Pod-sucking bugs of cowpea

*Hemiptera* spp.

**SUMMARY:** The pod-sucking bugs are a group of major pests of cowpea in sub-Saharan Africa. They are difficult to control due to their mobility: a single control strategy is unlikely to succeed. An integrated approach that combines cultural practices, such as early planting and fertiliser use, combined with carefully timed insecticide applications can manage the pest.

**KEY SIGNS**

The nymphs and adults of several different species of pod-sucking bugs suck on the sap of the young pods causing them to shrivel and dry prematurely, become deformed and have reduced grain yields.

The shrivelling and drying symptoms can be confused with other stresses such as drought and disease, however, the feeding puncture wounds are a sign of pod-sucking bugs.

The insects can often be found on the pods or under the leaves of cowpeas and other host plants. Pod-sucking bugs feed on a wide range of legumes and are very mobile, which makes them challenging to control. Monitor crops regularly to look for pod-sucking bugs and symptoms such as shrivelling and prematurely dried out pods.

**MANAGEMENT**

**Prevention** – what to do before signs are seen

*Cultural approaches:* Plant resistant cultivars if available.

Plant early to avoid periods of heavy infestation.

Intercropping with sorghum or greengram is reported to help reduce populations and the need for insecticides. To be effective against pod-sucking bugs, intercropping should be used with other management strategies. Intercropping with maize, which is commonly practiced by smallholder farmers, is said to cause an increase in pod damage caused by pod-sucking bugs and therefore is not recommended.

Clean up haulms to prevent the insects from over seasoning in the crop residues.

*Chemical approaches:* Studies have shown that applying phosphorus at 30 kg P/ha significantly decreases the pod-sucking bug population and significantly increases yields.

**Control** – what to do after signs are seen

*Cultural approaches:* During flowering and pod formation, bugs can be collected and killed by hand in small plots.

*Chemical approaches:* IITA reports that cultural controls alone cannot control pod-sucking bugs; 2-3 sprays of insecticides are necessary to obtain a good crop. Pyrethrin-based insecticides can be used to control pod-sucking bugs. Commercial neem products (active ingredient azadirachtin) are also reported to be effective against the pod-sucking bugs. Spray with...
an insecticide once at budding (30 to 35 days after planting), once at full flowering (10 days after first spray) and, if a heavy infestation, spray once during the podding stage (10 days after second spray). Spray early in the morning or late in the evening when insects are active.

**CAUSE**

Pod-sucking bugs belong to the Hemiptera order of insects, which all have piercing, sucking mouthparts. There are several species of pod-sucking bugs in Africa, including the spiny brown bug (*Clavigralla tomentosicollis*), Riportus bugs (*Riptortus dentipes*), the green stink bug (*Nezara viridula*), the tip wilter (*Anoplocnemis curvipes*) and *Mirperus jaculus*. Legumes are host plants of the pod-sucking bugs.

**IMPACT**

Cowpea is an important source of protein in the diet in sub-Saharan Africa. The pod-sucking bugs can cause yield losses between 30-70%. The impact in each country depends on the species.

**DISTRIBUTION**

Pod-sucking insects are distributed throughout Africa.

**FURTHER READING**

Plantwise Knowledge Bank www.plantwise.org/knowledgebank  