### PEST MANAGEMENT DECISION GUIDE: GREEN AND YELLOW LIST

#### Bushy Top on Tobacco

**Bushy Top Virus Chisaka**

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Monitoring</th>
<th>Direct Control</th>
<th>Direct Control</th>
<th>Restrictions</th>
</tr>
</thead>
</table>
| - Transplant early with first rains (October to November) to avoid the disease  
- Keep the field weed-free to prevent aphids which transmit bushy top virus  
- Drenching with systemic insecticide to control vector in the nursery (see yellow direct control column) | - Other relevant crops: cauliflower, broccoli  
- Look for tiny and/or mottled leaves, deformed leaf veins and a bushy appearance at the top of the plant from 4 weeks after transplanting  
- Look for stunted plants in the field once a week  
- Look for presence of aphids on the plants once a week - the virus can not be controlled by pesticides but the aphid vectors can be controlled using chemical insecticides (see yellow direct control column)  
- When aphids are seen in the field start yellow direct controls | - Rogue out and burn or bury diseased plants as soon as you see them to reduce spread of the disease | - Use personal protective equipment when handling and applying pesticides, follow the label recommendations.  
- Do not eat, drink, smoke when mixing or applying pesticides. | - WHO Class II - Moderately Hazardous. Apply the chemical at sowing followed by another drench 45 days after germination. Allow 70 days between application and harvest. |
| | | | | - WHO Class II (Moderately Hazardous) and low dermal and inhalation toxicity. One or two additional applications could be made based on scouting. Allow 21 days between application and harvest. |
| | | | | - WHO Class II (Moderately Hazardous), apply at transplanting only for the direct control in the field. Re-entry interval 1 day |
| | | | | - WHO Class II - Moderately Hazardous. Very toxic bees. |
| | | | | - WHO Class II - Moderately Hazardous. Apply the chemical at sowing followed by another drench 45 days after germination. Allow 70 days between application and harvest. |

**Fields:** Apply Imidacloprid (Confidor 70WG). Dilute 65g in 100L water and apply 30ml (cup no. 30) by drenching around the plant at transplanting. Systemic, neonicotinoid, IRAC Group 4A

**Fields:** Apply Thiamicarb (Actara 25 WG). Dilute 120 g in 100 litres and apply 30 ml of mixture in the planting hole at transplanting. Systemic, neonicotinoid, IRAC Group 4A

---

*Malawi*  
**CREATED/UPDATED:** August 2014; Updated June 2016  
**AUTHOR(S):** Chrissie Mainjeni (Agricultural Research and Extension Trust, ARET), David Kamangira (DARS) & Ronald Chilumpha (Farmers Organisation Ltd) Updated by R. Chilumpha (Farmers Organisation Ltd) & D. Kamangira (DARS)  
**EDITED BY:** Plantwise

Plantwise is a CABI-led global initiative  
www.plantwise.org