

BE-NC-54-2

S N A P   B E A N  
P R O D U C T I O N  
I N  
S O N O M A   C O U N T Y

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## INTRODUCTION:

Sonoma County produced 125 acres of snap beans in 1953. The variety was the Blue Lake and was used for freezing. The quality was good and in 1954 approximately 400 acres will be planted. The 1954 acreage will be used for freezing and canning.

## SOILS:

Snap beans should be planted only on a deep fertile soil. The best yields have been obtained on the river bottom lands where overflow has occurred each year. Most of these soils are classified in the Yolo series. Land selected should be fairly level and well drained as standing water will kill plants.

## IRRIGATION:

In selecting a location to grow snap beans be sure that an adequate supply of water is available. Nearly all of the fields were sprinkler irrigated last year. A crop will require from 5 to 8 irrigations. During the harvest period the beans are irrigated every 7 to 10 days. Individual growers reported labor costs for irrigation ranging from \$8.00 to \$37.50 per acre. Labor costs can be reduced by passing pipe over the wire rather than carrying to end of row.

## SEED BED PREPARATION:

Plow ground early in the spring and leave rough. Two to 3 weeks before expected planting date, disc and allow weeds to germinate. Beans require a soil temperature of 65 to 70° for best germination. Immediately before planting, disc, harrow and float soil for planting.

## PLANTING:

Use 20 pounds of seed per acre which has been treated with 1 1/3 oz. of Arasan and 2 oz. of 25% Lindane <sup>per 100 lbs.</sup> These chemicals will reduce damage caused by wireworms, seed corn maggots and seed decay. Plant seed 1 1/2 to 2 inches deep in moist soil.

Two or more planting dates are recommended. A staggered planting will help equalize labor demands. Remember that the processor also has a schedule - work with them in determining your planting dates. The first planting will probably be in May.

Row spacing last year varied from 46 to 96 inches with plants spaced 4 inches apart in row. A 48 inch row seems ideal for good production and fairly efficient use of machine cultivation.

## FERTILIZATION:

Growers last year used 200 - 300 lbs. mixed fertilizer at time of planting. This fertilizer should be placed 4 inches to one side of the seed and 2 inches deeper.

Prior to first picking growers applied nitrogen through the sprinkler system. Additional nitrogen was also added between the second and third pickings. Late application of fertilizer resulted in less returns to the grower. Last year's costs ranged from \$10.00 to \$50.25 per acre.

## CULTIVATION AND WEED CONTROL:

Use cultivation as a means of controlling weeds. Planting into a well and recently prepared seed bed will allow the beans to germinate as fast as the weeds.

COSTS OF PRODUCING SNAP BEANS  
WITH A YIELD OF 7½ TONS PER ACRE

LLOYD HERWOOD, FARM ADVISOR

ARTHUR SHULTIS, EXTENSION ECONOMIST

ITEMS	Sample Costs		Your Costs	
	Per Acre	Per Ton	Per Acre	Per Ton
<b>Land Preparation &amp; Planting:</b>				
Flow Once	\$3.75			
Disc Twice	4.50			
Harrow	1.50			
Float	3.00			
Planting	2.40			
<b>Total</b>	<b>15.15</b>	<b>2.02</b>		
<b>Cultural Labor &amp; Field Power:</b>				
Trellis Work	10.00			
Irrigation 7x @ \$2.50	17.50			
Cultivation 2x Machine	6.00			
Hand Hoeing & Weeding	20.00			
Stringing	30.00			
Pest Control	6.00			
Apply Fertilizer	4.20			
Clean up Field in Fall	11.00			
<b>Total</b>	<b>104.70</b>	<b>13.96</b>		
<b>Harvesting:</b>				
Picking @ 2¢ lb.	300.00			
Supervision of Pickers	81.25			
Haul out of Field	22.50			
<b>Total</b>	<b>403.75</b>	<b>53.82</b>		
<b>Materials:</b>				
Water, Power to Pump 24"	7.00			
Seed 20 lbs. @ 35¢	7.00			
Fertilizer 300 lbs. mixed at planting, 200 lbs.				
NuGreen in water	30.00			
Pest Control 120# @ 8¢	9.60			
String & Props	35.00			
<b>Total</b>	<b>88.60</b>	<b>11.82</b>		
Overhead	40.00	5.33		
<b>Total Cash Costs Except Rent</b>	<b>652.20</b>	<b>86.95</b>		
Land Rent	75.00	10.00		
<b>Total Costs</b>	<b>727.20</b>	<b>96.95</b>		

Labor costs above are figured at the following hourly rates: man labor except harvesting at \$1.00, tractor 2.00, truck 2.00. Tractor and truck rates are supposed to cover repairs, depreciation and other overhead costs.

Front mounted equipment is a must for efficient machine cultivation. While plants are small the weed knives may be spaced only a few inches apart. Behind the weed knives mount a very shallow shovel to remove weeds between the rows and to move soil back around base of plant. Use only shallow cultivation in your bean field.

Some hand hoeing will be necessary but keep to minimum as it is expensive. The importance of weed control is shown by the 1953 costs which ranged from \$12.00 to \$134.80 per acre.

### PEST CONTROL:

Diabrotica, aphids, cutworms, red spider, and whiteflies are insects which may attack bean fields. Last year dusting with 30 - 40 lbs. per acre of 10% D.D.T. and 75% sulfur gave satisfactory control of insects attacking beans.

Bob Sisson, Entomologist in your local Farm Advisors Office, will prepare a circular on insect control prior to planting.

### STRINGING:

Don't be in a hurry to string. The use of tools are restricted once the field has been strung. Growers last year believed that extra labor spent for training after stringing was wasted. The string should be placed between 10 and 12 inches apart. Lower top wire until it is at a convenient height for stringers. Use a heavy paper string for the lower string.

Place extra supports underneath the top wires before they begin to sag. It will require about two extra supports between each hop pole.

## HARVESTING:

Harvesting is the most important factor in snap bean production. Harvesting costs will represent over 60% of the total costs. Five pickers per acre are required as the field must be picked on a 3 - 5 day schedule. Mature beans must be picked or else future yields will be reduced. This is particularly important at the first picking when the beans are scattered and set low on the plants.

The costs of supervision at picking ranged from \$5.00 to \$10.00 per ton. Careful instruction and supervision is needed so that pickers won't "strip pick" which will reduce yields at the next picking.

The importance of quality is well demonstrated by some figures presented by Mr. Martinelli at the 1954 Vegetable Conference. Beans are graded into six sizes. The smaller sizes 1, 2, 3 were sold for \$165 per ton. Number 4 beans were sold for \$125 per ton. Number 5 brought \$90 per ton. The number 6 bean was sold for \$60 per ton. A ton of 1, 2, 3' will return \$115 above picking costs (\$40 picking labor, \$10 supervision) to the grower. The same ton of beans if allowed to mature to a 6 grade will weigh  $4\frac{1}{4}$  tons. The picking costs will be \$225 and the return to the grower above picking costs will be \$45.

Learn from your processor what a number 4 bean looks like. A number 4 bean will return more money per acre than any other grade.

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