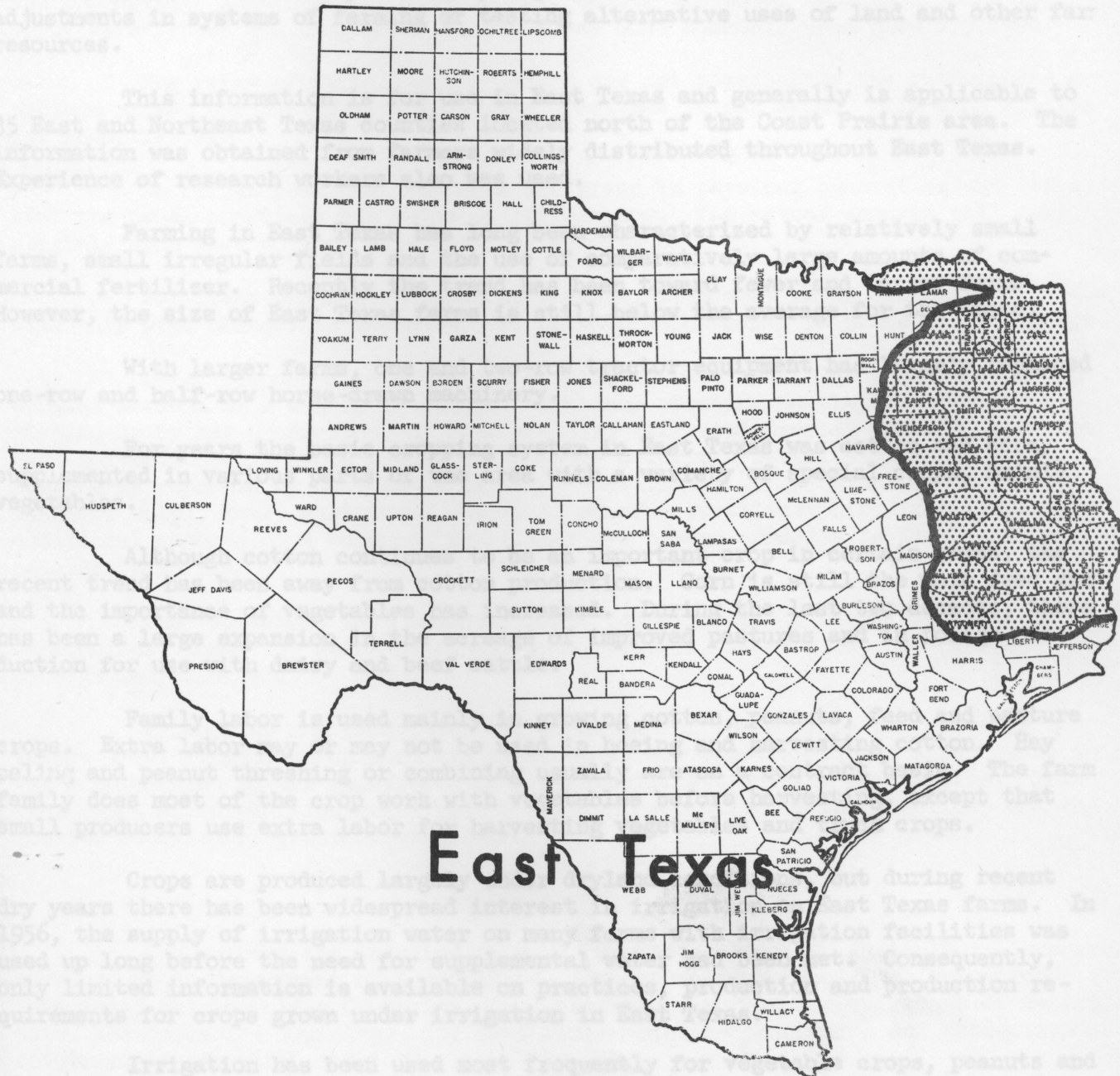


Production and Production Requirements of Crops



East Texas

TEXAS AGRICULTURAL EXPERIMENT STATION

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PRODUCTION AND PRODUCTION REQUIREMENTS OF CROPS--EAST TEXAS

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This is one in a series of reports on production and production requirements of crops in the various types-of-farming areas of Texas. It provides some of the information necessary for analyzing farm management problems and for planning adjustments in systems of farming or testing alternative uses of land and other farm resources.

This information is for use in East Texas and generally is applicable to 35 East and Northeast Texas counties located north of the Coast Prairie area. The information was obtained from farmers widely distributed throughout East Texas. Experience of research workers also was used.

Farming in East Texas has long been characterized by relatively small farms, small irregular fields and the use of comparatively large amounts of commercial fertilizer. Recently the trend has been toward fewer and larger farms. However, the size of East Texas farms is still below the average for the State.

With larger farms, one and two-row tractor equipment has largely replaced one-row and half-row horse-drawn machinery.

For years the basic cropping system in East Texas was cotton and corn, supplemented in various parts of the area with a variety of special crops, mainly vegetables.

Although cotton continues to be an important crop in certain areas, the recent trend has been away from cotton production. Corn is still the main feed grain and the importance of vegetables has increased. During the last two decades, there has been a large expansion in the acreage of improved pastures and in forage production for use with dairy and beef cattle.

Family labor is used mainly in growing cotton, peanuts, feed and pasture crops. Extra labor may or may not be used in hoeing and harvesting cotton. Hay baling and peanut threshing or combining usually are on a contract basis. The farm family does most of the crop work with vegetables before harvesting, except that small producers use extra labor for harvesting vegetables and truck crops.

Crops are produced largely under dryland conditions, but during recent dry years there has been widespread interest in irrigation on East Texas farms. In 1956, the supply of irrigation water on many farms with irrigation facilities was used up long before the need for supplemental water had been met. Consequently, only limited information is available on practices, production and production requirements for crops grown under irrigation in East Texas.

Irrigation has been used most frequently for vegetable crops, peanuts and a few grazing crops. With the exception of peanuts, irrigated Coastal Bermudagrass and a few vegetable crops, data are insufficient to determine normal levels of production with irrigation. Most irrigation has been with a sprinkler system.

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With the exception of the application of water, production practices before harvest are about the same for both dryland and irrigated vegetable crops. In some instances, irrigation entails more intensive insect control practices. The use of fertilizer usually is increased with irrigation.

Production and production requirements for general crops (cotton, corn, peanuts, hay and grazing crops) are shown in Tables 1-7 and are based entirely on information obtained from farmers. The rate of fertilization represents the amounts commonly used to obtain the indicated yields. Reporting has been simplified by listing the total pounds per acre of the three common elements--nitrogen, phosphorus and potassium. Numerous insecticides were used. The total amounts of dust and spray were listed and only those insecticides most commonly used were reported.

The rates of fertilization listed are not necessarily the recommended or optimum rates, but represent common farm practices in the area. This also applies for insecticides.

As far as possible, the data are given in physical quantities and represent the usual practices and rates of performance. The actual amounts will vary slightly from year to year with seasonal conditions.

For items such as contract operations, 1956 cost rates are listed. These will vary with changes in market prices or with adjustments in price relationships.

Large responses to water and fertilizer have led to growing interest in Coastal Bermuda as a source of forage. Problems relating to the utilization, by grazing or by hay production, of high yielding irrigated Coastal Bermuda, have not been solved. Requirements are shown in Table 8 for the establishment of Coastal Bermuda as reported by East Texas farmers. Fertilizer applications are for establishment only. Heavy additional applications of a fertilizer high in nitrogen and additional amounts of a balanced fertilizer are needed annually in East Texas to maintain high yields.

The vegetables most commonly grown commercially in East Texas include watermelons, tomatoes, sweet potatoes, peas, peppers, sweet corn, cantaloupe, cabbage and cucumbers.

Production and production requirements for these crops are shown in Tables 9-20. The data reported are based on farmer experience. In a few cases this was supplemented by the experience of crop specialists working in the area. The production and production requirements are representative of the practices and the results obtained by substantial growers.

Acknowledgment

The authors are indebted to W. F. Hughes, economist, Agricultural Research Service, U. S. Department of Agriculture, for information involving irrigation practices, and to Calvin C. Boykin, Jr., assistant professor, Department of Agricultural Economics and Sociology, for data concerning the production and production requirements of cotton and corn.

Data concerning forage and pasture crops were obtained in connection with Regional Farm Management Research Project S-27, "The Economics of Production in Use in Beef and Dairy Farms."

Table 1. Cotton production and production requirements

	<u>Dryland</u>					
Normal yield						
Lint, pounds		175				
Seed, pounds		280				
Seed per acre, pounds		25				
Average value of seed		16				
dollars per 100 pounds						
Bought, 50 percent		10.00				
Home grown, 50 percent		4.00				
Insecticides, spray, pints ^{1/}		3				
Fertilizer	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>			
	10	20	10			
Usual planting period	April - May					
Usual harvesting period	August - September					
<u>Labor and power inputs per acre</u>						
	<u>One-row tractor</u>			<u>Two-row tractor</u>		
	<u>Total hours</u>			<u>Total hours</u>		
X Over	Man	Tractor	X Over	Man	Tractor	
Flat break	.6	1.20	1.20	.6	.80	.80
Harrow	.3	.12	.12	.3	.12	.12
Disk	2.0	2.22	2.22	2.0	1.20	1.20
Bed	.3	.30	.30	.3	.17	.17
Plant and fertilize	1.2	1.20	1.20	1.2	.70	.70
Cultivate	4.5	4.60	4.60	4.5	2.60	2.60
Hoe and thin	1.0	8.00		1.0	8.00	
Poison	3.0	1.00	1.00	3.0	.60	.60
Total hours preharvest		18.64	10.64		14.19	6.19
Pick	2.5	17.00		2.5	17.00	
Haul and gin		3.00	3.00		3.00	3.00
Common contract operation						
Picking		2.5 at \$2 per cwt.			2.5 at \$2 per cwt.	

^{1/} Toxaphene (2) DDT (1) at \$2.25 per gallon.

Table 2. Corn production and production requirements

	Harvested for bundles Red top	Dryland	Harvested for silage Honey drop
Normal yield, bushels	4,500	25	20,000
Seed per acre, pounds	10	7	10
Average value of seed cents per pound			
Bought, 100 percent		16	
Bought, 100 percent	13		13
Fertilizer	N 10 P ₂ O ₅ 20 K ₂ O 10	P ₂ O ₅ 20	N 10 P ₂ O ₅ 10 K ₂ O 10
Usual planting period	May	March	May
Usual harvesting period	July - August	August - September	July - August

Labor and power inputs per acre

	One-row tractor			Two-row tractor		
	X Over	Total hours		X Over	Total hours	
		Man	Tractor		Man	Tractor
Flat break	1.0	2.00	2.00	1.0	1.33	1.33
Disk	1.0	1.10	1.10	1.0	.59	.59
Harrow and fertilize	.3	.12	.12	.3	.12	.12
Plant and fertilize	1.1	1.10	1.10	1.1	.65	.65
Cultivate	3.0	3.20	3.20	3.0	1.66	1.66
Total hours preharvest		7.52	7.52		4.35	4.35
Snap in equipment	1.0	6.00	2.00	1.0	6.00	2.00
Bind	1.0	.77	.77	1.0	.77	.77
Shuck	1.0	3.33		1.0	3.33	
Haul in	1.0	3.00	1.67	1.0	3.00	1.67
Harvest for silage own equipment						
Cut in field	1.0	1.43	1.43	1.0	1.43	1.43
Haul to silo	1.0	2.86	2.86	1.0	2.86	2.86
Spread and pack	1.0	2.86	1.43	1.0	2.86	1.43
Common contract operations						
Row binding		1.0 at \$5 per acre			1.0 at \$5 per acre	
Cut silage in field		1.0 at \$10 per acre			1.0 at \$10 per acre	
Haul to silo		1.0 at \$2.90 per hour			1.0 at \$2.90 per hour	

Table 3. Sorghum hay and silage production (row crop) and production requirements

	Harvested for hay			Harvested for silage		
	Red top			Honey drop		
Common variety						
Normal yield, pounds	4,500			20,000		
Seed per acre, pounds	10			10		
Average value of seed cents per pound	13			13		
Bought, 100 percent	13			13		
Fertilizer	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
	10	20	10	10	20	10
Usual planting period	May			May		
Usual harvesting period	July - August			July - August		
Labor and power inputs per acre						
	One-row tractor			Two-row tractor		
	Total hours			Total hours		
	X Over	Man	Tractor	X Over	Man	Tractor
Flat break	1.0	2.00	2.00	1.0	1.33	1.33
Disk	1.0	1.10	1.10	1.0	.60	.60
Plant and fertilize	1.1	1.10	1.10	1.1	.65	.65
Cultivate	2.5	2.70	2.70	2.5	1.42	1.42
Total hours preharvest		6.90	6.90		4.00	4.00
Harvest for bundles own equipment	1.0	.50	.50	1.0	.50	.50
Bind	1.0	.77	.77	1.0	.77	.77
Shock	1.0	3.33		1.0	3.33	
Haul in	1.0	5.00	1.67	1.0	5.00	1.67
Harvest for silage own equipment	1.0 at 20 cents per bale			1.0 at 20 cents per bale		
Cut in field	1.0	1.43	1.43	1.0	1.43	1.43
Haul to silo	1.0	2.86	2.86	1.0	2.86	2.86
Spread and pack	1.0	2.86	1.43	1.0	2.86	1.43
Common contract operations						
Row binding	1.0 at \$5 per acre			1.0 at \$5 per acre		
Cut silage in field	1.0 at \$10 per acre			1.0 at \$10 per acre		
Haul to silo	1.0 at \$2.50 per hour			1.0 at \$2.50 per hour		

Table 4. Broadcast sorghum hay production and production requirements

Normal yield, pounds	4,800		
Seed per acre, pounds	50		
Average value of seed cents per pound	13		
Bought, 100 percent	13		
	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
Fertilizer	15	30	15
Usual planting period	May		
Usual harvesting period	August		

Labor and power inputs per acre

	<u>One-row tractor</u>			<u>Two-row tractor</u>		
	<u>X-Over</u>	<u>Total hours</u>		<u>X Over</u>	<u>Total hours</u>	
		<u>Man</u>	<u>Tractor</u>		<u>Man</u>	<u>Tractor</u>
Flat break	1.0	2.00	2.00	1.0	1.33	1.33
Fertilize	1.0	.40	.40			
Disk	1.0	1.10	1.10	1.0	.60	.60
Drill and fertilize				1.0	.43	.43
Seed	1.0	.40	.40			
Disk	1.0	<u>1.10</u>	<u>1.10</u>			
Total hours preharvest	1.0	5.00	5.00		<u>2.36</u>	<u>2.36</u>
Harvest, own equipment						
Mow	1.0	.50	.50	1.0	.50	.50
Rake	1.0	.40	.40	1.0	.40	.40
Bale	1.0	.50	.50	1.0	.50	.50
Haul in	1.0	1.50	.50	1.0	1.50	.50
Common contract operations						
Bale and rake		1.0 at 20 cents per bale			1.0 at 20 cents per bale	

Table 5. Broadcast Sudan pasture production and production requirements

	Grassed and harvested for hay	Dryland	Used entirely for grazing
Normal yield, grazing days ^{1/}		100	
Seed per acre, pounds	67	35	107
Average value of seed cents per pound	3200		
Bought, 100 percent		15	
Fertilizer	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
Bought, 100 percent	25	50	25
Usual planting period		April - May	
Usual harvesting period		June - October	

	Labor and power inputs per acre					
	One-row tractor			Two-row tractor		
	X Over	Total hours		X Over	Total hours	
		Man	Tractor		Man	Tractor
Flat break	.5	1.00	1.00	1.0	1.33	1.33
Disk	1.0	1.11	1.11	.7	.40	.40
Harrow	.3	.12	.12	.3	.12	.12
Fertilize	1.0	.40	.40			
Disk	1.0	1.11	1.11			
Drill and fertilize				1.0	.43	.43
Seed break	1.0	.40	.40	1.0	1.33	1.33
Disk	1.0	1.11	1.11	1.0	.60	.60
Top dress	1.0	—	—	.3	.13	.13
Total hours preharvest	1.0	5.25	5.25	1.0	2.41	2.41

^{1/} Grazing for one cow or the equivalent.

Top dress				.3	.13	.13
Total hours preharvest		3.56	3.56		2.49	2.49
Harvest, own equipment						
Mow	1.0	.50	.50	1.0	.50	.50
Bale	1.0	.40	.40	1.0	.40	.40
Haul	1.0	.50	.50	1.0	.50	.50
Haul in	1.0	1.29	.43	1.0	1.29	.43

Custom contract operations

 Bale and haul 1.0 at 20 cents per bale 1.0 at 20 cents per bale

^{1/} Grazing days for one cow or the equivalent.

Table 6. Oats-vetch production and production requirements

	Grazed and harvested for hay		Irrigated crop			
			Used entirely for grazing			
Normal yield						
Grazing, days ^{1/}	67		107			
Hay, pounds	3200					
Seed per acre						
Oats, bushel		2 1/2				
Vetch, pounds		20				
Average value of seed						
Oats, bought, 100 percent dollars per bushel		1.00				
Vetch, bought, 100 percent cents per pound		17				
Fertilizer	N 18	P ₂ O ₅ 36	K ₂ O 18			
Usual planting period	September - October		September - October			
Usual harvesting period	May		November - May			
	Labor and power inputs per acre					
	One-row tractor			Two-row tractor		
		Total hours			Total hours	
	X Over	Man	Tractor	X Over	Man	Tractor
Flat break				1.0	1.33	1.33
Disk	.5	.56	.56	1.0	.60	.60
Fertilize	1.0	.40	.40			
Disk	1.0	1.10	1.10			
Drill and fertilize				1.0	.43	.43
Seed	1.0	.40	.40			
Disk	1.0	1.10	1.10			
Top dress				.3	.13	.13
Total hours preharvest		3.56	3.56		2.49	2.49
Harvest, own equipment						
Mow	1.0	.50	.50	1.0	.50	.50
Rake	1.0	.40	.40	1.0	.40	.40
Bale	1.0	.50	.50	1.0	.50	.50
Haul in	1.0	1.29	.43	1.0	1.29	.43
Common contract operations						
Rake and bale		1.0 at 20 cents per bale			1.0 at 20 cents per bale	

^{1/} Grazing days for one cow or the equivalent.

Table 7. Peanut production and production requirements

	Dryland crop			Irrigated crop		
	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
Normal yield						
Nuts, bushels		32			50	
Hay, pounds		1200			1800	
Seed per acre, shelled, pounds		25			30	
Average value of seed						
cents per pound						
Bought, 100 percent		25			25	
Sacks, number		20			35	
Irrigation water, acre inches					4	
Fertilizer						
N	5			3		
P ₂ O ₅		10			12	
K ₂ O			5			12
Usual planting period		May			May	
Usual harvesting period		August - October			August - September	
Labor and power inputs per acre						
	One-row tractor			Two-row tractor		
	X Over	Total hours		X Over	Total hours	
		Man	Tractor		Man	Tractor
Flat break	1.0	2.00	2.00	1.0	1.33	1.33
Disk	1.0	1.11	1.11	1.0	.60	.60
Harrow	.5	.20	.20	.5	.20	.20
Plant and fertilize	1.1	1.10	1.10	1.1	.65	.65
Cultivate	2.5	2.50	2.50	2.5	1.25	1.25
Hoe	1.0	2.00		1.0	2.00	
Total hours preharvest(dryland)		8.91	6.91		6.03	4.03
Irrigate	2.0	4.00		2.0	4.00	
Total hours preharvest(irrigated)		12.91	6.91		10.03	4.03
Flow up	1.0	1.00	1.00			
Pile	1.0	6.25				
Plow up and rake				1.0	.50	.50
Turn	1.0	5.00		1.0	.25	.25
Haul in and thresh	1.0	6.00	3.00			
Thresh with combine				1.0	2.00	1.00
Bale hay	1.0	1.00	.33	1.0	1.00	.33
Haul hay	1.0	2.86	1.43	1.0	2.86	1.43
Haul nuts	1.0	.40	.20	1.0	.40	.20
Common contract operations						
Combining or threshing	1.0	at 30 cents per bushel		1.0	at 30 cents per bushel	
Bale	1.0	at 20 cents per bale		1.0	at 20 cents per bale	

Table 8. Coastal Bermuda--requirements for establishment

	<u>Dryland</u>		
Sprigs per acre, bushels	10		
Average value of sprigs dollars per bushel	1.00		
Bought, 25 percent	1.00		
Homegrown, 75 percent	1.00		
Fertilizer	<u>N</u> 30	<u>P₂O₅</u> 60	<u>K₂O</u> 30
Usual planting period	April		
Usual harvesting period	April - October		

	<u>Labor and power inputs per acre</u>		
		<u>Two-row tractor</u>	
		<u>Total hours</u>	
	<u>X Over</u>	<u>Man</u>	<u>Tractor</u>
Flat break	1.0	1.33	1.33
Disk	1.5	.90	.90
Digging sprigs	1.0	2.50	1.25
Set sprigs	1.0	3.75	1.25
Fertilize	1.0	.42	.42
Cultivate or harrow	1.0	.40	.40
Mow	1.0	.40	.40
Total to establish		9.70	5.95

Plant	1.0	.30	.30
Gratch	1.0	.66	.33
Break middles	2.3	1.52	.76
Cultivate	1.0	1.00	1.00
Poison	1.4	1.36	1.36
Prune	4.0	.40	.40
Prune	3.0	6.00	
Prune	4.0	8.00	
Total hours preharvest		29.05	5.96
Harvest	4.0	16.00	
Haul	4.0	4.00	4.00

1/ Parathion at \$11.70 per gallon.
 2/ Parathion (2 percent) at \$8.65 cwt. and Lindane at \$7.60 cwt.

Table 9. Watermelon production and production requirements

	<u>Dryland</u>		
Normal yield, pounds	25,000		
Seed per acre, pounds	1.00		
Average value of seed dollars per pound	1.00		
Bought, 100 percent	2.25		
Insecticides			
Spray, pints ^{1/}	3		
Dust, pounds ^{2/}	10		
Lime, pounds	4		
	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
Fertilizer	70	140	70
Usual planting period	April		
Usual harvesting period	July		
	<u>Labor and power inputs per acre</u>		
	<u>Two-row tractor</u>		
		<u>Total hours</u>	
	<u>X Over</u>	<u>Man</u>	<u>Tractor</u>
Clean up field	1.0	8.00	
Disk	1.0	1.00	1.00
Open beds for fertilizer	.5	.16	.16
Fertilize	.5	.16	.16
Open beds and fertilize	.5	.16	.16
Bed on fertilizer	1.0	.33	.33
Drag	1.0	.30	.30
Plant	1.0	.66	.33
Scratch	1.0	1.52	.76
Break middles	1.0	1.00	1.00
Cultivate	3.4	1.36	1.36
Poison	1.0	.40	.40
Prune	1.0	6.00	
Paint	1.0	8.00	
<u>Total hours preharvest</u>	1.0	<u>29.05</u>	<u>5.96</u>
Harvest	4.0	16.00	
Haul	4.0	4.00	4.00

^{1/} Parathion at \$11.70 per gallon.

^{2/} Parathion (2 percent) at \$8.65 cwt. and Lindane at \$7.60 cwt.

1/ DDT, 5 percent, and copper, 6 percent, at \$12.00 per 100 pounds.

2/ Pickup or truck.

Table 10. Tomato production and production requirements

	Dryland 10,000				
Normal yield, pounds	10				
Seed per acre, ounces	1				
Average value of seed dollars per ounce	1.00				
Bought, 100 percent	1.00				
Materials, hotbed and cold frame					
Lumber, 2 by 12 inches rough every third year, running feet	200				
Sheeting every third year, yards	60				
Insecticides, dust, pounds ^{1/}	60				
Baskets, number	18				
Fertilizer, cold frame	N	P205	K20		
In field, before planting	5	10	5		
side areas	15	30	15		
	25	50	25		
Usual period to					
Plant seed	February				
Set in field	April				
Harvest	May - June - July				
Labor and power inputs per acre					
	One-row tractor		Two-row tractor		
	Total hours		Total hours		
	X Over	Man Tractor	X Over	Man Tractor	
Production of plants:					
Prepare hotbed and plant seed	1.0	12.0	1.0	12.0	
Care of hotbed	1.0	7.0	1.0	7.0	
Prepare cold frame	1.0	12.5	1.0	12.5	
Transplant seedlings	1.0	16.5	1.0	16.5	
Care of cold frame	1.0	12.5	1.0	12.5	
Field operations:					
Flat break	1.0	2.0	1.0	1.33	1.33
Disk	1.0	1.1	1.0	.60	.60
Lay off rows and fertilize	1.0	1.1	1.0	.60	.60
Bed	1.0	1.0	1.0	.60	.60
Open beds	1.0	1.0	1.0	.50	.50
Plant	1.1	42.0	1.1	42.00	
Cultivate	8.0	11.0	8.0	11.00	11.00
Dust	3.0	6.0	3.0	6.00	
Total hours preharvest		125.7		123.13	14.63
Harvest	8.0	120.0	8.0	120.0	12.00
Haul and market	8.0	10.0	8.0	10.0	10.00 ^{2/}

^{1/} DDT, 5 percent, and copper, 6 percent, at \$12.00 per 100 pounds.
^{2/} Pickup or truck.

Table 11. Sweet potato production and production requirements

Normal yield, bushels		200	
Seed per acre, bushels		10	
Average value of seed dollars per bushel	2,000 500		5,000 1,500
Home grown, 100 percent	15	1.00	15
Crates		30	
Fertilizer		<u>N</u> 60	<u>P₂O₅</u> 120 <u>K₂O</u> 60
Usual period to			
Bed seed potatoes			March
Set in field			May - June
Harvest			August - October

	Labor and power inputs per acre					
	One-row tractor			Two-row tractor		
	X Over	Total hours		X Over	Total hours	
	Man	Tractor		Man	Tractor	
Bed out seed	1.0	2.00	.50	1.0	2.00	.50
Care plant bed	1.0	.50		1.0	.50	
Clean up field	1.0	4.00	1.00	1.0	4.00	1.00
Disk				1.0	1.10	1.10
Flat break	1.0	2.00	2.00	1.0	1.33	1.33
Disk	1.0	1.10	1.10			
Cultivate				1.0	.67	.67
Lay off rows	1.0	1.00	1.00	1.0	.50	.50
Fertilize	1.0	1.00	1.00	1.0	.50	.50
Bed	1.0	1.10	1.10	1.0	1.10	1.10
Drag	.5	.50	.50	.5	.25	.25
Pull slips	1.0	4.40		1.0	4.40	
Set out: by hand	1.0	9.20	2.00	1.0	9.20	2.00
with machine	1.0	6.00	2.00	1.0	6.00	2.00
Cultivate	3.0	6.00	3.00	3.0	6.00	3.00
Hoe	1.0	2.10		1.0	2.10	
Total hours preharvest						
Hand setting		34.90	13.20		33.65	11.95
Machine setting		31.70	13.20		30.45	11.95
Plow up, MB plow	1.0	2.00	2.00	1.0	2.00	2.00
Pick up and box	1.0	42.00	4.00	1.0	42.00	4.00
Plow up, potato digger	1.0	2.00	2.00	1.0	2.00	2.00
Pick up and box	1.0	15.00	4.00	1.0	15.00	4.00

Table 12. Pea production and production requirements

	<u>Dryland</u>			<u>Irrigated</u>		
Normal yield	2,000			5,000		
Green, pounds	2,000			5,000		
Dry, pounds	500			1,500		
Seed per acre, pounds	15			15		
Average value of seed cents per pound	30			30		
Bought, 50 percent	30			30		
Home grown, 50 percent	12			12		
Baskets for picking, number	10			15		
Fertilizer	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
	8	16	8	20	40	20
Usual planting period	May			May		
Usual harvesting period	June			June		
Green	August - September			August - September		
Dry	July - August			July - August		
Labor and power inputs per acre, one-row tractor						
	<u>Total hours</u>			<u>Total hours</u>		
	<u>X Over</u>	<u>Man</u>	<u>Tractor</u>	<u>X Over</u>	<u>Man</u>	<u>Tractor</u>
Flat break	1.0	2.00	2.00	1.0	2.00	2.00
Disk	1.0	1.10	1.10	1.0	1.10	1.10
Harrow	1.0	.40	.40	1.0	.40	.40
Plant and fertilize	1.0	1.00	1.00	1.0	1.00	1.00
Cultivate	2.5	2.70	2.70	2.5	2.70	2.70
Irrigate				2.0	10.00	4.00
Total hours preharvest		7.20	7.20		17.20	11.20
Pick ^{1/}	8.0	50.00	4.00 ^{2/}	14.0	125.00	7.00 ^{2/}
Haul and market	8.0	4.00	4.00 ^{2/}	14.0	7.00	7.00 ^{2/}

^{1/} Contract price for picking at 1.5 cents per pound.

^{2/} Pickup or truck.

Table 13. Pea production and production requirements

	<u>Dryland</u>			<u>Irrigated</u>		
Normal yield						
Green, pounds		2,000			5,000	
Dry, pounds		500			1,500	
Seed per acre, pounds		15			15	
Average value of seed						
cents per pound						
Bought, 50 percent		30			30	
Home grown, 50 percent		12			12	
Baskets for picking, number		10			15	
Fertilizer	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
	8	16	8	20	40	20
Usual planting period		May			May	
Usual harvesting period						
Green		June			June	
Dry		August - September			August - September	

	Labor and power inputs per acre, two-row tractor					
	X Over	Total hours		X Over	Total hours	
		Man	Tractor		Man	Tractor
Flat break	1.0	1.33	1.33	1.0	1.33	1.33
Disk	1.0	.60	.60	1.0	.60	.60
Harrow	1.0	.40	.40	1.0	.40	.40
Plant and fertilize	1.0	.50	.50	1.0	.50	.50
Cultivate	2.5	1.42	1.42	2.5	1.42	1.42
Irrigate				2.0	10.00	4.00
Total hours preharvest		4.25	4.25		14.25	8.25
Pick ^{1/}	8.0	50.00		14.0	125.00	
Haul and market	8.0	4.00	4.00 ^{2/}	14.0	7.00	7.00 ^{2/}

^{1/} Contract price for picking at 1.5 cents per pound.

^{2/} Pickup or truck.

Table 14. Green pepper production and production requirements

	Dryland			Irrigated		
Normal yield, bushels	200			400		
Home raised plants						
Seed per acre, ounces	1			1		
Average value of seed bought dollars per ounce	1.00			1.00		
Average value of plants bought dollars per 1,000	2.50			2.50		
Materials, hotbed and cold frame						
Lumber, 2 by 12 inches rough every third year running feet	200			200		
Sheeting, every third year, yards	60			60		
Insecticides, dust, pounds ^{1/}	30			45		
Baskets to pick in, number	18			30		
	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
Fertilizer, cold frame	5	10	5	5	10	5
In field, before planting	15	30	15	30	60	30
Sidedressing	25	50	25	60		
Usual period to						
Plant seed	February - March			February - March		
Set plants in field	May			May		
Harvest	June - July			June - July		

Labor and power inputs per acre, one-row tractor

	Total hours			Total hours		
	X Over	Man	Tractor	X Over	Man	Tractor
Production of plants:						
Prepare hotbed and plant seed	1.0	10.00		1.0	10.00	
Care of hotbed	1.0	6.00		1.0	6.00	
Prepare cold frame	1.0	12.00		1.0	12.00	
Transplant seedlings	1.0	15.00		1.0	15.00	
Care of cold frame	1.0	12.00		1.0	12.00	
Field operations:						
Flat break	1.0	2.00	2.00	1.0	2.00	2.00
Disk	1.0	1.10	1.10	1.0	1.10	1.10
Harrow	1.0	.40	.40	1.0	.40	.40
Bed and fertilize	1.0	1.10	1.10	1.0	1.10	1.10
Set plants	1.0	36.00		1.0	36.00	
Cultivate	6.0	6.00	6.00	7.0	7.00	7.00
Side dress	1.0	1.00	1.00	1.0	1.00	1.00
Hoe	1.0	16.00		1.0	16.00	
Poison	2.0	4.00		3.0	6.00	
Irrigate				2.0	10.00	4.00
Total hours preharvest		122.60	11.60		135.60	16.60
Harvest	4.0	65.00		7.0	130.00	
Haul and market	4.0	3.00	3.00 ^{2/}	7.0	6.00 ^{2/}	

^{1/} Toxaphene and DDT at \$8.70 per cwt.^{2/} Pickup or truck.

Table 15. Green pepper production and production requirements

	Dryland			Irrigated		
Normal yield, bushels	200			400		
Home raised plants:						
Seed per acre, ounces	1			1		
Average value of seed bought dollars per ounce	1.00			1.00		
Average value of plants bought dollars per 1,000	2.50			2.50		
Materials, hotbed and cold frame						
Lumber, 2 by 12 inches rough every third year running feet	200			200		
Sheeting every third year, yards	60			60		
Insecticides, dust, pounds	30			45		
Baskets to pick in, numbers	18			30		
	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
Fertilizer, cold frame	5	10	5	5	10	5
In field, before planting	15	30	15	30	60	30
Sidedressing	25	50	25	60		
Usual period to						
Plant seed	February - March			February - March		
Set plants in field	May			May		
Harvest	June - July			June - July		
	Labor and power inputs per acre, two-row tractor			Labor and power inputs per acre, two-row tractor		
	X Over	Total hours		X Over	Total hours	
		Man	Tractor		Man	Tractor
Production of plants:						
Prepare hotbed and plant seed	1.0	10.00	3.25	1.0	10.00	3.25
Care of hotbed	1.0	6.00		1.0	6.00	
Prepare cold frame	1.0	12.00		1.0	12.00	
Transplant seedlings	1.0	15.00	6.77	1.0	15.00	10.77
Care of cold frame	1.0	12.00		1.0	12.00	
Field operations:						
Flat break	1.0	1.33	1.33	1.0	1.33	1.33
Disk	1.0	.60	.60	1.0	.60	.60
Harrow	1.0	.40	.40	1.0	.40	.40
Bed and fertilize	1.0	.60	.60	1.0	.60	.60
Set plants	1.0	36.00		1.0	36.00	
Cultivate	6.0	3.00	3.00	7.0	3.50	3.50
Side dress	1.0	.50	.50	1.0	.50	.50
Hoe	1.0	16.00		1.0	16.00	
Poison	2.0	4.00		3.0	6.00	
Irrigate				2.0	10.00	4.00
Total hours preharvest		117.43	6.43		129.93	10.93
Harvest	4.0	65.00		7.0	130.00	
Haul and market	4.0	3.00	3.00 ^{2/}	7.0	6.00 ^{2/}	

1/ Toxaphene and DDT at \$8.70 per cwt.

2/ Pickup or truck.

Table 16. Sweet corn production and production requirements

	<u>Dryland</u>			<u>Irrigated</u>		
Normal yield, sacks ^{1/}	140			200		
Seed per acre, pounds	7			7		
Average value of seed cents per pound	60			60		
Bought, 100 percent	60			60		
Grading, sacking, selling percent market value	10			10		
Fertilizer	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
	110	100	50	110	100	50
Usual planting period	March			March		
Usual harvesting period	June			June		
	<u>Labor and power inputs per acre, one-row tractor</u>					
		<u>Total hours</u>			<u>Total hours</u>	
	<u>X Over</u>	<u>Man</u>	<u>Tractor</u>	<u>X Over</u>	<u>Man</u>	<u>Tractor</u>
Flat break	1.0	2.00	2.00	1.0	2.00	2.00
Disk	1.0	1.10	1.10	1.0	1.10	1.10
Lay off rows or bed	1.0	1.30	1.30	1.0	1.30	1.30
Harrow	.3	.12	.12	.3	.12	.12
Plant and fertilize	1.0	1.00	1.00	1.0	1.00	1.00
Cultivate	3.0	3.25	3.25	3.0	3.25	3.25
Irrigate				1.0	5.00	2.00
Total hours preharvest		8.77	8.77		13.77	10.77
Harvest	1.0	19.00		1.0	27.00	
Haul to market	1.0	5.60	5.60 ^{2/}	1.0	7.00	7.00 ^{2/}

^{1/} Five dozen ears per sack.^{2/} Pickup or truck.

Table 17. Sweet corn production and production requirements

	Dryland			Irrigated		
Normal yield, sacks ^{1/}	140			200		
Seed per acre, pounds	7			7		
Average value of seed cents per pound						
Bought, 100 percent	60			60		
Grading, sacking, selling percent market value	10			10		
Fertilizer	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
	110	100	50	110	100	50
Usual planting period	March			March		
Usual harvesting period	June			June		

Labor and power inputs per acre, two-row tractor

	X Over	Total hours		X Over	Total hours	
		Man	Tractor		Man	Tractor
Flat break	1.0	1.40	1.40	1.0	1.40	1.40
Disk	1.0	1.00	1.00	1.0	1.00	1.00
Lay off rows or bed	1.0	.75	.75	1.0	.75	.75
Harrow	.3	.12	.12	.3	.12	.12
Plant and fertilize	1.0	.50	.50	1.0	.50	.50
Cultivate	3.0	2.00	2.00	3.0	2.00	2.00
Irrigate	1.0	5.00	2.00	1.0	5.00	2.00
Total hours preharvest	2.0	5.77	5.77	2.0	10.77	7.77
Harvest	1.0	19.00	10.10	1.0	27.00	6.30
Haul to market	1.0	5.60	5.60 ^{2/}	1.0	7.00	7.00 ^{2/}

^{1/} Five dozen ears per sack.^{2/} Pickup or truck.

Dieldrin at \$8.65 per cwt. and lindane at \$7.60 per cwt.

Pickup or truck.

Table 18. Cantaloupe production and production requirements

	Dryland		
Normal yield, bushels	120		
Seed per acre, pounds	2		
Average value of seed dollars per pound	2.25		
Bought, 50 percent	1.50		
Home grown, 50 percent	.75		
Insecticides, dust, pounds ^{1/}	5.0		
Fertilizer	N	P ₂ O ₅	K ₂ O
	20	40	20
Usual planting period	April		
Usual harvesting period	July		

	Labor and power inputs per acre					
	One-row tractor			Two-row tractor		
	X Over	Total hours		X Over	Total hours	
	Man	Tractor		Man	Tractor	
Flat break	2.0	4.00	4.00	2.0	2.66	2.66
Disk	1.0	1.10	1.10	1.0	.60	.60
Distribute fertilizer	1.0	1.00	1.00	1.0	.60	.60
Plant	1.0	7.50	2.00	1.0	7.50	2.00
Side dress	.3	.30	.30	.3	.30	.30
Cultivate	4.0	4.00	4.00	4.0	2.00	2.00
Hoe and thin	1.0	12.00		1.0	12.00	
Dust	2.0	2.00		2.0	2.00	
Total hours preharvest		31.90	10.40		27.66	6.16
Harvest	10.0	16.00	5.00	10.0	16.00	5.00
Haul and market	10.0	5.00	5.00 ^{2/}	10.0	5.00	5.00 ^{2/}

^{1/} Parathion at \$8.65 per cwt. and lindane at \$7.60 per cwt.

^{2/} Pickup or truck.

Table 20. Cucumber production and production requirements

Table 19. Cabbage production and production requirements

Normal yield, pounds	<u>Dryland</u>		
Normal yield, pounds	10,000		
Plants per acre	12,000		
Average value of plants dollars per 1,000	2.25		
Insecticides, dust, pounds ^{1/}	50		
Fertilizer	<u>N</u> 30	<u>P₂O₅</u> 60	<u>K₂O</u> 30
Usual planting period	February		
Usual harvesting period	May - July		

	Labor and power inputs per acre					
	One-row tractor			Two-row tractor		
	X Over	<u>Total hours</u>		X Over	<u>Total hours</u>	
	Man	Tractor	X Over	Man	Tractor	
Flat break	1.0	2.00	2.00	1.0	1.33	1.33
Disk	1.0	1.10	1.10	1.0	.60	.60
Harrow	1.0	.40	.40	1.0	.40	.40
Bed and fertilize	1.0	1.10	1.10	1.0	.60	.60
Set plants	1.0	10.00	2.00	1.0	10.00	2.00
Cultivate	4.0	4.00	4.00	4.0	2.00	2.00
Hoe	1.0	16.00		1.0	16.00	
Poison	3.0	<u>2.00</u>		3.0	<u>2.00</u>	
Total hours preharvest		36.60	10.60		32.93	6.93
Harvest	4.0	25.00	5.00	4.0	25.00	5.00
Haul and market	4.0	5.00	5.00 ^{2/}	4.0	5.00	5.00 ^{2/}

^{1/} -Toxaphene and parathion at \$10.00 per 100 pounds.
^{2/} Pickup or truck.

Table 20. Cucumber production and production requirements

	<u>Dryland</u>		
	10,000		
Normal yield, pounds			
Seed per acre, pounds	3		
Average value of seed dollars per pound			
Bought, 100 percent	1.00		
Insecticides, dust, pounds ^{1/}	5		
Fertilizer	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>
	40	40	40
Usual planting period	April		
Usual harvesting period	June - July		

	Labor and power inputs per acre					
	One-row tractor			Two-row tractor		
	X Over	Total hours		X Over	Total hours	
	Man	Tractor		Man	Tractor	
Flat break	2.0	4.00	4.00	2.0	2.66	2.66
Disk	1.0	1.10	1.10	1.0	.60	.60
Bed and fertilize	1.0	1.10	1.10	1.0	.60	.60
Plant	1.0	7.50		1.0	7.50	
Side dress	1.0	1.00	1.00	1.0	1.00	1.00
Cultivate	4.0	4.00	4.00	4.0	2.00	2.00
Hoe and thin	1.0	12.00		1.0	12.00	
Dust	2.0	2.00		2.0	2.00	
Total hours preharvest		32.70	11.20		28.36	6.86
Harvest	12.0	100.00		12.0	100.00	
Haul and market	12.0	12.00	12.00 ^{2/}	12.0	12.00	12.00 ^{2/}

^{1/} Parathion at \$8.65 per cwt. and lindane at \$7.60 per cwt.

^{2/} Pickup or truck.