

# Grapes Cultivation with Stanes products

## Land Preparation and Vine Establishment

Trenches of 75 cm width, 75 cm depth and 118 m length in a north-south direction with a gap of 3 m between trenches are opened with heavy machinery. They are closed with topsoil, up to a height of 45 cm after 15 days exposure to sun.

The remaining gap is filled with a mixture of soil, cattle manure, single superphosphate, sulphate of potash and micro-nutrients. Usually, 50 kg of Stanes Organic manure , 2.5 kg of superphosphate, 0.5 kg of sulphate of potash and 50 g each of ZnSO<sub>4</sub> and FeSO<sub>4</sub> are added to the soil for every running meter length of the trench.

## Spacing

Spacing generally varies with the varieties and soil fertility. For vigorous varieties it is 6 m x 3 m or 4 m x 3 m and 3 m x 3 m or 3 m x 2 m for less vigorous varieties.

## Application of Manure and Fertilizers

While 40 percent of the annual dose is given through organic sources, 60 percent is given as inorganic fertilizer.

Organic sources like Organic fertilizer and **Stanes Bio fertilizers @ @-5 liters per ha ( Symbion NPK and VAM) can be used as an organic sources**

## Pests and their Management

The important pests of grapes are , flea beetles, thrips, mealy bugs and leaf hoppers.

Flea beetles: The adult beetles scrape the sprouting buds and eat them up completely after each pruning. Damaged buds fail to sprout .Bio Insecticides like Nimbecidine ( 5ml/lit) is sprayed from the fourth day until the emergence of leaves.

Thrips: Thrips attack the ovaries of flowers and newly set berries and suck sap from them. The affected berries develop a corky layer and become brown on maturity. Scab formation on the berry surface is also due to thrip damage to the ovaries/young berries. Such berries are not suitable for marketing. Thrips are effectively controlled by spraying of Nimbecidine ( 5 ml/lit) and



Bio-Catch ( 10 ml /lit) . Prophylactic sprays of Bio insecticides against thrips are given once in five days from the initiation of bloom to berry set.



**Mealy Bugs:** Nymphs and adults suck sap from the tender shoots resulting in crinkling and stunting of the new shoots. They excrete honey on leaves and berries and sooty mold develops on the honey. Mealy bug infected bunches are unfit for marketing. Yield losses can be up to 50 percent due to mealy bug damage. Mealy bugs are hard-to-kill insects and the package of practices for their control in India is as follows:

- i) Avoid spraying broad-spectrum insecticides particularly synthetic pyrethroids.
- ii) Spraying of Nimbecidine ( 5 ml/lit) and Bio-Catch ( 10 ml /lit) as a Prophylactic sprays to be given once in five days from the initiation of bloom to berry set.



**Leaf hoppers:** This pest has assumed serious proportions in all grape growing regions of India in recent years. The adults and young nymphs of hoppers suck sap exclusively from the lower side of the leaves. Nimbecidine 5 ml and Bio-Magic 10 ml per lit is found to be more effective on the nymphs



### Diseases and their Management

The important grape diseases are anthracnose, downy mildew, powdery mildew and bacterial leaf spot. In recent years, Alternaria is also becoming a serious pathogen. Spray formulations of Bio-Cure-F ( Trichoderma @ 5-10 ml/l )to control infection of Alternaria, Cladosporium on leaves to delay leaf fall. 1 or 2 sprays at 10 days interval may be given when high humidity prevails



Soil application / spray of Trichoderma during monsoon or rainy periods also be given for reducing the inoculum of pathogens like Alternaria, Cladosporium, Botryodiplodia etc.

Anthracnose is prevalent in all grape growing regions of the country. The disease is characterized by small light brown or greyish black lesions on tender shoots, young leaves, flowers and young berries. Stanes Bio-Cure-B , Bio-Cure-F and Stanes sting are used @h 5-10 ml per lit to control this disease.



**Downy mildew** is the most devastating disease of grapes in the tropical region of the country. The disease mainly appears on the leaves, but also attacks the flower clusters and young fruits. The losses are very high when it attacks the clusters before fruit set. Entire clusters decay, dry and drop down. Nimbecidine ( 5ml) and Bio-Cure-B ( 5ml) and Bio-Dewcon ( 5ml) are used against this disease.



**Powdery mildew** is prevalent in all the grape growing regions. It is next in importance to downy mildew in its devastating severity. The disease is characterized by the presence of white powdery (ash like) coating in patches on both sides of the leaves, young shoots and immature berries. Powdery mildew is controlled easily with Nimbecidine ( 5ml) and Bio-Cure-B ( 5ml) and Bio-Dewcon ( 5ml)



### Leaf bacterial disease

Bacteria infects leaves, shoots and berries. The symptoms appear as minute water soaked spots on the lower surface of the leaves, especially along the main and lateral veins. Mostly these spots coalesce and form larger patches. Severely infected leaves give a blighted appearance. Stanes Bacterimycin at 500 ppm to 1000 ppm ( 0.5 gram to 1 gm per lit of water) is used as a prophylactic spray to control this disease



### Drought Management

During shoot growth, Berry growth and development and Ripening, the water requirement will be maximum. In this period, application of **Green Miracle** at the rate of 3 ml per lit of water as foliar spray will be beneficial to avoid water loss.

This can be applied three times at an interval of 7 days during fruit setting , to have a uniform fruits. Application of Green miracle 2 days before harvest, will enhance the keeping quality of fruits



