

This does not constitute a formal recommendation. When using herbicides always read the label, and when in doubt consult your farm advisor or county agent.

This is an excerpt from the book *Weed Control in Natural Areas in the Western United States* and is available wholesale through the UC Weed Research & Information Center (wric.ucdavis.edu) or retail through the Western Society of Weed Science (wsweedscience.org) or the California Invasive Species Council (cal-ipc.org).

Peganum harmala

Harmal or African rue

Family: Zygophyllaceae (caltrop)

NON-CHEMICAL CONTROL

<i>Cultural</i> : grazing	P	not palatable to livestock
<i>Cultural</i> : prescribed burning	P	recovery will occur rapidly
<i>Mechanical</i> : mowing and cutting	P	recovery will occur from underground reproductive structures
<i>Mechanical</i> : tillage	P	roots will fragment and recover
<i>Mechanical</i> : grubbing, digging or hand pulling	G	roots must be removed or new plants will form

CHEMICAL CONTROL

The following specific use information is based on published papers and reports by researchers and land managers. Other trade names may be available, and other compounds also are labeled for this weed. Directions for use may vary between brands; see label before use.

2,4-D	NIA	Imazapic	NIA
Aminocyclopyrachlor + chlorsulfuron	NIA	Imazapyr	E
Aminopyralid	NIA	Metsulfuron	E
Chlorsulfuron	NIA	Paraquat	NIA
Clopyralid	NIA	Picloram	NIA
Dicamba	NIA	Rimsulfuron	NIA
Glyphosate	F-G often mixed with 2,4-D	Sulfometuron	NIA
Hexazinone	E also tebuthiuron	Sulfosulfuron	NIA
		Triclopyr	NIA

E = Excellent control, generally better than 95%

G = Good control, 80-95%

F = Fair control, 50-80%

P = Poor control, below 50%

Control includes effects within the season of treatment.

Control is followed by best timing, if known, when efficacy is **E** or **G**.

***** = Likely based on results of observations of related species

FLW = flowering

NIA = No information available

Fa = Fall

Sp = Spring

Su = Summer

RECOMMENDED CITATION: DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California. 544 pp.