

## PHYSIOLOGICAL DISORDER

Crop/disorder	Symptoms	Cause	Remarks/remedies
<b>Rose</b>			
Blind shoots	Stem that fails to develop a bud	Low temperature (< 15°C)	Foliar spray of ascorbic acid (1000 ppm) and bending over the stem
Bent neck	Bending of stems of after harvesting	Premature harvesting & excessive water loss	Red Velvet and Sonia (susceptible), First Red (strength neck) cultivar
Bull head	Malformed buds called as Bull Head	Low temperature during night	Maintain optimum temperature (day 21°C and night 17°C)
Balling	The inability of a bud	Sticky petals due to excess moisture	Roses with many petals are more susceptible
<b>Chrysanthemum</b>			
Crooked neck	Bending of neck	Variation in day and night temperature	Maintain optimum temperature
Bronze colour foliage	-	Pb deficiency	-
Crown-bud formation	-	Insufficient light intensity	-
Quelling of florets	-	Boro-n deficiency	
Petal burn			
<b>Gladiolus</b>			
Tip burn	Dis-colouration and drying up of tips	High levels of aerial fluorides	A spray of blitox 50 WP (0.3%)
Geotropic bending of spikes	Spikes show tendency to bend against gravity	Downward movement of auxin	Spikes should be held vertically
<b>Marigold</b>			
Leaf burn	Tips and margins of leaves yellow	Excess B, Mn and Mo	Mn, Mo and B should not be more than 55 ppm, 24 ppm and 3 ppm, respectively.

## INSECT AND PESTS

Crop/Insect	Zoological name	Control
<b>ROSE</b>		
Rose aphid	<i>Macrosiphum rosaeformis</i>	Natural enemies coccinellids, syrphids
Rose sawfly	<i>Arge fumipennis</i>	Spray indoxocarb (14.5 SL) 0.02%
Phytophagous mites	<i>Tetranychus urticae</i>	Phosalone @ 0.02% , Dicofol @0.02%
Thrips	<i>Frankliniella occidentalis</i>	Spray diamethoate (0.03%) at 10 days interval
Greenhouse whitefly	<i>Trialeurodes vaporariorum</i>	Protect the nursery by using nylon nets (200 mesh) for 25-30 days.
<b>CHRYSANTHEMUM</b>		
Aphid	<i>Macrosiphoniella sanborni</i>	Spray imidachloropid (0.02%)
Serpentine leaf miner	<i>Liriomyza trifolii</i>	Spray fipronil (0.03%)
Pea leaf miner	<i>Chromatomyia horticola</i>	Spray fipronil (0.03%)
Cabbage semilooper	<i>Thysanoplusia orichalcea</i>	Spray with fipronil (0.03%)
<b>MARIGOLD</b>		
Red spider mite	<i>Tetranychus sp.</i>	Phosalone @ 0.02% , Dicofol @0.02%
Hairy caterpillar	<i>Diacrisia oblique</i>	Monocrotophos @ 0.01%
<b>GLADIOLUS</b>		
Aphids	<i>Dyseplus tulipae</i>	Spray imidachloropid (0.02%)
Thrips	<i>Taeniothrips simplex</i>	Spray diamethoate (0.03%) at 10 days interval

### INTEGRATED PEST MANAGEMENT

1. Follow crop rotation
2. Grow resistance/tolerance varieties
3. Proper sanitation of field
4. Crop not sown in disease prone areas
5. Soil solarisation
6. Apply natural enemies and biological control
7. Apply pesticide only on ETL level.