

Bidens black jack weed in beans, cotton, potatoes

Bidens pilosa SOKOTELA in Tonga language. NAKASOPYO in Bemba language

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p><i>Bidens pilosa</i> black jack weed (Picture by Chris Parker, CPC)</p>	<ul style="list-style-type: none"> • Manage weeds when they are small to prevent them from establishing and becoming big. • Intercrop maize with beans, as this suppresses the growth of <i>Bidens</i> weeds. • Thick mulches with dry non-weedy plant materials prevent germination of weeds. 	<ul style="list-style-type: none"> • Soybean, cotton, beans, potatoes and maize are the crops that most suffer from <i>Bidens</i> black jack weed. • Early detection and rapid response is needed to avoid seeding of the weed. • Check fields once a week during early crop establishment. Later on, scouting once a month is ok. • To scout, walk in the field in a zigzag pattern, noting areas of low or high <i>Bidens</i> weeds density. • <i>Bidens</i> seedlings have two 2.5 cm strap-shaped first leaves. The weed becomes 20 to 150 cm tall. Dark green, opposite leaves on stems and branches are 4-20 cm long and up to 6 cm wide. The lower leaves are simple, ovate and serrate, the upper leaves have 2-3 leafparts. Some small white or pale-yellow flowers form a flower head. Seeds have two spines. Identify weeds with a weed guide. Or collect samples and consult an agricultural officer. • When you see many <i>Bidens</i> black jack seedlings in a young crop, consider action. • When you see <i>Bidens</i> black jack weeds starting to flower consider control to prevent seed development and thus weed problems the following season. 	<ul style="list-style-type: none"> • Conduct mechanical/manual weeding. 	<ul style="list-style-type: none"> • <i>Bidens pilosa</i> black jack weed is susceptible to many herbicides against broad leaf weeds. However, mechanical control is effective and usually enough to control the weed. • When using a pesticide or botanical, 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 and water sources. • WHO toxicity class II pesticides might not be allowed in local IPM schemes. 	
 <p>Early seedling stage of black jack weed is the right time for control (photo E. Leguizamon, CPC)</p>				<ul style="list-style-type: none"> • Simazine – based products; as selective herbicides to control broad leaved weeds. Applied as post emergence herbicide in grassy crops. Do not spray on non-grassy crops as they will be killed. Application rate is usually between 250-350ml/16 L knapsack sprayer; but double check the product label. • Glyphosate-based products are non-selective herbicides. This means they kill any plant. Therefore it is sprayed before planting or after planting but before crop germination. Trade names are Cycat, Round up, Muscle up, Springbok, Scat, Erase and others. The application rate is usually 250-350ml/16L knapsack sprayer but double check product label. Dinitroaniline pesticide group. 	<ul style="list-style-type: none"> • WHO toxicity class U (Unlikely to present acute hazard in normal use). Restricted re-entry interval r.e.i. 3 days; pre-harvest interval 14 days. Max 1 spray per season. Can accumulate in the environment. • WHO toxicity class III (slightly acute hazardous). 1 spray only. Never spray when crop has emerged. r.e.i. 1 d. Works only when getting into contact with weeds. Sprays on soil do not help. Currently debated for negative chronic effects on humans and animals.
 <p>Prevent growing and spread of weed seeds (photo S.D. Sawant)</p>					



Zambia

CREATED/UPDATED: July 2015

AUTHOR(S): DEMIAN MABOTE NDALAMEI, Zambia Agriculture Research Institute, ZARI, Mt Makulu, Zambia, phone +260211278130

EDITED BY: Plantwise