

Whiteflies in cassava

Bemisia tabaci



Adult 1 mm whiteflies (photo: CPC D. Bedford)



Immature whiteflies can be easily killed with neem (photo: C. Hetzel UPENN)



White flies underside cassava leaf (photo : CIAT acarvajal)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions
<ul style="list-style-type: none"> Whiteflies transmit viruses, like the plant cassava-mosaic-virus; thus use tolerant cassava varieties, such as Nalumino, Umusungu Use virus-free planting materials from certified providers Avoid, if ever possible, planting tomatoes nearby because they also host whiteflies. Remove weeds because many weeds, such as geranium, are alternative white fly hosts Intercrop with maize or cowpeas because they tend to repel, to a small extent, whiteflies 	<ul style="list-style-type: none"> Plant few tobacco plants nearby because its flowers attract whiteflies and are early indicators for white fly infestation (you find them there first) When cassavas are young, start scouting for whiteflies underside leaves in the mornings or evenings, because early transmission of viruses by whiteflies can cause damage. Scout field for whiteflies starting from the edges towards the middle of the field (visit 30 plants). If, on average, 3 to 5 whiteflies are found per plant and know about frequent cassava virus infections in your area, then you may consider applying direct control measures. If you have no cassava virus infections in the area, the threshold for action is 5 to 10 whiteflies per leaf. 	<ul style="list-style-type: none"> Grind neem seeds or chop <i>Hibiscus</i> leaves, or <i>Tephrosia vogelii</i> (Ububa) leaves, then soak in water for 1 day, add a bit of soap, then spray in the mornings reaching also undersides of leaves (kills only young stages of whiteflies). Chop hot pepper fruits, or chop garlic bulbs, put them into a plastic bag with water and hang them for 1 to 2 weeks. Add a bit of soap, and then spray in the mornings reaching also undersides of leaves. Use yellow or orange sticky paper or plastic sheets as traps (1 per 10 to 20 m²). Ask the agro input suppliers to organise traps. 	<ul style="list-style-type: none"> Chemicals are NOT ALLOWED in areas where cassava leaves are harvested for food, because leaf-picking persons may not know that a field has been sprayed. The chemical listed here might be considered ONLY for cassava tuber production in not accessible fields AND ONLY when cassava virus infections are expected. Otherwise, no chemicals are to be considered; use green direct control instead. Spray early mornings and late evenings, when whiteflies are less active. When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, pre-harvest interval, max number of sprays, restricted re-entry interval. Do not empty into drains. WHO toxicity class II pesticides might not be allowed in local IPM schemes. Always consult recent list of registered pesticides (ZEMA). 	<ul style="list-style-type: none"> Abamectin -based products. Chloride channel activator group of avermectin pesticides. WHO class III (slightly hazardous); p.h.i. 14 d, r.e.i. 3 d, min retreatment 14 d, max 2 sprays per season

Zambia

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