

# INTENSIVE Agriculture

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# Production of Virus Free Planting Material in Citrus

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Citrus is one of the important fruit crops and is grown commercially in tropical and subtropical regions of our country. Unfortunately, the citrus industry is facing the challenge of citrus decline, a complex problem caused by several factors viz., cultivar, soil, rootstock, nutrition, management practices, pests and diseases. Among these factors, virus and virus like disease have played a key role in citrus decline and therefore, their management is inevitable because once the plant is infected, it cannot be controlled and becomes destructive.

In citrus more than 15 virus diseases have been reported (Table-1) of which tristeza and greening are wide spread (Table-2). These are responsible for significant losses to most of the commercial cultivars of citrus. Use of virus free planting material, control of insect vectors and sanitation are some of the practices advocated to minimise the risk caused by these diseases. Dissemination of many virus and virus like diseases undoubtedly occur through propagation materials. Foundation block of disease free bud wood source and a clean tree nursery programme is certainly a

Table 1: Virus and virus like diseases of citrus in India.

Disease	Major vector	Organism
<b>A. Primarily vector transmitted</b>		
1. Tristeza (Including seedling yellow strain)	<i>Toxoptera citricida</i> Kirk (Aphid)	Closterovirus
2. Greening disease	<i>Diaphorina citri</i> Kuway (Psylla)	Gracillicutes gram negative Bacteria Virus
3. Vein enation and Woody gall	<i>Toxoptera citricida</i> Krik (Aphids)	
4. Leathery leaf	<i>Aphis gossypii</i>	Probably virus
<b>B. Primarily mechanical transmitted (and also bud transmitted)</b>		
5. Exocortis	No vector	Viroid
6. Infectious variegation	No vector	Virus
7. Multiple sprouting (bud mite)	No vector	Badna virus
8. Mosaic	Aphids	Probably virus
9. Xyloporosis (Cachexia)	No vector	Viroid
<b>C. Primarily bud graft transmitted</b>		
10. Psorosis	Not known, but natural spread reported	Copillo virus
11. Impietratura	Not known	Probably virus
12. Citrus blastomania	Vector not known	Mycoplasma
13. Rubbery wood	Not known	Virus
14. Yellow corky vein	Not known	Virus
15. Leaf curl	Not known	Probably virus

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