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4. **Phaseolus vulgaris L.)**

4.1. **Phaseolus vulgaris L.)**

Phaseolus vulgaris L.) is a legume species that is widely cultivated in the world. It is a member of the Fabaceae family. The plant is a climbing or trailing vine, with leaves that are typically trifoliate. The flowers are small and pea-like. The seeds are large and kidney-shaped. Phaseolus vulgaris L.) is a very important food crop, especially in the tropics and subtropics. It is a source of protein and fiber. It is also a source of various nutrients, including iron, calcium, and potassium. The plant is also used for a variety of other purposes, such as for animal feed and for the production of biofertilizers.

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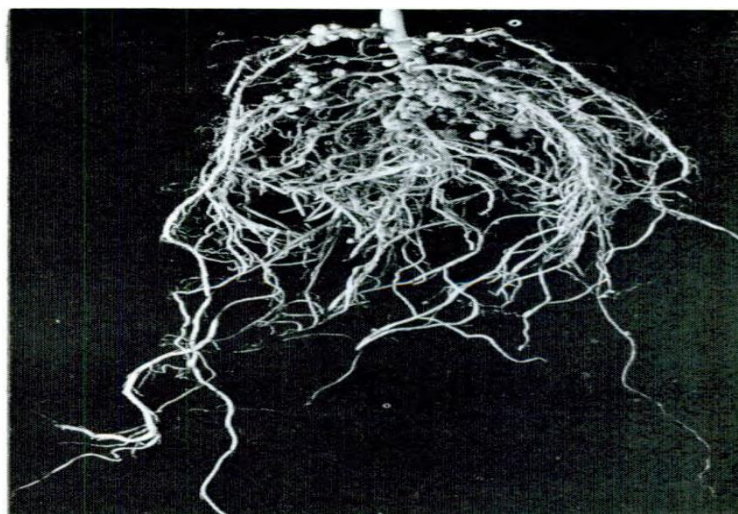
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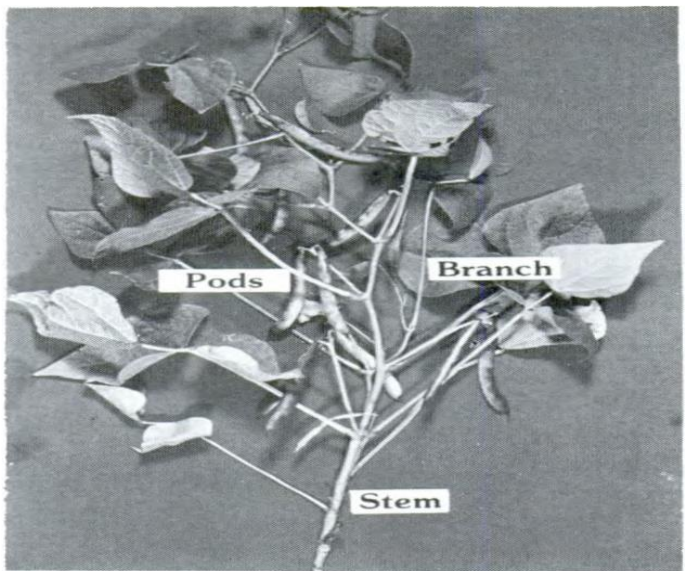


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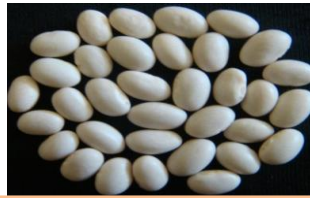


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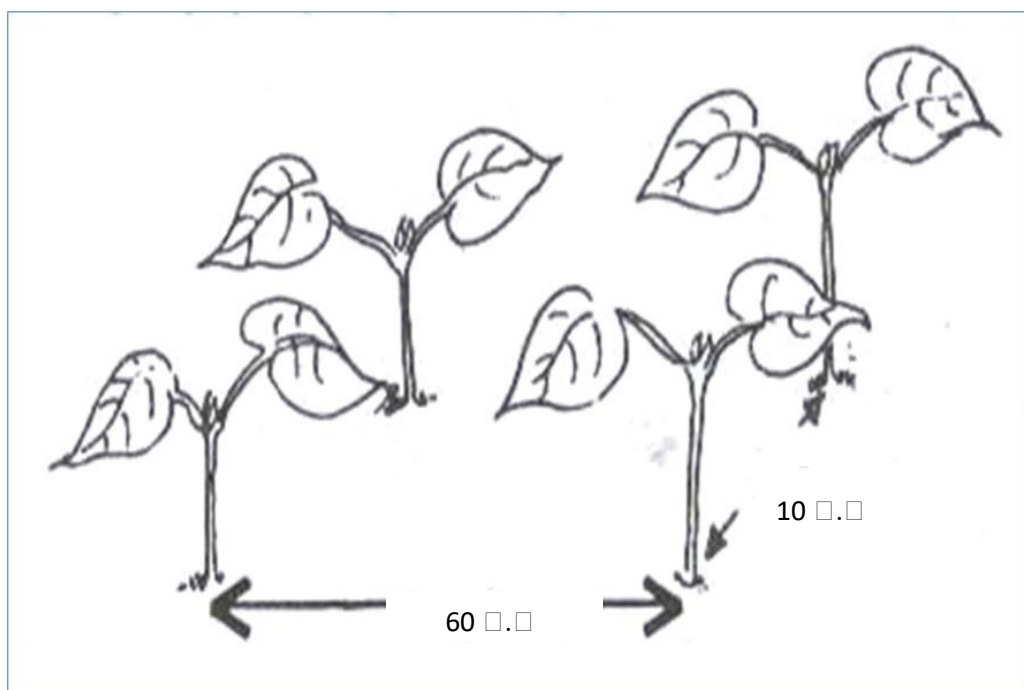


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2	□□□□□ □□□□□	LR=19.5pH ² - 255.3pH + 808.2	0.83* *	52
3	□□ □□	LR=29.7pH ² - 351.7pH + 1038.4	0.95* *	51
4	□□□□□ □□□	LR=7.6pH ² - 97.2pH + 309.5	0.90* *	25
5	□□ □□ □□□	LR=17.5pH ² - 204.6pH + 598.3	0.81* *	50
6	□□□ □□	LR=46.3pH ² - 513.6pH + 1425.1	0.90* *	50
7	□□□□□□	LR=25.2pH ² - 295.7pH + 865.6	0.78* *	283

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3.8	55.4	119.6	130.8	49.9	73.5	142.0	105.8
4.0	46.1	99.0	106.8	42.3	59.9	111.5	86.0
4.2	37.7	79.9	85.2	35.3	47.7	84.7	68.2

4.4	30.1	62.4	65.9	29.0	36.9	61.6	52.4
4.6	23.5	46.4	49.0	23.2	27.4	42.2	38.6
4.8	17.7	32.0	34.5	18.0	19.4	26.6	26.8
5.0	12.8	19.2	22.4	13.5	12.8	14.6	17.1
5.2	8.8	7.9	12.6	9.6	7.6	6.3	9.4
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□□□□□ □□□ (common bacterial blight (*Xanthomonas. axenopodis* **Pv.*Phaseoli***)).

Xanthomonas axenopodis Pv. *Phaseoli*



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豆葉腐爛病 (Halo blight (*P. syringae* pv. *phaseolicola*))

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griseola))

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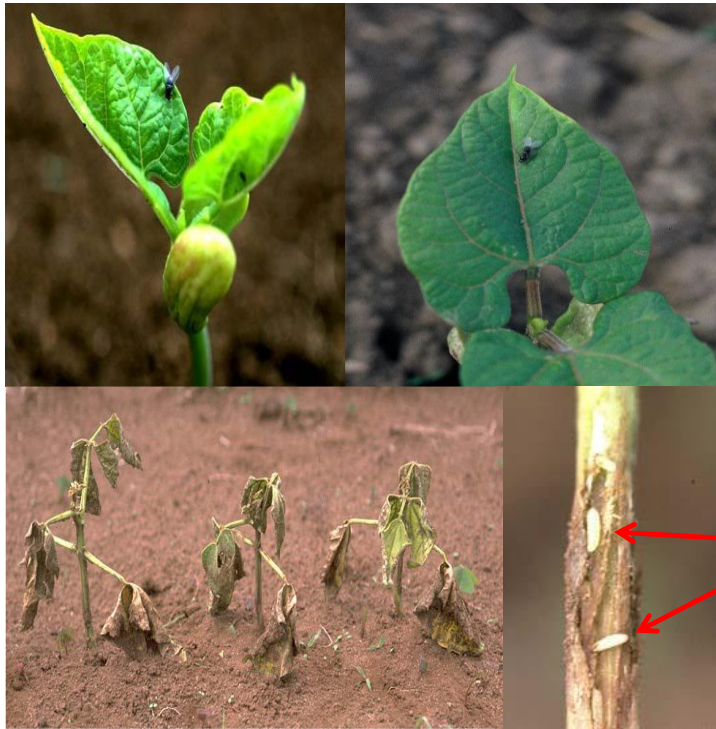
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Maggots in bean stem

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Figure 1. Damage to bean plants by the bean moth.

4.14. Bean - Bean Moth

Bean Moth

Bean Moth is a common pest of bean plants. It is a small, light brown moth with a wingspan of 7-10 mm. The larvae are small, yellowish, and feed on the leaves and pods of the plant. The damage is characterized by small holes in the leaves and pods. The moth is found in the bean fields from July to October. The larvae are found in the pods of the plant. The moth is a common pest of climbing beans.

Bean Moth

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5. **□□ (Vigna radiata (L.) R. Wilczek))**

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5.9. Suitable Irrigation Methods (Suitable Irrigation Methods)

There are three main types of irrigation: Furrow irrigation, Drip Irrigation, and Sprinkler Irrigation. Each method has its own advantages and disadvantages.

Furrow Irrigation (Furrow Irrigation)

Furrow irrigation is a traditional method where water is applied to the soil through long, narrow channels (furrows) between the rows of crops. This method is simple and effective, but it can be inefficient if the furrows are not properly spaced or if the water is not distributed evenly.

Furrow Length (Furrow Length)

The length of the furrows is an important factor in determining the efficiency of the irrigation system. A common rule of thumb is to have furrows that are 5 to 20 meters long. However, the optimal length depends on the soil type, the crop, and the available water.

Furrow Space (Furrow Space)

The space between the furrows (between plant rows) is also a critical factor. For single rows, a furrow width of 40 cm is typically used. For double rows, a furrow width of 60 cm is recommended. The spacing between the furrows should be consistent throughout the field to ensure uniform water distribution.

In addition to the furrow width and length, the spacing between the furrows is also important. For single rows, a furrow width of 40 cm is typically used. For double rows, a furrow width of 60 cm is recommended. The spacing between the furrows should be consistent throughout the field to ensure uniform water distribution.

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6.7 Suitable Irrigation Methods (Suitable Irrigation Methods)

Irrigation methods suitable for different crops and soil types are discussed. Two main methods are highlighted: Furrow irrigation and Sprinkler Irrigation.

Furrow Irrigation (Furrow Irrigation)

Furrow irrigation is a method where water is applied to the soil through long, narrow channels (furrows) between the rows of crops. This method is suitable for crops with long, narrow rows and is often used for cereals and legumes. It is a simple and effective method, but it can be labor-intensive and may not be suitable for all soil types.

Furrow Length (Furrow Length)

The length of the furrows is an important factor in determining the efficiency of the irrigation system. The length of the furrows should be determined based on the crop type, soil type, and the available water capacity of the soil. A common range for furrow length is 5 to 20 meters, with a maximum length of 30 to 50 meters. A length of 100 meters is also mentioned.

Furrow Space (Furrow Space)

The space between the furrows (between plant rows) is an important factor in determining the efficiency of the irrigation system. The space between the furrows should be determined based on the crop type, soil type, and the available water capacity of the soil. A common range for furrow space is 50-60 cm for single rows and 20-30 cm for double rows. A range of 30-40 cm is also mentioned. A space of 60 cm is also mentioned.

Furrow Slope (Furrow Slope)

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1- 6

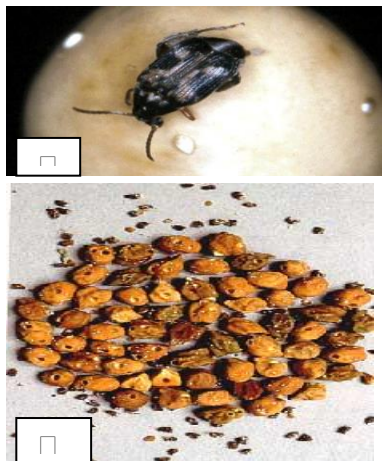
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6.11

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