

THE SESBANIA SEED-FEEDING WEEVIL

(*Rhysomatus marginatus*)

A natural enemy of

SESBANIA (*Sesbania punicea*)

in South Africa

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DESCRIPTION

Rhysomatus adults are small black beetles (up to 7 mm long) with elongate snouts and a characteristic white border to the elytra (hardened fore wings) and first thoracic segment. They are found on the plants between November and January when seed pods are ripening.

LIFE CYCLE

Adult females lay their eggs in almost fully-developed sesbania seed pods. The females chew holes in the pods and deposit eggs singly, close to, or in, the exposed seeds. The hole is then plugged with regurgitated plant tissue. On hatching, the grubs tunnel into the nearest seed and start feeding. Each grub usually destroys two or three neighbouring seeds in a pod before tunnelling out of the pod and falling to the ground. The grubs then burrow into the soil and form a chamber of compacted soil in which they lie dormant for the winter. In spring they pupate and in early summer adults emerge and burrow to the soil surface before climbing or flying up into the sesbania trees to start laying eggs in the new crop of pods.

FEEDING DAMAGE

Adult feeding causes some damage on leaves, flowers and immature pods, but the greatest impact on the plants is through the grubs feeding on seeds. On average about 80% of the seeds that are set by sesbania each year are destroyed by *Rhysomatus*.

IMPACT ON SESBANIA

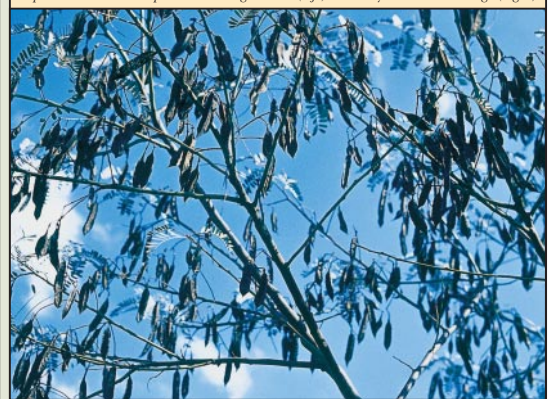
Rhysomatus is acting as an ideal complimentary agent by destroying most of the seeds that develop in spite of the damage caused by the flower-weevil, *Trichapion lativentre*. The combined effect of these two beetles has slowed the rate of spread of sesbania and made other control methods much more effective (because there are few seeds to replace plants that are removed). In a few areas, there has been a decline in the density of the weed due to the combined damage caused by *Trichapion* and *Rhysomatus*. Under the correct environmental conditions, the combined presence of all three sesbania biological control agents can bring the weed under complete control. Under these conditions no other control methods should be required.



Rhysomatus marginatus



Opened sesbania seed pods: undamaged seeds (left) and *Rhysomatus* damage (right)



Sesbania pods in abundance



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ADDITIONAL INFORMATION IS AVAILABLE. PHONE: Weedbuster Toll-free Helpline: 0800 005 376
WEBSITE: PPRI website is located via links from the Agricultural Research Council website: www.arc.agric.za

