




Control of *Parthenium hysterophorus* in Sorghum

Parthenium hysterophorus Faramsisa, biya bassa (Oromo), qinche arem (Amharic), kalignole (Somali),

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>Parthenium weed in flower. (Photo by Arne Witt, CABI)</p>	<ul style="list-style-type: none"> • Purchase and sow certified crop and pasture seed to reduce the chance of contamination • Seeds travel on animals and machinery - do not allow animals into an affected area and clean machinery to prevent spread • Use irrigation water from source without the weed to prevent seed introduction 	<ul style="list-style-type: none"> • Additional relevant crops: maize, finger millet • Annual erect broadleaved herb, 0.5-1.5 m high. Leaves pale green and covered with short stiff hairs. Rosette and lower stem leaves deeply divided and large; upper stem leaves are shorter and less divided. White small compact flower heads (about 5 mm across) at the tips of branches, each flowerhead has 5 distinctive "petals". 	<ul style="list-style-type: none"> • Remove plants and the roots and flowering stems before flowering to prevent seed set • Follow up weeding consistently to achieve longer term control • Conduct regular weeding during critical period of weed competition (4-8 weeks after emergence) 	<ul style="list-style-type: none"> • Use of chemical herbicides may lead to the development of herbicide resistance. 	<ul style="list-style-type: none"> • When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.
 <p>Lower stem leaves are deeply divided and large. (Photo by Arne Witt, CABI)</p>	<ul style="list-style-type: none"> • Prevent water runoff from infested land to non-infested land • Maintain a regular weeding regime in crops (general crop sanitation) • Remove parthenium from roadsides, wastelands, field boundaries and other areas that serve as source of infestation 	<ul style="list-style-type: none"> • Regularly check edges of waterbodies, grazing places and vehicle tracks for rosettes • Check for rosettes after periods of rain as seeds depend on high moisture to germinate 	<ul style="list-style-type: none"> • Hand hoeing or pulling when the soil is moist before flowering of the plant • Manual control is high risk, expensive in terms of labour cost, not sustainable and operation stage-bound. Wear long-sleeved clothes, gloves and, if possible, a mask to avoid contact with skin and respiratory tract as Parthenium weed causes allergic reactions 	<ul style="list-style-type: none"> • Application of suitable herbicides like 2,4-D (1-1.5 lt a.i./ha) applied at 1 to 3 weeks after emergence found effective 	<ul style="list-style-type: none"> • 2,4-D: Class II (Moderately hazardous)
 <p>Young rosette of Parthenium weed © Forest and Kim Starr, flickr</p>	<ul style="list-style-type: none"> • Intercropping reduces vulnerability of crops to parthenium weed hazard and guarantees higher yield • Repeated cultivation/harrowing before sowing, use of clean crop seed, competitive varieties that are tall and have high leaf biomass and makes shading, appropriate sowing rate and time and increased amount of fertilizer at sowing 	<ul style="list-style-type: none"> • Check fields for infestation and consider direct control during critical period of weed competition • Check for flowering and seed development to prevent seed set and build up of seed bank 	<ul style="list-style-type: none"> • Use and distribute established biocontrol agents (<i>Zaygogramma bicolorata</i>, <i>simicronyx lutulentus</i>, and <i>Listronotus setosipenus</i>) 	<ul style="list-style-type: none"> • Dicamba (2.8 kg a.i /ha) foliar application • Pre-planting application of Glyphosate (2.7 kg a.i/ha) 	<ul style="list-style-type: none"> • Dicamba: Class II (Moderately hazardous) • Glyphosate: WHO Class III (Slightly hazardous) Should be applied before sowing on actively growing Parthenium

Ethiopia

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