		300	422.7				.16	.22		.24	6.13	.62	
Miscellaneous at 5% of a Interest on cash costs a Subtotal, general over	at 10% for head	6 mo's		1.1	.2	.051	.148	.46	.31	.22	.09	.24	11.97	1.21	14.94
Interest on cash costs a Subtotal, general over Subtotal, grow thru ge	at 10% for chead eneral ove	6 mo's	.45 1 1.86 5	1.1 Pu 23.1	.2 Tk 3.5	.051 1.080 3	.148	9.67	.31 3.39	.22 .43 4.69	.09 1.89	.24		1.21	14.94
Interest on cash costs a Subtotal, general over Subtotal, grow thru go Inagement: at 5% of ex	at 10% for chead eneral ove spected gr	otal 6 mo's rhead oss (4.5 t	.45 1 1.86 5	1.1 Pu 23.1	.2 Tk 3.5	.051 1.080 3	.148	9.67	.31 3.39	.22 .43 4.69	.09 1.89	.24	11.97	1.21	14.94 166.41 12.41
Interest on cash costs a Subtotal, general over Subtotal, grow thru ge	at 10% for chead eneral ove spected gr	otal 6 mo's rhead oss (4.5 t	.45 1 1.86 5	1.1 Pu 23.1	.2 Tk 3.5	.051 1.080 3	.148 .110 han bal	9.67 les) =	.31 3.39 \$248.2	.22 .43 4.69 26 x .05)	1.89	.24 .47 5.04	11.97	1.21	7.37 14.94 166.41 12.41 183.04
Interest on cash costs a Subtotal, general over Subtotal, grow thru go Management: at 5% of ex	at 10% for chead eneral ove spected gr	otal 6 mo's rhead oss (4.5 t	ons cubes	1.1 Pu 23.1 at \$55.1	.2 ; Tk 3.5 17 (\$10/tor	.051 1.080 3 n higher t	.148 .110 han bal	9.67 les) =	.31 3.39 \$248.2	.22 .43 4.69 26 x .05)	.09 1.89 real es	.24 .47 5.04	11.97	1.21	14.94 166.41 12.41
Interest on cash costs a Subtotal, general over Subtotal, grow thru generates at 5% of example of Subtotal, all operations.	t 10% for thead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t	ons cubes	1.1 Pu 23.1 at \$55.1	.2 ; Tk 3.5 17 (\$10/ton	.051 1.080 3 n higher t	.148 .110 han bal	9.67 les) =	.31 3.39 \$248.2	.22 .43 4.69 26 x .05)	.09 1.89 real es	.24 .47 5.04	11.97	1.21	14.94 166.41 12.41
Interest on cash costs a Subtotal, general over Subtotal, grow thru generated at 5% of example of Subtotal, all operations at the subtotal	t 10% for thead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t Net land rent	ons cubes Deprec- iation	1.1 Pu 23.1 at \$55.1	.2 ; Tk 3.5 17 (\$10/ton	.051 1.080 3 higher t	.148 .110 han bal Wate	9.67 les) = er & inage	.31 3.39 \$248.2	.22 .43 4.69 26 x .05) ototals, Rent, dep	.09 1.89 real es	.24 .47 5.04 tate	11.97	1.21	14.94 166.41 12.41 183.04
Interest on cash costs a Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operations and estate costs:	at 10% for chead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t	Deprectiation	1.1 Pu 23.1 at \$55.1	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04	.051 1.080 3 higher t	.148 .110 han bal Wate	9.67 les) = er & inage	.31 3.39 \$248.2	.22 .43 4.69 26 x .05) ototals, Rent, dep	.09 1.89 real es	.24 .47 5.04 tate Other 2.04	11.97	1.21	14.94 166.41 12.41 183.04
Interest on cash costs a Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operations and estate costs:	at 10% for chead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t Net land rent	Deprectiation 1.00	1.1 Pu 23.1 at \$55.1 Inter- est	.2; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78	.051 1.080 3 h higher t Repairs, utilitie	.148 .110 han bal Wate	9.67 les) = er & inage	.31 3.39 \$248.2	.22 .43 4.69 26 x .05) btotals, Rent, deption, int	real es	.24 .47 5.04 tate 0ther 2.04 2.03	11.97	1.21	14.94 166.41 12.41 183.04
Interest on cash costs a Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operations. Leal estate costs: Land Shop, metal Sachine shed, frame	at 10% for chead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectiation	1.1 Pu 23.1 at \$55.3 Inter- est 2.25 1.12	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36	.051 1.080 3 h higher t Repairs, utilitie	.148 .110 han bal Wate	9.67 les) = er & inage	.31 3.39 \$248.3 Sul	.22 .43 4.69 26 x .05) btotals, Rent, deption, in	real es	.24 .47 5.04 tate Other 2.04 2.03 .62	11.97	1.21	14.94 166.41 12.41 183.04 2.04 5.28 2.49
Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operations. Leal estate costs: and shop, metal sachine shed, frame	at 10% for chead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectation	1.1 Pu 23.1 at \$55.1 Inter- est	.2; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78	.051 1.080 3 h higher t Repairs, utilitie	.148 .110 han bal Wate	9.67 les) = er & inage	.31 3.39 \$248.2	.22 .43 4.69 26 x .05) Execution, int 3.25 1.87	real es	.24 .47 5.04 tate 0ther 2.04 2.03	11.97	1.21	14.94 166.41 12.41 183.04
Interest on cash costs a Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operations. Leal estate costs: and Shop, metal Machine shed, frame Asbor house	at 10% for chead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectiation	1.1 Pu 23.1 at \$55.3 Inter- est 2.25 1.12	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36	.051 1.080 3 h higher t Repairs, utilitie	.148 .110 han bal Wate	9.67 les) = er & inage	.31 3.39 \$248.3 Sul	.22 .43 4.69 26 x .05) btotals, Rent, deption, in	real es	.24 .47 5.04 tate Other 2.04 2.03 .62	11.97	1.21	14.94 166.41 12.41 183.04 2.04 5.28 2.49 7.49
Interest on cash costs a Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operations. Leal estate costs: Land Shop, metal Machine shed, frame Labor house	at 10% for chead eneral ove spected gr ons costs	ntal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectation	1.1 Pu 23.1 at \$55.1 Inter- est 2.25 1.12 3.12	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65	Repairs, utilitie	.148 .110 han bal Wate	9.67 les) = er & inage	.31 3.39 \$248.3 Sul	.22 .43 4.69 26 x .05) btotals, Rent, deption, int	real es	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54	11.97	1.21	14.94 166.41 12.41 183.04 2.04 5.28 2.49
Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operations and shop, metal fachine shed, frame abor house Sprinkler	at 10% for chead eneral ove spected gr ons costs	otal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectation 1.00 .75 .83 13.31	Inter- est 2.25 1.12 3.12 9.98	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 .26 2.89 -a/ -a/	.148 .110 han bal Wates s dras	9.67 les) = er & inage	.31 3.39 \$248.3 Sul	.22 .43 4.69 26 x .05) Stotals, Rent, deption, int 	real es	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21	14.94 166.41 12.41 183.04 2.04 5.28 2.49 7.49 24.89
Subtotal, general over Subtotal, grow thru genanagement: at 5% of ex Subtotal, all operation subtotal sub	at 10% for chead eneral ove spected gr ons costs	ntal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectation 1.00 .75 .83 13.31 4.56 1.28	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44	.2 Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 2.89 -a/ -a/	.148 .110 han bal Wates drag	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) btotals, Rent, deption, int 3.25 1.87 3.95 23.29 6.39 2.72	.09 1.89 real es	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06	2.04 5.24 7.44 24.88 7.06
Subtotal, general over Subtotal, grow thru genanagement: at 5% of ex Subtotal, all operation and subtotal, all operation and subtotal subt	at 10% for chead eneral ove spected gr ons costs	ntal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectation 1.00 .75 .83 13.31 4.56 1.28 1.33	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 .26 2.89 -a/ -a/	.148 .110 han bal Wates s drai	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) btotals, Rent, deption, int - 3.25 1.87 3.95 23.29 6.39 2.72 3.57	real es	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06	2.04 5.28 2.44 24.88 7.00 2.77 3.55
subtotal, general over Subtotal, grow thru genagement: at 5% of ex Subtotal, all operation of the subtotal, all operation of the subtotal, all operation of the subtotal operation operation of the subtotal operation ope	at 10% for thead eneral over spected grows costs	Net land rent (1.70)	Deprectation - 1.00	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24 1.73	.2 3.5 Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 2.89 -a/ -a/	.148 .110 han bal Wates s drai	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) ototals, Rent, deption, int - 3.25 1.87 3.95 23.29 6.39 2.72 3.57 10.36	real es prec- erest	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06	2.04 183.04 2.04 5.24 7.44 24.88 7.00 2.77 3.55
subtotal, general over Subtotal, grow thru genagement: at 5% of ex Subtotal, all operation of the subtotal, all operation of the subtotal operation operation of the subtotal operation operat	at 10% for thead eneral over spected grows costs	ntal 6 mo's rhead oss (4.5 t Net land rent (1.70)	Deprectation 1.00 .75 .83 13.31 4.56 1.28 1.33	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 2.89 -a/ -a/	.148 .110 han bal Wates s drai	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) btotals, Rent, deption, int - 3.25 1.87 3.95 23.29 6.39 2.72 3.57	real es prec- erest	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06	2.04 5.28 2.44 24.88 7.00 2.77 3.55
subtotal, general over Subtotal, grow thru genagement: at 5% of ex Subtotal, all operation of the subtotal, all operation of the subtotal of t	at 10% for chead eneral ove expected gr ons costs	Net land rent (1.70)	Deprectation - 1.00	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24 1.73	.2 3.5 Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 2.89 -a/ -a/	.148 .110 han bal Wates s drai	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) ototals, Rent, deption, int - 3.25 1.87 3.95 23.29 6.39 2.72 3.57 10.36	real es prec- erest	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06	2.04 5.22 2.44 7.44 24.83 7.00 2.77 3.55 10.31 65.92
Subtotal, general over Subtotal, grow thru genagement: at 5% of ex Subtotal, all operation of the subtotal and subtotal all operation of the subtotal operation operation of the subtotal operation operation of the subtotal operation op	at 10% for chead eneral ove expected gr ons costs	Net land rent (1.70)	Deprectation - 1.00	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24 1.73	.2 3.5 Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 2.89 -a/ -a/	.148 .110 han bal Wates s drai	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) ototals, Rent, deption, int - 3.25 1.87 3.95 23.29 6.39 2.72 3.57 10.36	real es prec- erest	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06	2.04 5.24 7.44 24.88 7.00 2.77 3.55 10.31 65.91
Subtotal, general over Subtotal, grow thru ge anagement: at 5% of ex Subtotal, all operation of the subtotal and subtotal all operation of the subtotal operation operation of the subtotal operation	at 10% for chead eneral ove expected gr ons costs	Net land rent (1.70) (1.70) (1.70) (1.70)	Deprec- iation 1.00 .75 .83 13.31 4.56 1.28 1.33 8.63 31.69	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24 1.73 23.71	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69 	Repairs, utilitie 1.25 2.6 2.89 -a/ -a/ 4.40	.148 .110 han bal	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) Dictals, Rent, deption, int 3.25 1.87 3.95 23.29 6.39 2.72 3.57 10.36 55.40	real es prec- erest	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06 10alqoz 2 hasi 1870cs 1870cs 1870cs 1870cs 1870cs	2.00 5.21 2.44 7.44 24.88 7.00 2.77 3.55 10.31 65.99
Interest on cash costs a Subtotal, general over Subtotal, grow thru genangement: at 5% of ex Subtotal, all operation of the subtotal operation opera	at 10% for thead eneral over the costs	Net land rent (1.70) (1.70) (1.70) (1.70)	Deprec- iation 1.00 .75 .83 13.31 4.56 1.28 1.33 8.63 31.69	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24 1.73 23.71	.2 3.5 Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69	Repairs, utilitie 1.25 2.26 2.89 -a/ -a/ 4.40 at: 4.5	Wates dram	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1a	.22 .43 4.69 26 x .05) Dictals, Rent, deption, int 3.25 1.87 3.95 23.29 6.39 2.72 3.57 10.36 55.40	real es	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97 128.67 Roq undi svoda lo 201 za si basilizavo org undi sinagas i on anolise	1.21 13.06 IMAGENTAL STATES OF THE PROPERTY O	2.00 5.21 2.44 7.44 24.88 7.00 2.77 3.55 10.30 65.99 248.99
Subtotal, general over Subtotal, grow thru general over Subtotal, grow thru generated and subtotal, all operations. Subtotal, frame and subtotal frame and subtotal frame and subtotal, real estate. Subtotal PRODUCTION AND OPERATE Subtotal frame and subtotal frame a	at 10% for thead eneral over the costs	Net land rent (1.70) (1.70) (1.70) (1.70)	Deprec- iation 1.00 .75 .83 13.31 4.56 1.28 1.33 8.63 31.69	Inter- est 2.25 1.12 3.12 9.98 1.83 1.44 2.24 1.73 23.71	.2 ; Tk 3.5 17 (\$10/ton Insurance & taxes 2.04 .78 .36 .65 1.60 .69 6.12	051 1.080 3 higher t Repairs, utilitie 1.25 .26 2.89 -a/ -a/ 4.40 at: 4.5 5.0	.148 .110 han bal	9.67 les) = er & inage	31 3.39 \$248.: Sul 1 1at	.22 .43 4.69 26 x .05) Detotals, Rent, deption, int 3.25 1.87 3.95 23.29 6.39 2.72 3.57 10.36 55.40	real es rec- erest	.24 .47 5.04 tate Other 2.04 2.03 .62 3.54 1.60 .69	11.97	1.21 13.06 IMAGENTAL STATES OF THE PROPERTY O	2.04 183.04 2.04 5.24 7.44 24.88 7.00 2.77 3.55

Table 9. Per acre costs of producing BARLEY for FEED, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 40 cwt (80 bu)/acre, 62 acre enterprise.

		F					7	<u> </u>					T		
		11		Physical	ldata			Power	unit c	osts	Imple	. costs	Mater-		
	Trac-	E	Imple-	Materials	Gata	Trac-	_	-10.01	<u> </u>	Repair,		Repair,	ials &		Total/
Operation(s)	tor	L	ment	description	Truck	tor	Man	Fixed	Fuel	lube	Fixed	lube	custom	Labor	acre
Preplant:				· · · · · · · · · · · · · · · · · · ·	miles	hours	hours				\$/ac	re			
Rip (subsoiler) .2 acre	125	Н	3 shank			.091	.091	.49	. 30	.20	. 32	.05		. 36	1.72
Spread fertilizer	70	L		N60; P40; K20		.079	.159	.21	.10	.11			21.24	.64	22.30
Plow & pack	125	Н	4-18's		~-	.417	.417	2.23	1.37	.93	1.54	1.28		1.67	9.02
Roller harrow, 2 times	100	Н	15'			.400	.400	1.50	1.14	.70	1.26	.66		1.60	6.86
Subtotal, preplant						.987	1.067	4.43	2.91	1.94	3.12	1.99	21.24	4.27	39.90
Plant:														1	5
Haul seed		-	2 ton		.33		.064	.29	.03	.11		~-		.26	.69
Plant	40	M	12'	100 lb. @ 8¢		.303	.303	.58	.53	38	1.79	.21	8.00	1.21	12.70
Subtotal, plant					. 33	.303	.367	.87	. 56	.49	1.79	.21	8.00	1.47	13.39
Grow:															
Spray for weeds	40	L	sprayer	3/4 1b. 2, 4-D		.159	.159	.30	.23	.20	.44	.33	1.83	. 64	3.97
Pickup, season		-	¹5 ton		22.0		.733	3.28	1.14	1.58	~-			2.93	8.93
Irrigate, 12 acre in.		-	circle	elec. 0 \$.80/acre inch			.570					3.22	9.60	2.28	15.10
Subtotal, grow					22.0	.159	1.462	3.58	1.37	1.78	.44	3. <u>55</u>	11.43	5.85	28.00
Harvest:															
Swath		-	14' SP	custom									5.00		5.00
Combine		-	14' SP				.454	7.42	1.41	4.33				1.82	14.98
Haul barley		-	2 ton	16.5 mi/150 cwt	4.4		.908	3.94	.45	1.54				3.63	9.56
Subtotal, harvest					4.4		1.362	11.36	1.86	5.87			5.00	5.45	29.54
Post harvest:											l .		17-27-120-1	**************************************	
Rake straw	40	L	8'			.167	.167	. 32	. 24	.21	.47	.20		.67	2.11
Bale & stack straw		-	custom	.75 ton @ \$14									10.50		10.50
Subtotal, post harvest						.167	.167	.32	. 24	.21	.47	. 20	10.50	, .67	12.61
Subtotal, preplant thru	post harv	rest		Pu 22.0; 7	rk 4.73	1.616	4.425	20.56	6.94	10.29	5.82	5.95	56.17	17.71	123.44
General overhead:								1]				
Miscellaneous at 5% of abo				1.1	. 24	.081	.221	1.03	. 35	.51	.29	. 30	2.81	.88	6.17
Interest on cash costs at		om o	o's						. 36	. 54		. 31	2.95	.93	5.09
Subtotal, general overhe				1.1	. 24	.081	.221	1.03	.71_	1.05	.29	.61	5.76	1.81	11.26
Subtotal, preplant thru				Pu 23.1; 7		1.697			7.65	11.34	6.11	6.56	61.93	19.52	134.70
Management: at 5% of expe	0	,	•					,							6.75
Subtotal, all operations	costs														<u>141.45</u>

	Net land	Deprec-	Inter-	Insurance	Repairs,	Water &	Subtotals, real e	state	
Real estate costs:	rent	iation	est	& taxes	utilities	drainage	iation, interest	Other	
Land	Neg.			2.04				2.04	2.04
Shop, metal		1.00	2.25	.78	1.25		3.25	2.03	5.28
Machine shed, frame		.75	1.12	.36	.26		1.87	.62	2.49
Labor house		.83	3.12	.65	2.89		3.95	3.54	7.49
Labor house, beets									
Sprinkler		13.31	9.98	1.60	a/		23.29	1.60	24.89
Motor, pump, panel (100 hp)		4.56	1.83	.69	<u>a</u> /		6.39	.69	7.08
Well		1.28	1.44		- -		2.72		2.72
`fainline pipe		1.33	2.24				_ 3.57		3.57
Subtotal, real estate costs	Neg.	23.06	21.98	6.12	4.40		45.04	10.52	55.56

TOTAL PRODUCTION AND OPPORTUNITY COSTS------197.01

Cost/acre \$197.01 minus value of straw, \$15, equals cost for barley \$182.01

Cost/unit or breakeven selling price at: 40 cwt (80 bu)/acre 45 cwt (90 bu)/acre

35 cwt (70 bu)/acre

4.55

4.06

Repair, electricity and labor costs for the sprinkler system are included with growing costs.

Table 10. Per acre costs of ESTABLISHING a STAND and costs of producing IRRIGATED PASTURE, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78. Yield goal 8 animal unit months of grazing/acre.

Table II We are much at producton furniture, their seriality institutes, southeavers, hear, 1977-78. Their most 750 curious Field can benefit to

name nodel metava	Zube	bestil	F	ol le				cal dat		7 10 10 10	Powe	r unit	costs	Imple	. costs	Mater-		
	87	Trac-	ě	Imple-		Materials			Trac-				Repair,		Repair,	ials &	Course	Total
Operation(s)		tor	1	ment	de	escription		Truck	tor	Man	Fixed	Fuel	lube	Fixed	lube	custom	Labor	acre
ESTABLISH STAND:	56-	0.0	32.	22	. 88.	NOX.	5 H - D	niles	hours	hours				\$/	acre			
Spread fertilizer b/ Orill pasture seed	1.28	70	L		4	0-40-20	290		.079	.159		.10	.11			17.04	.64	17.8
orill pasture seed—	18.1	40	L	12'	31.5	BZ1.	8/0.		.303	.303		.53	.38	~-	.21	23.92	1.21	26.2
Irrigate, 4 acre in.		25.1	-	circle	elec	\$.80/ac.	in		Time?	.142	Semest.	75370		- FE 1	- TT (1	3.20	.57	3.7
Pickups	.0.1.1	23	53	ton ton	88.	7004		6.5		.217		. 34	.47				.87	1.6
Subtotal	0.0	3.65	08.		2.14	CO a	004	6.5	. 382	.821		.97	.96	~-	.21	44.16	3.29	49.
Interest at 10% for 3 m	no's	5-12		58 1	I EAVE		1104.	-7).[.02	.02		.01	1.11	.08	1.
Total, establish star	ıd							6.5	.382	.821		.99	.98		.22	45.27	3.37	50.8
	-1/						124-											
WHAT COCKE S DACTU		88.	0.0		54.	127	122			THITTA		WO3 1				F3 12347 W 161		T
ANNUAL COSTS for PASTUR	Œ:		ar.	0.4	7.0	-250	DCT.			di l . s	Sendo	molescon afr	B 95		83.50	Tiqui .si	Berbins	
Grow: Opread Fertilizer	1.22	70	1	custom	120	0; 40; 20			.079	.159	.21	.10	.11		01 0	33.84	.64	34.
rrigate, 22 acre in.			L	circle		\$.80/ac.			.079	.570	3 41	.10		22	3.22	17.60	2.28	23.
Pickup, season			3.6	ton		3.00/ac.		20.0		.667	2.98	1.04	1.44			A 15-0 al-4000	2.67	8.
	-	125				-		0.02	.091	.091	.49	.30	.20	.32	.05	Logs , esc	.36	1.
Rip (subsoiler) .2 acre	04.4	125	н	3 shan	K I	707.5	ACB.	20.0	.170		3.68			.32	3.27	51 44	5.95	67.
Subtotal, grow								20.0	.170	1.487	3.00	1.44	1.75	.34	3.21	51.44	3.93	0/.
General overhead:	-1	3133	01.		05.1			1 0	000	.074	10	.07	.09	01	.16	2.57	.30	3.
interest on cash costs				_ 15	1 91.5		OUY:	1.0	.008	.074	.18	.08	.09	.01	.17	2.70	.30	
Subtotal, general over		6 101 0	mo s		12 1957	1.200	-	1.0	.008	.074	_	.15	.18	.01	.33	5.27	.61	3.
					. 11.1		Pu Z		.178	1.561		1.59	1.93	.33		56.71	6.56	74.
Subtotal, grow through								21.0	.1/0	1.361	3.00	1.59			3.60			and the same of th
fanagement: at 5% of e			5 (8	AUM'S	at \$10 =	\$80 x .	05)	-				15.	11 00			5.6	alv cald	.4.
Subtotal, all operati	ions co	osts	0.64	- 85	110	005.	V22.1										~~	78.5
1.53 X0.18	41-1	3.78		81	4 33-1	18	146								estate	Innan In		
200.33 37.71 343.52		23-25			Deprec-			surance			Water 8			leprec-	Mark Color		Laranao	
Real estate costs:	1.00			rent	iation	est		taxes	ut 11	ities	drainag	<u>e</u>	iation,	Interest		78 BRODE	Liscalli	
and Metal		0.000	20	neg.	1 00	0.05		2.04		-			100	3,701 50	2.04	algani me	Interest	2.
mop, metal		1.26		77	1.00	2.25	281	.78	1.				3.	. 25	2.03	raceg , Ik	Subsns	5.
Machine shed, frame	14.66	15.05	88	11 36	.75	1.12	FAS.	. 36		26	~-			.87	-62	dqaxq ,la	Subtrot	2.
abor house					.83	3.12		.65	2.	89	0053.4.0	0.52 In		.95	3.54	Z 58 138	Named With the State of the Sta	7.4
Sprinkler					13.31	9.98		1.60		=				. 29		o ffe gla	202000	24.
Motor, pump, panel (10	00 hp)	930388	Dear	1818100	4.56	1.83		.69	_	_				. 39	.69			7.
Well			-567	1980 , 76	1.28	1.44	1077	IN-S a	adamin' a	- 2570				.72		E1600 938	the final	2.
Mainline pipe	:/	1ed 70 3	1011	ar and	1.33	2.24	E3/11	2400	10117 A	- 181	2011			.57		11102 101		3.
Pasture stand (annual)		2.04		Marie I	10.17	3.05	20		BC	Table 6	00.1		13.			Ind	Shep, se	13.
ences, 1% miles—		2.0	-		.20	1.00		.10	1.		00.1	_		.20	1.10	shed, fra	entdesM	2.
Subtotal, real estate				neg.	33.43	26.03	. (5.22	5.	40	7.7		59.	.46	11.62	2100.13	Labor ho	71.
		TTTTT OO	3 m a														A T FALL SAME TO	1/0
OTAL PRODUCTION AND OF	PORTU	VITY COS				reakeven			0074						pt 0013 Ja			$\frac{-149.}{18.}$

 $[\]frac{a}{A}$ Assumed seed is drilled into stubble following harvest of oats or barley.

10 AUM's/acre

12 AUM's/acre

14.97

 $[\]frac{b}{P}$ Potomac Orchard grass 6 lb. at \$.72, Cicer Milkvetch 4 lb. at \$1.75, and Regar Brome 6 lb. at \$2.10.

 $[\]frac{c}{A}$ Annual costs for pastures stand: Depreciation: $\frac{$50.83}{5 \text{ years}} = 10.17 Interest: $\frac{$50.83 + $10.17}{2}$

 $[\]frac{d}{d}$ Perimeter fences, Investment \$1,500; Annual costs: dep. \$25, int. \$125, taxes \$13, repairs \$125. No charges included for stock water facilities.

Table 11. Per acre costs of producing POTATOES, CENTER PIVOT SPRINKLES IRRIGATION, Southeastern, Myo., 1977-78. Yield goal 250 cwt/acre field run; hauled to and elevated into storage; 375 acre enterprise.

and elevated into stor	age; 3	1/3 :		rprise.													
		F				Physic	al data	1		Powe	r unit	costs	Imple.	costs	Mater-		
	Trac-	u e	Imple-		Material	s		Trac-				Repair,		Repair,	ials &		Total/
Operation(s)	tor	<u>ĭ</u>	ment	d	escripti	011	Truck	tor	Man	Fixed	Fuel	lube	Fixed	lube	custom	Labor	acre
Preplant:							miles	hours	hours				\$/a	cre			
Spread fertilizer	7 C	L	custom		N50; P13	15		.079	.159	.21	.10	.11			32.50	.64	33.56
Disc	100	Н	15'					.182	.182	.68	.52	.32	.92	.57		.73	3.74
Plow & packer	125	Н	4-18's					.417	.41/	2.23	1.37	.93	1.54	1.28_		1.67	9.02
Subtotal, preplant								.6/8	./58	3.12	1.99	1.36	2.46	1.85	32.50	3.04	46.32
Plant:																	
Cutter, elevator, ft 1'dr, 4 men		-	cutter	fung	icide 28	c/cwt			.680	.40	.17	.15	1.27	.70	4.76	2.72	10.17
Haul, seed		-	2 ton	8	mi/125 c	wt	1.0		.400	.89	.10	.35				1.60	2.94
Plant	125	Н	4 row	1/ c	wt seed	@ \$6		.400	. 400	2.14	1.31	.89	3.85	.89	102.00	1.60	112.68
Subtotal, plant				1			1.0	.400	1.480	3.43	1.58	1.39	5.12	1.59	106.76	5.92	125.79
Grow:																	
Cultivate, add systemic	70	L	4 row	13 1b	Thimet	@ 64¢		.357	.357	.96	.45	.51	1.68	.78	8.32	1.43	14.13
Cultivate & harrow	100	L	4 row		rolling		~~	.227	.227	.85	.43	.40	.88	.46		.91	3.93
Sidedness NH3 (rig \$.30)	70	M	custom	N	100 @ \$.	12		.250	.250	.67	.40	.36			12.30	1.00	14.73
Herbicide, apply \$3.50		-	air	Sen	cor, l i	ъ \$6									9.50		9.50
Irrigate, 140 acre in.		-	circle	elec.	\$.80/ac	. in.			.570					3.22	11.20	2.28	16.70
Spray for blight, 3 times		_	air	\$5	/time ov	er									15.00		15.00
Pickups, season		-	¹₃ ton				30.0		1.000	4.47	1.56	2.16			l	4.00	12.19
Spray vines, apply \$3.50		***	1/3 acre	2.5 p	ts DOW @	\$1.31									2.25		2.25
Subtotal, grow							30.0	.834	2.404	6.95	2.84	3.43	2.56	4.46	58.57	9.62	88.43
Harvest & bin:																	
Windrow	100	M	2 row		⅓ acre			.400	.400	1.50	.94	.70	3.33	. 96		1.60	9.03
Harvest & load	125	Н	2 row	¹ ₅ a	cre; 3 p	krs		.400	1.600	2.14	1.31	-89	7.18	2.76		6.40	20.68
Haul to storage (3 tk's)		-	2 ton	12	5 cwt/11	mi	22.0		1.200	19.69	2.27	7.68				4.80	34.44
Elevate to bins, 3 men		-	40 ft	fung	icide lo	/cwt			1.200				.84	.55	2.50	4.80	8.69
Subtotal, harvest & bin							22.0	.800	4.400	23.33	4.52	9.27	11.35	4.27	2.50	17.60	72.84
Post harvest:													1				
Disc vines	100	Н	15'					.182	.182	.68	.52	.32	.92	- 57		.73	3.74
List, field-cult	125	Н	15'					.200	.200	1.07	.66	.45	2.86	.56		.80	6.40
Subtotal, post harvest								.382	.382	1.75	1.18	.77	3.78	1.13		1.53	10.14
Subtotal, preplant thru post har	vest				<u>Pu 3</u>	0.0; Tk	23.0	3.094	9.424	38.58	12.11	16.22	25.27	13.30	200.33	37.71	343.52
General overhead:																	
Miscellaneous at 5% of above subto						1.5	1.1	.155	.471	1.93	.61	.81	1.26	.66	10.02	1.88	17.17
Interest on cash costs at 10% for	6 mo's									_	.64	.85		.70	10.52	1.98	14.69
Subtotal, general overhead						1.5	1.1	.155	.471	1.93	1.25	1.66	1.26	1.36	20.54	3.86	31.86
Subtotal, preplant thru general	overhe	ad			Pu 3	1.5; Tk	24.1	3.249	9.895	40.51	13.36	17.88	26.53	14.66	220.87	41.57	375.38
Management: at 5% of expected gro	ss (25	0 cv	vt at \$2.0	00 = \$5	00 x .05)											25.00
Subtotal, all operations costs -																	400.38
											Subtota	als, real	estate				
		Net	land De	eprec-	Inter-	Insura	nce Re	pairs,	Water	· &	Rent,	deprec-		_			
Real estate costs:		1	ent 1a	ation	est	& tax	es ut	ilities	drain	age	iation	, interes	t Othe	r			
Land			9.09			2.04						49.09	2.0				51.13
Shop, metal				1.00	2.25	.78	;	1.25				3.25	2.0	3			5.28
Machine shed, frame				.75	1.12	.36	1	. 26				1.87	.6				2.49
Labor house				.83	3.12	.65		2.89				3.95	3.5				7.49
Sprinkler			1	13.31	9.98	1.60	1					23.29	1.6				24.89
Motor, pump, panel (100 hp)				4.56	1.83	.69		a/				6.39	.6	9			7.08
Well				1.28	1.44			a/				2.72					2.72
Mainline pipe				1.33	2.24			<u></u>				3.57					3.57
Subtotal, real estate costs			9.09	23.06	21.98	6.12		4.40				94.13	10.5	2			104.65
TOTAL PRODUCTION AND OPPORTUNITY C	OSTS -													<u>-</u> 			505.03
	-	Cos	st/unit or	break	even sel	ling pr	ice at:	250 c	wt/acre								2.02
									wt/acre								2.23
									wt/acre								1.84
a/								2,5 0	, dere								1.04

 $[\]frac{}{\underline{a'}}$ Repair, electricity and labor costs for the sprinkler system are included with growing costs.

EVALUATION OF BUDGET DATA

Return-Cost Data

Comparative return-cost data for crops are summarized in Table 12. Data for each crop taken from the detailed budgets are shown in one column. This facilitates comparison of gross returns, individual cost items and various measures of net returns for different crops. Based on the price-yield-cost assumptions in this analysis, dry beans was the most profitable crop budgeted. Returns from other crops were not adequate to cover total costs.

Blank spaces are provided for users of the budgets to enter their own price-yieldcost data and thus evaluate profitability for different situations.

Shown at the bottom of Table 12 are returns above total costs, cash costs, operations costs and returns above all costs except land (this residual is return to land). These net returns indicate relative profitability of various crops for 1977.

It must be emphasized that higher yields or prices would increase gross and net returns while lower yields or prices would decrease gross and net returns. Therefore, farmers and others can best use these budgets as a guide in evaluating specific situations.

Physical Data

In addition to the cost-return information available in the crop budgets there is a

considerable amount of physical information that can be useful for planning purposes. Physical data from the crop budgets are summarized in Table 13.

Table 12. Comparative minushs and costs for crops, CHMTER PIVOT SPRINKLER DESCRIPTION, Southwarden, Wyo., 19/2-28.

Shown in Table 13 are fertilizers applied as pounds of available plant food. This information can be used to estimate total fertilizer requirements for individual cases. Soil tests are recommended before making final decisions on fertilizer applications.

Also shown are miles of truck and pickup use for each crop which can be used in planning requirements for various situations. In specific cases the distance of the farm from town should be considered.

Tractor requirements for each crop can be used to plan total requirements for various crops. The data can also be helpful in estimating costs and requirements for larger or smaller operations.

Labor requirements for each crop can be used to estimate labor needed for various sizes of farms and combinations of crops.

If fuel prices should change, or if fuel should ever be rationed, it might be useful to know the approximate amount of fuel required to produce various crops. Data from the crop budgets were summarized to obtain the estimated fuel requirements for each crop as shown in the lower part of Table 13. Data show that sugar beets, potatoes and corn for silage require the most fuel while irrigated pasture and barley require the least.

Table 12. Comparative RETURNS AND COSTS for crops, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78.

L 1 n e	Sugar	Your	Corn-	Your	Corn-	Your farm	Dry beans	Your farm
	beets	farm	grain	farm	silage	Latin	Dealis	
1 Returns:	D		Corn		Silage		Веапѕ	
2 Crop	Beets		Stalks		511age		Deans	
3	Tops				l		1	
4 Yield/acre	20 tons		55 cwt		22 tons		20 cwt	
5	20 tons				1		1	
6 Price/unit	\$25/ton		\$3.31 cwt		\$13.55 ton		\$21.10 cwt	
7	\$2/ton		\$15 acre				0/22 00	
8 Value/acre	\$500.00		\$182.05		\$298.10		\$422.00	
9	\$ 40.00		15.00				4/00 00	
O Gross returns	\$540.00		\$ <u>197.05</u>		\$ <u>298.10</u>		\$422.00	
1 Operations costs:								
2 Labor @ \$4/hr	39.79		19.59		29.53		25.05	
3 Fuel	17.28		8.09		12.40		10.25	
4 Repair, lube	39.49		16.54		27.37		19.57	
5 Seed	10.99		12.00		12.00		16.10	
6 Fertilizer	55.10		45.34		45.34		14.28	
7 Herbicides	8.71		2.44		2.44		11.25	
8 Insect & fungi	3.00						12.00	
9 Nematocide	37.80				- -		- -	
O Other material	2.20				- -			
l Custom charges	54.00						7.50	
2 Electricity	17.60		12.80		12.80		12.80	
3 Sprinkler repairs	3.22		3.22		3.22		3.22	
General overhead (cash)	14.46		6.00		7.26		6.60	
5 Subtotal	303.64		$\frac{0.00}{126.02}$		152.36		138.62	
6 Interest, 10%, 6 mo's	15.18		6.30		7.61		6.93	
7 Subtotal, cash costs	$\frac{13.10}{318.82}$		$\frac{3.30}{132.32}$		159.97		145.55	
8 Management, 5% of receipts	27.00		9.85		14.90		21.10	_
			34.04		58.42		39.05	
9 Machinery fixed costs	89.71		34.04		70.42		J9.03	
O Alfalfa stand (op.)	725 52						205.70	
Subtotal, operations costs	435.53		<u>176.21</u>		233.29		203.70	_
Real estate costs:		1						
3 Improvements:	2 22		2 50		2.58		2.58	
4 Depreciation	3.22		2.58				6.49	_
5 Interest	9.82		6.49		6.49		1	
6 Insurance & taxes	4.06		3.83		3.83		3.83	
Repairs & utilities	6.50		4.40		4.40		4.40	
Subtotal, improvements	<u>23.60</u>		<u>17.30</u>		<u>17.30</u>		<u>17.30</u>	
9 Sprinkler system:								
O Depreciation	20.48		20.48		20.48		20.48	
l Interest	15.49		15.49		15.49		15.49	
2 Insurance & taxes	2.29		2.29		2.29			
3 Subtotal, sprinkler	38.26		<u> 38.26</u>		_38.26		38.26	
4 Net land rent:	44.70				31.75		47.35	
5 TOTAL COSTS (31 + 38 + 43 + 44	542.09		231.77		320.60		308.61	
					I		I	
6 Return above :a/	(0.00)		(0/ 70)		(00.50)		112 20	
7 Total costs (10 - 45)	(2.09)		(34.72)		(22.50)		113.39	
8 Cash costs (10 - 27)	221.18		64.73		138.13		276.45	
9 Operations costs (10 - 31)	104.47		20.84		64.81		216.30	
O All except land (47 + 44)	42.61		(34.77)		9.25		160.74	

 $[\]overline{\underline{a}/}$ Numbers in parenthesis are negative.

Cable 12. (CONTINUED) Comparative RETURNS AND COSTS for crops, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo, 1977-78.

1	e daulti valtad ,	Alfalfa, baled	Your	Alfalfa, cubed	Your	Barley for feed	Your farm	Irrigated pasture	Your farm	Potatoes	Your farm
-	1 Returns:	badna	beino	шикее		1	1212	4.23.30	7.75	1 11 17 17 1	277 2971
	2 Crop	Нау		Hay		Barley		Pasture		Potatoes	
	3 211 50	62		20	- 14 A	Straw			80.50		main partidio
	4 Yield/acre	4.5 tons		4.5 tons		40 cwt		8 AUM's		250 cwt	Constilla
	5				100	.75 ton				100	- magoral
	6 Price/unit	\$45.17 ton		\$55.17 ton		\$3 cwt	93.3	\$10 AUM	4.于7.到水源	\$2 cwt	
	7 04 03	08	DIL	- 66		\$20 ton	(AR	0.77	TIBAN	102	- sandaot
-	8 Value/acre	\$203.26	- 11.0	\$248.26		\$120.00		\$ 80.00	.Linvn	\$500.00	missan
	9	20.00				15.00	-	0.84	Lines	41	79141
1	O Gross returns	\$203.26		\$248.26		\$135.00	d	\$ 80.00	Llen	\$500.00	Line and
1	1 Operations costs:						The state of the s		NAME OF TAXABLE PARTY.		b/d
1	2 Labor @ \$4/hr	6.65		11.85		17.71		5.95		37.71	
1	3 Fuel	1.81	0.1	3.08		6.94	0.42	1.44	8228	12.11	- aquabl
1.	4 Repair, lube	2.37		5.61	1	13.02	d. 8	1.80	9328	26.30	7203
1	5 Seed	5.35				8.00				102.00	tors:
1	6 Fertilizer	16.60		16.60		21.24	March 1	33.84	ekoa'	44.80	25 but diament
1	7 Herbicides		4504	807	3.343	1.83	C	10017		7.08	Same the and Of
	8 Insect & fungi	200	.200	-627-	23.13	- El	Ci o	2,320	19 2 17 15	20.08	ASSESSED FOR IN
1	9 Nematocide	.829	970.	1.239	96	23	A.	878-	0.200	211	Thursto 'du o
2	O Other material	4.000		-c161	50	0.		1.525	9778	end -	##5 . qri ():
2	1 Custom charges	78.00	17.00	82.50	F 26 2	15.50	A service and	NDF-P	40.7575.00	15.17	All tractor
2	2 Electricity	17.60	6.154	17.60	0.01	9.60		17.60		11.20	10
2	3 Sprinkler repairs	3.22		3.22		3.22		3.22	5308	3.22	1217
2	4 General overhead (cash)	6.31		7.02		4.85		3.19		13.98	and delivery VV
2	5 Subtotal	132.56		147.48	L	101.91	- III	67.04		293.65	gat kon water
2	6 Interest, 10%, 6 mo's	6.63		7.37		5.09		3.35		14.69	d v v v v
2	7 Subtotal, cash costs	139.19		154.85		107.00		70.39		308.34	Innen Toni
2	8 Management, 5% of receipts	10.16		12.41	5 - 30	6.75	10.39	4.00	0.724	25.00	Leas
2	9 Machinery fixed costs	5.11		11.56		27.70	12.5	4.19	/acre	67.04	acitra
	0 Alfalfa stand (op.)	14.58		14.58				13.22		- \td.	base Incl. need
3	1 Subtotal, operations cost			193.40		141.45		91.80		400.38	1989
3	2 Real estate costs:	00.0	DA.	107 - 10		-			23283	100	
	3 Improvements:	3.75	75	-30				2000	aron/	1=8	sallos
3	4 Depreciation	2.58		2.58		2.58		2.78		2.58	(Lau) E
3.	5 Interest	6.49	100	6.49	V	6.49	1.0-20	7.49	8758	6.49	[989]
3	6 Insurance & taxes	3.83		3.83		3.83	A = T	3.93	and the second	3.83	soline
3	7 Repairs & utilities	4.40		4.40		4.40	4 - 6	5.40		4.40	
3		17.30		17.30		17.30		19.60		17.30	
3	9 Sprinkler system:								antiniu		ours/acre bel
	O Depreciation	20.48	stom la	20.48	30H E	20.48	n snoau	20.48	Suranan	20.48	Carl Strate Service
	1 Interest	15.49		15.49		15.49	amid been	15.49	baund	15.49	nel use is ca
	2 Insurance & taxes	2.29	Toldining	2.29	0.00	2.29	DESIGNATION OF THE PARTY OF THE	2.29		2.29	
4		38.26		38.26		38.26		38.26		38.26	er.
	4 Net land rent:	50	Casolt	110	IU TOWO		WULL D	- 30.120 H		49.09	
	5 TOTAL COSTS (31+38+43+44)	224.60	5 Fee 17 F	248.96	.ampl	197.01	0.0	149.66	1.6	505.03	CAA
	6 Return above:a/	<u> </u>	7		D mile	257.102	T A P	7.00	[6	aslb , qd	UUI
	7 Total costs (10 - 45)	(21.34)	/Tm <	(.70)	2 Y ED(0	(62.01)	1 1	(69.66)		(5.03)	7.0
	8 Cash costs (10 - 27)	64.07		93.41		28.00		9.61		191.66	CA.
	9 Operations costs (10 - 31)	34.22	Iss	54.86	100.00	(6.45)	612	(11.80)		99.62	4484
	0 All except land (47 + 44)	(21.34)		(.70)		(62.01)		(69.66)		44.06	

a/ Numbers in parenthesis are negative.

Table 13. Summary and comparison of PHYSICAL DATA for CROPS, CENTER PIVOT SPRINKLER IRRIGATION, Southeastern, Wyo., 1977-78.

Item	Unit	Sugar beets	Corn- grain	Corn- silage	Dry beans	Alfalfa, baled	Alfalfa, cubed	Barley for feed	Irrigated pasture	Potatoes
Enterprise size	acres	125	125	62	62	62	62	62	125	375
Fertilizer:										
Nitrogen	lb. avail.	150	130	130	18			60	120	150
Phosphate	lb. avail.	100	80	80	46	80	80	40	40	135
Potassium	lb. avail.	50				10	10	20	20	
Sulfer	lb. avail.	20				25	25			
Zinc Trucks: <u>b</u> /	lb. avail.		5	5	3					
Pickups	mi/acre	35.0	26.0	26.0	28.0	22.0	22.0	22.0	20.0	30
2 ton Tractors: <u>a</u> /	mi/acre	17.3	8.6	22.0	3.36		3.3	4.73		23
125 hp, diesel	hr/acre	1.654	.508	1.277	.708			.508	.091	1.417
100 hp, diesel	hr/acre	2.320	.609	1.378	.627	.200	.200	.400		1.241
70 hp, diesel	hr/acre	.878	.739	.739	1.239	.079	.829	.079	.079	.436
40 hp, gas	hr/acre	. 544	.159	.159	.682			.629		
All tractors	hr/acre	5.396	2.015	3.553	3.256	.279	1.029	1.616	.170	3.094
Labor: a/	hr/acre	9.940								
Irrigation water	acre in.	22	16	16	16	22	22	12	22	14
Farm fuel used: b/										
Diesel	gal/acre	31.59	10.39	21.08	14.59	1.65	3.97	7.16	.98	20.22
Gasoline	gal/acre	8.48	7.50	7.45	8.34	2.20	2.86	5.09	2.00	7.40
Custom fuel used:b/	0									
Diesel	gal/acre				.62	10.40	6.00	1.71		
Gasoline	gal/acre	.13			.50	3.75	3.75	3.97		2.16
Total fuel:	-									
Diesel	gal/acre	31.59	10.39	21.08	15.21	12.05	9.97	8.87	.98	20.22
Gasoline	gal/acre	8.61	7.50	7.45	8.84	5.95	6.61	9.06	2.00	9.56

 $[\]frac{a}{}$ Hours/acre before calculating miscellaneous use. Does not include custom labor and tractor use.

 $[\]frac{b}{}$ Fuel use is calculated based on miles and hours/acre as shown in crop budgets and the following use rates:

	Gal	lons/h	our		
Power unit	High	Med	Low	_ Power unit	Gasoline
125 hp, diesel	8.1	6.5	5.0	Pickups, ½ ton	10 mi/gal
100 hp, diesel	7.0	5.8	4.7	Trucks, 2 ton	5 mi/gal
70 hp, diesel	4.9	3.9	3.1		
40 hp, gas	4.1	3.4	2.8	Combine	6 gal/hr
				Custom:	
				Swather	5 gal/hr
				Aerial spraying	.5 gal/acre

and dealers and represent actimates for the 1977 crop. Spaces are pr XICHAPAR users to list

inputs and prices for subsequent years.

Explanation of Worksheets

Appendix Worksheet I shows labor and machinery requirements and performance rates associated with cultural operations for crops grown under sprinkler irrigation. Basic data for this summary were provided by cooperators when they indicated operations, equipment and labor needed for each job performed on sprinkler irrigated crops.

Cooperators indicated the power unit and machine for each job and acres covered/10 hr. These data were extended to arrive at requirements in hr/acre/one time over. These coefficients are then used as "building blocks" for calculating costs for each operation in the enterprise budgets.

investments and costs are devaloped for

Appendix Worksheet II shows the inventory of depreciable assets, with size, 1977 cost, estimated useful life, in hours or miles and years until obsolete. Data for case farm machines includes: years the item has been used on the farm, remaining useful life, annual use on the case farm, and present, salvage, depreciable and average values. Depreciable value is present value minus salvage value. Average value is present value plus salvage divided by 2.

Appendix Worksheet III shows annual and per unit fixed costs for machinery and improvements. Calculations were as follows:

Annual depreciation = Present value minus salvage
Years remaining life

Interest on average investment = average value × 10%

total operating costs for tractors used in

Annual taxes:

Vehicles = (cost to farmer) ×
(% of cost based on age) × (30
mills) + (state fee based on
weight)

Machinery = (average value) × (.15) × (mill levy)

Metal shop = (\$.08) × (sq ft floor area)

Machine shed = $(\$.04) \times (\text{sq ft floor area})$

Annual insurance = estimates provided by cooperators

Fixed cost/unit = Annual fixed cost
Annual use

Appendix Worksheet IV shows estimated annual and per unit operating costs for machinery and improvements. Fuel use for vehicles and tractors was based on cooperator estimates and manufacturer data. Fuel use, fuel cost, oil-lube-repair, and

Appendix Worksheet V shows input prices and

Annual taxes are based on guides and estimates developed from information obtained from assessors. The author accepts the responsibility for the above guides as they may or may not be as used by assessors. Assessed values for vehicles based on age: 1 yr. 60%; 2 yr. 50%; 3 yr. 40%; 4 yr. 30%; 5 yr. 20%; 6 yr. and over 15%. Assumed levy of 68 mills.

total operating costs for tractors used in developing the crop budgets were as follows:

Fuel rates and cost, oil-lube-repairs and total operating cost/hr for tractors (Torrington).

Tractor	fuel	rates a	and	cost/hr	for various	loads								
Work 1oad		125 hp diesel		100 hp diesel	70 hp diesel	40 hp gas								
		Fuel use, gal/hour												
High Medium Low		8.1 6.5 5.0		7.0 5.8 4.7	4.9 3.9 3.1	4.1 3.4 2.8								
	Fuel cost, \$/hour ^{a/}													
High Medium Low		3.28 2.63 2.02		2.84 2.35 1.90	1.98 1.58 1.25	2.12 1.76 1.45								
		01	1, 1	ube, rep	pairs, \$/hou	<u>b</u> /								
A11		2.23		1.76	1.43	1.25								
		Tota	a1 c	perating	g cost, \$/ho	urc/								
High Medium Low		5.51 4.86 4.25	<u> </u>	4.60 4.11 3.66	3.41 3.01 2.68	3.37 3.01 2.70								

Operating cost/unit = $\frac{\text{Annual operating cost}}{\text{Annual use}}$

Appendix Worksheet V shows input prices and material application rates for case farm crops. These input prices were obtained from farmers

and dealers and represent estimates for the 1977 crop. Spaces are provided for users to list inputs and prices for subsequent years.

A rate of \$4/hour was charged for all labor used in producing crops. Full-time employees in the area are normally paid on a monthly basis. Total earnings of farm employees would include wages and housing with utilities. Other earnings may or may not include medical insurance and meat. Cooperators indicated the labor rate of \$4/hour would just about cover cash costs for full-time farm employees in the area.

Appendix Worksheet VI shows the inventory and investments with fixed and operating costs for specialized items necessary for center pivot sprinkler irrigation. Most of the specialized investment is for a sprinkler system and potato equipment.

Investments and costs are developed for two sprinkler situations, i.e., pumping from a 100 ft. well and pumping from a surface source. Users of the budgets should note the specific investment cost items for each situation:

	Inves	stments
	Pump from well	Pump from surface
Circle sprinkler	\$20,800	\$20,800
Motor, pump,	8,136	3,800
panel, etc.	(100 hp)	(75 hp)
Well $(16" \times 125")$	3,000	
Mainline pipe	4,012	4,012
Totals	\$35,948	\$28,612

 $[\]frac{a}{D}$ Diesel at 40.5 cents/gal, gasoline at 51.7 cents/gal net after refunds.

 $[\]frac{b}{R}$ Rates taken from Appendix Worksheet IV.

 $[\]frac{c}{T}$ These rates were used in budgeting costs for specific cultural operations.

Appendix Worksheet I. Cultural operations and machine-labor performance rates for crops under center pivot sprinklers, Southeastern, Wyo., 1977-78.

												1000000		Hours/		
	Trac-	Imple-	Sugar	Corn-	Corn-	Alf-	Dry	Bar-	Yalf	Po-	Pas-		Acres/	1 time	F	uel
Operation (s)	tor	ment	beets		silage	alfa	beans	1ey		atoes			10 hrs	over	Туре	Rate
Preplant:	0			891			RTHIRT:	walke	1					Jania	2	1.5
Rip (subsoiler)	125	3 shank	. 2X	. 2X	. 2X		.2X	. 2X		ć 101	. 23	682	22	.454	diesel	high
Spread fertilizer	70	custom	1X	1X	1X	1X	1X	1X		1X	1X	2003	63	.159	diesel	1ow
Plow & packera/	125	4-18's	1X	1X	1X		1X	17		1 Y		846	22	a/	diesel	high
Disk	100	15'	1X	1X	1X		100	000 46		2X	2	100	55	.182	diesel	high
Roller harrow	100	15'	2X	1X	1X	1X	2X	2X				192	50	.200	diesel	high
Level	125	000 14' 000		12 -127			-0.0	000,0		Tie Ind	15 E- 1		50	.200	diesel	high
Shank in nematocide	100	custom	2 1000	1 - 257			0.1	000,51		(510)	100	essit	44	.227	diesel	high
Field cultivator	125	151 000	V.F. 000 H	094	-4		1X	000,51	140.	1X	2.0	west's	50	.200	diesel	high
Spike harrow	40	24'	200	T. G.F.C.	- 4	40.0	1X	13, 100		1X	0.4	115	55	.182	gas	high
		CAN.		1.55	A								22)		840	8
Plant:	70	6 row	1.06X	200	-		67	1.500		3	7		24	.417	diesel	high
Sugar beets	70	4 row	1.00A	1X	1X			006.1-			245		33	.303	diesel	medium
Corn		TOTAL TOTAL CO.	304				1X	2,500	195.	0.00			33	.303	diesel	medium
Beans	/0	6 row			- 2		0.7	1X	1004	1			33	.303		medium
Barley	40	12'	-001	50.	7.1		10%		200						gas	high
Potatoes	125	4 row	OE.L	-0.			- < 1	000,5		1X	16.		25	.400	diesel	urgu
Cut & treat seed Grow:	06+-	cutter	-010				-01	2,300		1X	10			hupe half		
Rough (stop blowing)	40	stripper	2X				-0.7	000 /L	350	Jan 11	0-		44	.227	gas	1ow
Post or lay-by spray	40	sprayer	. 2X				_4_	000.5		1X	192		44	.227	gas	low
Cultivate: 1st	70	6 or 4 R	1X	1X	1X		1X	2,000		1X	130		28	.357	diesel	low
Other	100	6 or 4 R	3X	1X	1X		1X	000/2		1X	138		44	.227	diesel	low
Rotary hoe	40	12'						007-1			7.00		66	.151	3737	low
Spray weeds	40	sprayer		1X	1X		-47	00 1X		Same and			63		gas	low
Clip	40	7 ft	4010		17		100	006.5		L Les	100		40	.250	gas	low
Spray by air	40	air	. 25X				1X	2,500		1/3X	1		. 4.0	and the state of t	gas	
Harvest:						1X	IX				7		13000	1000 300	gas	.5 g/acre
Top (saver)	100	006.00 003					-ð.			AX NOT			Conver		7801	h d a h
Pull & load	100 125	6 row	1X	AT				000,1		ST NO.			11	.909	diesel	high
Combine	123	3 row 14' SP	121	1.7				008,3		-			11	.909	diesel	high
		State of the state of the state of	1005	1X			1X	1X		1 HO-	10		22	-454	gas	6 g/hr
Cut & rod weeder	70	6 row	001				1X	106.5		7-	-		20	.500	diesel	high
Rake beans	40	81					1X	000.1		VIII VIII			20	.500	gas	low
Chop silage	125	2 row			1X						-		13	.769	diesel	high
Pack silage	100	blade	77.15	- 10 0	1X		771	000.1		100	5-3		13	.769	diesel	medium
Swath (custom)	6 D 4 -	14' SP				3X	-+1	1X					40	.250	gas	5 g/hr
Bale & stack (custom)	004	custom	2071	1200		3X		1X		-		4.5 T/hr			diesel	medium
Windrow potatoes	100	2 row	- DOT	_0.00			-21	100		1X	4		25	.400	diesel	medium
Harvest & load	125	2 row								1X			25	.400	diesel	high
Rake straw (½ of area)	40	low nos	7000	- TO)				1X			50 6 -		60	.167	gas	1ow
Vehicles:						mile	s/acre -							andult m	and g h E	
Pickups	0.00	½ ton	35	26	26	22	28	22	BLB,	30	20		30 m1/hr	17. milter 6	gas	10 mi/gal
Trucks: Haul seed	090_4	2 ton	-200	_914			. 2		33	1.00	The same of the sa		and a state of	the deliberation	gas	5 mi/gal
Haul crops	105.50	2 ton	17.3	8.6	22.0		3.1			22.0		Y	Mrober & Antel	CONT. ALC:	gas	5 mi/gal
-/									-						840	, 643

a/ Hours/acre to plow and pull packer: loam .454, sandy .417.

Appendix Worksheet II. Inventory of vehicles, tractors, implements and improvements, 400 acre farm, Torrington area, Wyo., 1977-78.

			Nes	√ equipme		Values for case farm								
			Cost	Useful	life_	Years	Remain-	Annual			Deprec-			
Item		Size	1977	Hr or mi	Total	Used	ing	Use_	Present	Salvage	iable A	verage		
Vehicles:			\$	miles	years		years	miles	\$	\$	\$	\$		
Pickup #1	gas	½ ton	5,000	64,000		4	4	6,120	3,000	800	2,200	1,900		
Pickup #2	gas	½ ton	6,000	64,000		2	6	6,120	4,000	1,000	3,000	2,500		
Truck, bed & hoist #1	gas	2 ton	12,800	60,000		10	5	1,500	4,000	2,500	1,500	3,250		
Truck, bed & hoist #2	gas	2 ton	12,800	60,000		5	10	1,500	9,000	3,000	6,000	6,000		
Truck, bed & hoist #3	gas	2 ton	12,800	60,000	15	2	13	1,500	12,000	3,500	8,500	7,750		
Tractors:						_		hours						
2-wheel drive, duals	diesel	125 hp	27,080	12,000		2	8	525	18,000	7,000	11,000	12,500		
2-wheel drive, duals	diesel	100 hp	23,940	12,000		4	6	570	12,000	5,000	7,000	8,500		
2-wheel drive, duals	diesel	70 hp	15,040	12,000		6	6	440	6,000	1,500	4,500	3,750		
2-wheel drive	gas	40 hp	11,000	12,000	12	10	2	210	1,200	600	600	900		
Tillage equipment:														
Plow, 2-way		4-18's	4,300	2,500		2	8	182	3,600	1,080	2,520	2,340		
Roller harrow		15'	4,540	2,500		4	6	120	2,000	600	1,400	1,300		
Leveler		14'	3,000	2,500		2	13	107	2,000	600	1,400	1,300		
Disc, tandem		15'	3,392	2,500		1	9	71	2,400	720	1,680	1,560		
Field cultivator		15'	3,400	2,500		2	12	23	2,500	600	1,900	1,550		
Spike tooth harrow		24'	1,200	2,500		5	15	50	600	200	400	400		
Stripper (for beets)		6 row	450	2,500		10	5	27	250	100	150	175		
Packer		6 f t	950	2,500	10	2	8	182	650	250	400	450		
Planting equipment:		• • •										7.00		
Grain drill		12'	4,350	2,000		10	6	35	1,000	400	600	700		
Beet planter		6 row	3,400	2,000		4	4	134	2,000	640	1,360	1,320		
Chemical incorporator		6 row	800	2,000		4	4	53	400	200	200	300		
Chemical boxes, 1 set		6 row	1,090	2,000	8	4	4	53	550	250	300	400		
Cultivating equipment:						_								
Cultivators (2)		6 row	3,000	2,500		6	4	232	1,600	800	800	1,200		
Cultivator, rolling		6 row	2,000	2,500		2	8	116	1,800	540	1,260	1,170		
Beet roller		6 row	1,100	2,500		15	10	6	500	250	250	375		
Rotary hoe		12"	1,650	2,500	15	8	7	42	30 0	165	135	232		
Harvest equipment:		_			,	•	,			0 500				
Beet topper (saver)		6 row	11,500	2,000		2	6	110	9,000	2,500	6,500	5,750		
Beet puller		3 row	18,000	2,000		2	6	110	12,000	4,000	8,000	8,000		
Combine, SP	gas	14'	36,000	2,500		7	7	105	10,000	3,000	7,000	6,500		
Side rake		8'	1,600	2,000		8	2	50	300	60	240	180		
Bean cutter		6 row	1,850	2,500		10	5	50	500	100	400	300		
Rod weeder		12'	1,200	2,500		10	5	50	400	80	320	240		
Corn chopper		2 row	4,600	2,000	10	4	6	44	3,000	600	2,400	1,80 0		
Miscellaneous:			2 500	2 000		-		1.50	1 000		700	0.50		
Front loader		1.5 ton		2,000		5	5	150	1,200	500	700	850		
Ditcher		8'	800	2,500		6	6	56	500	150	350	325		
Blade		8'	1,000	2,500		4	8	60	600	200	400	400		
Ditch closer		8'	600	2,500		5	10	56	300	T00	200	200		
Sprayer, 250 gal		6 TOW	950	2,500	10	4	6		500	200	300	350		
Post to be (2 0 500 - 1)		500	000				-	acres						
Fuel tanks (2 @ 500 gal)		500 gal			15	8	7	400	500	200	300	350		
Siphon tubes (1,000)		misc.	1,627		10		10	400	1,000	500	500	750		
Gated pipe (1,320 ft)		10"	2,838		15	4	11	340	2,000	1,500	50 0	1,750		
Shop equipment	_	misc.	8,000				20	400	4,000	4,000		4,000		
Totals, vehicles & equipmen	t		260,047						137,150	49,985	87,165	93,567		
Improvements:														
Shop, metal		40 x 60	-		30	15	15	400	12,000	6,000	6,000	9,000		
Machine shed, frame		40 x 60			20	10	10	400	6,000	3,000	3,000	4,500		
Labor house, frame		26 x 40			30	15	15	400	15,000	10,000	5,000	12,500		
Concrete ditch, 2 miles		14"	7,920		30	10	20	400	2,600		2,600	1,300		
Labor house, beets		20 x 30	8,500		30	15	15	105	4,000	3,000	1,000	3,500		
Totals, improvements			74,020						39,600	22,000	17,600	30,800		

Appendix Worksheet III. Fixed costs for vehicles, tractors, implements and improvements, 400 acre farm, Torrington area, Wyo., 1977-78.

Speraling conta		7,870.2. 35		19	Years Remain-	Donnes		ial co		***	THE WALLSON STATE		sts/unit	
AART	Duck	Intol	Annual	7		Deprec-			Insur-				Taxes &	
Item		Size	use	Used	ing	iation		Taxes			iation		Insurance	
Vehicles:		HEV.	miles	201		FED.							ile	
Pickup #1		ton	6,120	4		550	190	60		880	.090	.031		.14
Pickup #2		ton	6,120	2		500	250	100		950	.082	-041		.15
Truck, bed & hoist #1		2 ton	1,500	10		300	325	78		803	.200		.119	4 000
Truck, bed & hoist #2		2 ton	1,500	5		600	600	120	120	1,440	.400			.96
Truck, bed & hoist #3		2 ton	1,500	2	13	654	775	204	150	1,783	.436	.517		1.18
Tractors:	7.6		hours	2.5			2 200			A			our	
2-wheel drive, duals,		125 hp	525	2		1,375	1,250	184	HA DE	2,809	2.62	2.38	.35	5.35
2-wheel drive, duals,		100 hp	570	4		1,167	850	122	QH <u>153</u>	2,139	2.05	1.49	.21	3.75
2-wheel drive, duals,		70 hp	440	6	6	750	375	61	12/11/20/20	1,186	1.70	.85	.14	2.69
2-wheel drive	gas	40 hp	210	10	2	300	90	12		402	1.43	.43	.05	1.91
Tillage equipment:			100				201						Serred T	TIME.
Plow, 2-way		4-18's	182	2	8	315	234	24		573	1.73	1.29	.13	3.15
Roller harrow		15'	120	4	6	233	130	13		376	1.94	1.08	.11	3.13
Leveler		14'	107	2	13	108	130	13		251	1.01	1.21	.12	2.34
Disc, tandem		13	71	1	9	187	156	16		359	2.63	2.20	.23	5.06
Field cultivator		15	23	2	12	158	155	16		329	6.88	6.74	.69	14.31
Spike tooth harrow		24'	50	5	15	27	40	4	W.M.	71	.54	.80		1.42
Stripper (for beets)		6 row	27	10	5	30	17	2		49	1.11	.63	(Page 1)	1.81
Packer (behind plow)		6 ft	182	2	8	50	45	5		100	. 27	.29	.03	.55
Planting equipment:		101	,	1.0									THE REAL PROPERTY.	THE
Grain drill		12'	6	10	6	100	100	7		207	2.86	2.85	6.00	5.91
Beet planter		6 row	134	4	4	340	132	13		485	2.54	. 98		3.62
Chemical incorporator		6 row	53	4	4	50	30	3		83	.94	.57	.06	
Chemical boxes		6 row	53	4	4	75	40	4		119	1.41	.75	.08	
Cultivating equipment	•		000					744			-	HILL I	-0.00	
Cultivators (2)		6 row	232	6	4	200	120	12		332	.86	.52	.05	1.43
Cultivator, rolling		6 row	116	2	8	158	117	12		287	1.36	1.01	The second secon	2.47
Beet roller		6 row	6	15	10	25	37	4		66	4.17	6.17	.67	11.00
Rotary hoe		12'	42	8	7	19	23	2		44	.45	.55	.05	1.05
Harvest equipment:			110	_	,	1 000					0.05		2.2	10.01
Beet topper (saver)		6 row	110	2	6	1,083	575	59		1,717	9.85	5.23	.53	15.61
Beet puller	WW	3 row 14'	110	2 7	6 7	1,333	800	82	-	2,215	12.12	7.27	.75	20.14
Combine SP Side rake	gas	8 '	105	8	2	1,000	650	66		1,716	9.52	6.19	.63	16.34
Bean cutter		6 row	50	10	5	120 80	18 30	2		140	2.40	.36	.04	2.80
Rod weeder		12'	50	10	5 5			3		113	1.60	.60	.06	2.26
Corn chopper			44	4	6	64	24	2		90	1.28	.48	.04	1.80
Miscellaneous:		2 row	44	4	б	400	180	18		598	9.09	4.09	.41	13.59
Front loader		1.5 ton	150	5	5	140	85	9		227	0.2	6.7	66	
Ditcher		8'	56	6	6	58	32	3		234	.93	.57	.06	1.56
Blade		81	60	4	8	50	40	4		93 94	1.04	.57	.05	1.66
Ditch closer		8'	56	5	10	20	20	2		42	.83 .35	.67	.07	1.57
Sprayer, 250 gal		6 row	32	4	6	50		4				.36	.04	.75
oprayer, 250 gar		0 LOW	27.1	4	0	30	35	4		89	1.56	1.09	.12	2.78
Fuel tanks (2)		500 gal	acres	R	7	43	35	4		0.2	11	\$/a		
Siphon tubes (1,000)		misc.	400		10	50	75	4		82	.11	.09	.01	. 21
Gated pipe (1320 ft)		10"	340	4	11	45	175			125	.12	.19		.31
Shop equipment		misc.	400		20	43		18		238	.13	.51	.06	.70
Totals, vehicles &	eduipmen+	misc.	400		20	12 007	400	41		441		1.00	.10	1.10
Improvements:	edarbment					12,807	9,385	1,408	550	24,150				
Shop, metal		/O =	400	1 5	1.5	100	000	100	1.00			0.05	46	2 20
		40 x 60		15	15	400	900	192	120	1,612	1.00	2.25	.78	4.03
Machine shed, frame		40 x 60		10	10	300	450	96	48	894	. 75	1.12	.36	2.23
Labor house, frame	555	26 x 40		15	15	333	1,250	166	90	1,839	.83	3.12	.65	4.60
Concrete ditch, 2 mil	es	14"	400	10	20	130	130			260	.32	.32		.64
Labor house, beets		20 x 30	105	15	15	67	350	- 24	40	481	.64	3.33	.23	.38
Totals, improvement	S					1,230	3,080	478	298	5,086				

Appendix Worksheet IV . Operating costs for vehicles, tractors, implements and improvements, 400-acre farm, Torrington area, Myo., 1977-78.

	· · · · · · · · · · · · · · ·		Y (ears	Annu	al operatin	g cost	Per unit operating costs				
		Amua 1		Remain-		Oil, lube,			Oil, lube,			
[tem	Size	use	l'sed	ing	Fuel	repairs	Total	Fuel	repairs	Total		
Vehicles:		miles				\$/year -			S/mile -			
Pickup #1	'i tou	6,120	4	4	316	422	738	.052	.069	.121		
Pickup #2	¹, ton	6,120	2	6	316	462	778	.052	. 075	.127		
Truck, bed & hoist #1	2 ton	1,500	10	5	155	494	649	.103	. 329	.432		
Truck, bed & hoist #2	2 ton	1,500	5	10	155	524	677	.103	. 349	.452		
Truck, bed & hoist #3	2 ton	1,500	2	13	155	554	709	.103	.369	.472		
Tractors:		hours										
2-wheel drive, duals, diesel	125 hp	525	2	8	1,652	1,169	2,821	a/	2.23	<u>a</u> /		
2-wheel drive, duals, diesel	100 հր	570	4	6	1,387	1,002	2,389	a/	1.76	<u>a</u> /		
2-wheel drive, duals, diesel	70 lip	440	6	6	665	628	1,293	<u>a</u> /	1.43	<u>a</u> /		
2-wheel drive, gas	40 hp	210	10	2	3 38	262	600	<u>a</u> /	1.25	a/		
Tillage equipment:												
Plow, 2-way	4-18's	182	2	8		516	516		2.84	2.84		
Roller harrow	15'	120	4	6		196	196		1.63	1.63		
Leveler	14'	107	2	13		193	193		1.80	1.80		
Disc, tandem	15 '	71	1	9		222	222		3.13	3.13		
Field cultivator	15'	23	2	12		64	64		2.78	2.78		
Spike tooth harrow	24	50	5	15		38	38		1.41	1.41		
Stripper (for beets)	6 row	27	10	5		23	23		-85	.85		
Packer (behind plow)	6'	182	2	8		42	42		.23	.23		
Planting equipment:												
Grain drill	12	6	10	6		24	24		.69	.69		
Beet planter	6 row	134	4	4		297	297		2.22	2.22		
Chemical incorporator	6 row	53	4	4		53	53		1.00	1.00		
Chemical boxes	6 row	53	4	4		82	82		1.55	1.55		
Cultivating equipment:												
Cultivators (2)	6 row	232	6	4		447	447		1.93	1.93		
Cultivator, rolling	6 row	116	2	8		73	73		.63	.63		
Beet roller	6 row	6	15	10		9	9		1.50	1.50		
Rotary hoe	12'	42	8	7		19	19		-45	.45		
Harvest equipment:												
Beet topper (saver)	6 row	110	2	6		627	627		5 .7 0	5.70		
Beet puller	3 row	110	2	6		1,106	1,106		10.05	10.05		
Combine, SP gas	14'	105	7	7	326	1,002	1,328	3.10	9.54	12.64		
Side rake	8'	50	8	2		59	5 9		1 .1 8	1 .1 8		
Bean cutter	6 row	50	10	5		131	131		2.62	2.62		
Rod weeder	12'	50	10	5		5 5	5 5		1.10	1.10		
Corn chopper	2 row	44	4	6		408	408		9.27	9.27		
Miscellaneous:												
Front loader	1.5 ton	150	5	5		205	205		1.37	1.37		
Ditcher	8'	56	6	6		20	20		.36	.36		
Blade	8'	60	4	8		23	23		.38	. 38		
Ditch closer	8'	56	5	10		21	21		.37	.37		
Sprayer, 250 gal.	6 row	32	4	6	~-	67	67		2.09	2.09		
		acres							\$/acre -			
Fuel tanks (2)	500 gal	400	8	7		12	12		.03	.03		
Siphon tubes (1,000)	misc.	400		10		85	85		.21	.21		
Gated pipe (1,320 ft)	10"	340	4	11		100	100		.29	.29		
Shop equipment	misc.	400		20		400	400		1.00	1.00		
Subtotals, vehicles & equipment					5,465	12,136	17,601					
Improvements:												
Shop, metal	40 x 60	400	15	15		500	500		1.25	1.25		
Machine shed, frame	40 x 60	400	10	10		104	104		.26	.26		
Labor house, frame	26 x 40	400	15	15		1,158	1,158		2.89	2.89		
Concrete ditch, 2 miles	14"	400	10	20		156	156		.39	.39		
Labor house, beets	20×30	105	15	15		221	221		2.10	2.10		
Subtotals, improvements						2,139	_2 <u>,</u> 139					

 $[\]frac{a'}{a'}$ See page 33 for rates of fuel use, fuel cost, oil-lube-repair and total operating costs/hr for tractors.

Appendix Worksheet V . Input prices and application rates, 400-acre farm, Torrington area, Wyo., 1977-78.

			t in secureties had	1977		Applicat:	ion rates	s/acre or	times ove			1978
		Daprec-		Price/	Oats seeded	Sugar	Corn-	Corn-	Alfalfa	Dry	Barley	Price
	Item	sids!	Unit	unit	to alfalfa	beets	grain	silage	baled_	beans	for feed	
Fertilizer:		-		\$	7			3772			reneglass -/s	\$
Nitrogen (N)			1b avail.	.210	40	150	130	130		18	80	E.I.T.
Phosphate (P)	00C.5		1b avail.	.163	40	100	80	80	80	46	40	NAME OF THE OWNER, OWNE
Potassium (K)	259.1		1b avail.	.106	20	50	1 100E S	10.2 4	10	(1)22	20	
Sulfur (S)			1b avail.	.100	42	20	1000	75 31	25		eri. Emmetrooksy	Mea
Zinc (Z)			1b avail.	1.00		200 ===	5	5		3	THIOD - WWCTh	128
Seed:	8,750		000,000,00								203601	MARKET STATES
Sugar beet	0.04		1b	4.15	4-	2.65	7 100111	Anada /		7.7	927700 0071300	471
Feed barley (co	ertified	1)	cwt	8.00			. - 10 00 . W	The S	1		100	vq2
Corn (med. flat		084,1	1b	.60			20	20	1001	, all dress, in	anog geet 100	1001
Alfalfa	ART		1b	1.70	12		- 411,0	_int 00		siden_,L	stary version in	700
Bean			cwt	23.00	24	04.	105275	08.73.6	10.0	70	T menter ball	1 ak
Oats (certified	d)	Trail	cwt	9.00	70		10.151,10	00 TES 8			to their if and	
Custom services			Land bearing						-			
Swath			\$/acre	5.00	1X	tetal con	THE PERSON	of <u>Limen</u>	3X		1X	2.5
Bale (\$9), stac	ck (\$5)		\$/ton	14.00	1X	2890	lyet hel	844	3X		1X	207
Spray for milde		74	\$/acre	7.00	7577	.2X	110	- Hotel			791	-al4
Spray on herbid			\$/acre	2.50	755	con	1X	1X		1X	2000	19.65
Crop insurance		over.)	\$/acre	000.2	15.00	19.30	12.90	12.90		20.70	15.00	Jene 1
Shank in herbid			\$/acre	3.50	40	UEX 00	0.1	0.00			, 1111 #8546V 1	AVOIL.
Thin beets			\$/acre	30.00		1X		200			tiete-frotata	selU.
Weed, beets or	beans		\$/acre	15.00		1.66X	32 L 3	085		.5X	2011/	1507
Fulltime farm			\$/hour	4.00		88 == KD1	3	0.0			20110	NAME OF THE OWNER,
Spray for milde			\$/acre	12.00		.25X		30,000,730		1X	mericon andrive	1110
Association du			\$/ton	.06	253	1X					of Clares of	0368
Chemicals:	SA X		47 COM			100					FIGURE AND AN	0308
Telon, nematoc:	ide		gal	4.20 <u>a</u> /		15 ga1		61			12" case)	Mer 7.2
RoNeet, herbic			1b	.63		10 1b				~-	Ties bibs T'E	11.05
2-4, D, herbic			1b act.	2.44			1 1b	1 1b			.75 1b	
Treflan, herbic		seen You X	pint	3.75	description of	.66 pt		-01	×	1 pt	•/5 10	
Eptam, herbicio			quart	5.00	1 100 ALI	.00 pt	100			1 qt	Interest and I	- 15 m
Sutan, herbicio			pint	2.00	24113		4 pts	4 pts		ı dr	Inaughtpa a	
Post emerg. her			lb act.	29.00	250	.33 1b	4 pcs	4 PCS			7,0,1	un IS
Twine (400 bale		16)	2 balls	12.00	1X	.55 10		-41000	3X		1X	Deac
Hoes & supplie		10)	\$/acre	1.50	1A -240	1X		0.00	3A 	(II as	a TEY TEGIN	
Gasoline: (gr								Des			addurate not a	0.50%
	ter refu	nda)	\$/gal,	.574	73/4	-		205			DATE OF STREET	NAME OF TAXABLE PARTY.
Diesel	rer reru	mus)	\$/gal.	.517	51 in -5 in			000			170 13	0 0.500
			\$/gal.	.405				00			serior Folia	Dygl
011	2		\$/gal	1.65							10112-111	Circl

a/ Includes custom rig.

Appendix Worksheet VI. Inventory, fixed and operating costs for specialized items necessary for center pivot sprinkler irrigated crops, Southeastern, Wyo., 1977-78.

Southeastern	n, Wyo., 1977	-78.									
						Val	ues use	i in ente	rprise bud	gets	
		Cost	Usefu	l life	Years	Remain-	Annua1			Deprec-	
Item	Size	1977	Hr or mi	Total	used	ing	use	Present	Salvage	iable	Average
Inventory:		\$	hours	years		years	hours	\$	\$	\$	\$
Potato equipment:											
Planter	4 row	10,000	2,000	8	3	5	150	6,000	600	5,400	3, 3 00
Elevator	40 ft	7,000	2,000	10	5	5	400	4,500	500	4,000	2,500
Seed cutter		5,500	1,500	8	4	4	150	3,500	350	3,150	1,925
Front loader (SP, small)	½ ton	9,000	12,000	15	5	10	300	6,000	1,000	5,000	3,500
Boxes for trucks	16 ft	3,000		12	5	7	250	2,400	600	1,800	1,500
Windrower (potato)	2 row	7,000		6	3	3	200	5,000	1,000	4,000	3,000
Harvestor	2 row	19,000		6	2	4	200		3,500	10,500	8,750
Subsoiler	5 shank	1,800		14	6	8	60	1,200	120	1,080	6 60
Irrigation equipment:	5 51141111	2,000					acres	•			
Sprinkler & pivot	125 acre	26,000		15	5	10	125	20,800	4,160	16,640	12,480
Motor, pump, panel, cable, hookup	75 hp	4,750		15	5	10	125	3,800	1,140	2,660	2,470
Motor, pump, panel, cable, hookup	100 hp	10,170		15	5	10	125	8,136	2,441	5,695	5,288
Well (16" case)	125' @ \$30	3,750		20	5	15	125	3,000	600	2,400	1,800
Mainline pipe, 1,320 ft	10" @ \$3.80			20	5	15	125	4,012	1,605	2,497	2,808
ratiffine pipe, 1,520 it					ļ			· · · · · · · · · · · · · · · · · · ·			
				Annual f	fixed costs			F	ixed cost/	е	
	Annua1	Remain-	Deprec-	Inter-		In-		Deprec-	Inter-	Taxes &	
Fixed costs:	use	ing	iation	est	Taxes	surance	Total	iation	est	insurance	Total
Potato equipment:	hours	years		\$/ye	ear				\$/h	our	
Planter	150	5	1,080	330	34		1,444	7.20	2.20	-23	9.63
Elevator	400	5	800	250	26		1,076	2.00	.63	.06	2.69
Seed cutter	150	4	787	193	20		1,000	5.25	1.29	.13	6.67
Front loader (SP, small)	300	10	500	350	36		886	1.67	1.16	.12	2.95
Boxes for trucks	250	7	257	150	15	_	422	1.03	.60	.06	1.69
Windrower (potato)	200	3	1,333	300	31		1,664	6.67	1.50	.15	8.32
Harvestor	250	4	2,625	87 5	89		3,589	13.12	4.38	-44	17.94
Subsoiler	60	6	135	66	7		208	2.25	1.10	.12	3.47
Irrigation equipment:	acres								\$/a	cre	
Circle sprinkler	125	10	1,664	1,248	125	75	3,112	13.31	9.98	1.60	24.89
Motor, pump, 75 hp	125	10	266	247	25	15	553	2.13	1.97	.32	4.42
Motor, pump, 100 hp	125	10	570	229	54	32	885	4.56	1.83	.69	7.08
Well (12" case)	125	15	160	180			340	1.28	1.44		2.72
Mainline pipe 1,320 ft	125	15	166	280			446	1.33	2.24		3.57
								l			
				Annua 1	operating	costs		_Operati	ng cost/un	it of use	
	Annual	Remain-			011, lube,				Oil, lube,		
Operating costs:	use	ing	i	Fuel	repair	Total		Fuel	repair	Total	
Potato equipment:	hours	years			- \$/year				- \$/hour		
Planter	150	5			335	335		<u> </u>	2.23	2.23	
Elevator	400	5	İ		703	703			1.76	1.76	
Seed cutter	150	4	i		503	503			3.35	3.35	
Front loader (SP small)	300	10	1	365	340	705	- 1	1.22	1.13	2.35	
Boxes for trucks	250	7	i		179	179			.72	.72	
Windrower (potato)	200	3	ĺ		478	478	Ì		2.39	2.39	
Harvestor	250	4	į		1,380	1,380			6.90	6.90	
Subsoiler	60	6	1		32	32			.53	.53	
Irrigation equipment:	acres		•			J~			\$/acre		
Circle sprinkler	125	10	; i		582	582			4.66	4.66	
Motor, pump, 75 hp	125	10		\$.65/A in	49	49			.39	.39	
Motor, pump, 100 hp	125	10		\$.80/A in	105	105			.84	.84	
Well (12" case)	125	15		7.60/A III							
Mainline pipe	125	15									
	143	1.7									

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