

# PHYSIOLOGICAL DISORDERS AFFECTING QUALITY PRODUCTION IN ROSES

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Roses are one of the most popular and widely cultivated flowers globally, valued for their beauty, fragrance and symbolic significance. However, rose cultivation can be challenging due to various physiological disorders that can impact plant health, productivity and aesthetic appeal. Physiological disorders in roses refer to

conditions that arise from internal or environmental factors, rather than from pathogens or pests. These disorders can affect various aspects of plant growth and development, including flower production, leaf health, and overall plant vigor.

## 1. Bent neck

Roses develop bent necks when their stems weaken or become blocked, often due to inadequate water uptake, excessive transpiration or vascular issues resulting reduced water and nutrient flow to the flower,

premature senescence and reduced vase life. It can be managed by providing optimum water, maintaining temperature and humidity levels and preventing bacterial growth.

## 2. Bull Head

Bull heads refer to a condition where the flower bud becomes deformed and fails to open properly. Exposure to extreme temperatures, inadequate light or nutrient levels can cause flower bud blast or deformation with reduced

flower quality and quantity. To manage it, extreme temperature, nutrient and light levels should be avoided along with regular monitoring for pests and diseases.

## 3. Balling

Balling is associated with tightly closed petals, failing to open fully. This can be caused by a range of factors, including inadequate light,

high temperatures for humidity. It's management involves adequate maintenance of light, temperature and humidity levels.



## 4. Blind Shoots

Blind shoots in roses refer to shoots which may appear normal but lack flower buds or produce deformed and non-viable buds. The causes of blind shoots include insufficient light intensity and duration, extreme temperatures, nutrient

deficiencies, water stress, hormonal imbalances and root damage. To minimize the occurrence of blind shoots, rose growers should optimize light and temperature conditions.



## 5. Leaf Scorch

Leaf scorch is a physiological disorder characterized by the browning or yellowing of leaf margins and tips. which can result from various environmental and nutritional factors,

like high temperatures, water stress, nutrient imbalances, root damage and low humidity. To prevent and manage leaf scorch, growers should monitor these parameters.

## 6. Leaf Distortion

Leaf distortion in roses refers to abnormal leaf shapes or sizes, which can result from various physiological or pathological factors. Distorted leaves can impact the plant's aesthetic appeal and overall health. Causes of leaf distortion include hormonal imbalances, nutrient deficiencies, pests and diseases, environmental

stress and genetic factors. To address leaf distortion, growers should maintain balanced nutrition, monitor for pests and diseases, optimize environmental conditions, prune affected leaves, and use proper propagation techniques.

## 7. Sticking Buds

In roses, sticking buds occur when flower buds don't properly open or unfold. Causes of sticking buds include hormonal imbalances, nutrient deficiencies and environmental stress. To manage sticking buds, growers should

maintain balanced nutrition, monitor for pests and diseases, optimize environmental conditions and provide proper care and handling.



## Conclusion

Physiological disorders in roses can have a significant impact on plant health, productivity and aesthetic appeal. Understanding the causes and implementing proper management strategies can help minimize the impact of these disorders and promote healthy, thriving plants.

With proper care and attention, roses can thrive and provide a stunning display of color and fragrance, making them a beloved addition to any garden or floral arrangement. For enjoying healthy and productive plants with higher profit.