

# Hormones and fertilizer for grape vines

Being a highly nutritious fruit, the quality and quantity of grapes produced depend on the type and level of technology used which follow the agronomic practices.

When using hormones, one should be very careful about stage of application and concentration of hormones. Prevent bud breaking by smearing 2% of hydrogen cyanamide on grape trees. All hormones are applied by spraying.

## Hormone application

Hormone solution is applied to last 3 buds using cotton swab where as vegetative growth is regulated by use cycocel which increases chances of fertile buds. Gibberellic acid reduces number of flowers and elongates berries and bunches and hormones like combine, B.A., CCPU increase on berry sizes.

Similarly use CCC and decide amount of flowers retained and use GA3 hormone 3 times. Dont use GA3 if climate amount is cloudy otherwise excessive shedding off of flowers affect the yield. Dont use GA3 for full bloom stage. Combine hormones before 1 month to harvest and to avoid chemical residues in berries. All hormones are applied by spraying.

## Fertilization application

Nutrient requirement depends on variety, soil type, climatic conditions while nutrient dosage decision is based on soil, water leaf analysis and in this avoid unnecessary fertilizer application. Absorption is better if fertilizer is given through irrigation water.

Additionally, N increases vegetative growth and if it is in excess, it produces flowers and hence number of bunches. P is

used for flowers bud initiation and while potash for sufficient flowering and better berry quality. Excessive use of one nutrient affects absorption of others.

Fertilizer absorption is better when applied 2 ft away from vine tree. Use of N in form of Ca, ammonium nitrate after pruning and urea is recommended. However, avoid ammonium sulphide as it adds acidity in soil. Flower bud initiation takes place in 40-45 days after pruning and analyse leaf petiole at this stage to know nutritional status and take corrective measures .

Finally, watering depends on soil type, climatic condition and crop stage. Excessive irrigation lead to fungal diseases.