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## Skeleton weed in Western Australia: Management Guide

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Department of  
**Primary Industries and  
Regional Development**



Grains, Seeds and Hay  
Industry Funding Scheme

# **Skeleton weed in Western Australia**

## **Management Guide**



**Early detection is  
the best prevention**

Copies of this document are available  
in alternative formats upon request.

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Skeleton weed flower

Photo credits:

Ohio State Weed Lab, the Ohio State University; Theodore Webster, USDA Agricultural Research Service; Joseph M. DiTomaso, University of California Davis; Bruce Ackley, the Ohio State University; Harry Rose; Dan Tenaglia, Missouriplants.com; DPIRD, Western Australia.

# Introduction

**Skeleton weed is a declared plant which can reduce crop yields by competing for moisture and nutrients (mainly nitrogen).**

This Management Guide has been designed to assist landholders and increase their capacity to manage and eradicate skeleton weed infestations on their properties and to prevent further spread within the State.

Without the coordinated program aimed at controlling spread, skeleton weed would now be much more abundant and widely established throughout the cereal growing areas.

## Declaration categories and management implications

Skeleton weed is declared under section 22(2) of the *Biosecurity and Agriculture Management Act 2007*.

Category	Area	Implications
<b>C2</b>	Whole of the State except Narembeen and Yilgarn	<ul style="list-style-type: none"><li>• Eradicate infestations; destroy plants and prevent propagation each year, until no plants remain</li><li>• Prevent the spread of seed or plant parts</li><li>• Summer search is required</li><li>• Winter control is required</li></ul>
<b>C3</b>	Narembeen and Yilgarn	<ul style="list-style-type: none"><li>• Manage infestations to prevent the spread of seed or plant parts</li><li>• Summer search is required</li><li>• Treat plants to prevent seed set</li><li>• Winter control is required to receive search assistance</li></ul>

# The Grains, Seeds and Hay Industry Funding Scheme

The Grains, Seeds and Hay Industry Funding Scheme (GSHIFS) is overseen by a seven-member Industry Management Committee (GSHIMC). These are comprised of producers and others with an interest in the industry. The GSHIMC meet in person, quarterly. The purpose of the committee is to support a profitable, viable and sustainable industry by maintaining an industry-driven funding process for the effective mitigation of biosecurity risks to the WA grain, seed and hay industry.

The GSHIMC approves funding for both the Department of Primary Industries and Regional Development (DPIRD) operations and Local Action Groups (LAGs) to deliver operational activities within the approved Operational Program. LAG activities support and complement the work that is currently done by DPIRD.

Visit DPIRD's website: **[agric.wa.gov.au/IFS](http://agric.wa.gov.au/IFS)**





# The Skeleton Weed Program

The Skeleton Weed Program is a coordinated approach to manage skeleton weed in Western Australia. It is delivered by DPIRD under arrangement with the GSHIMC. The Committee acts under the Biosecurity and Agriculture Management Industry Funding Schemes (Grains) Regulations 2010 to manage prioritised pests affecting the grains industry.

**Assistance provided under the program is only available to landholders who contribute to the scheme** through the sale of grain, seed or hay. **Landholders not under the scheme** but who have skeleton weed on their properties **are still required to meet their obligations** under the *Biosecurity and Agriculture Management Act 2007*.

DPIRD Biosecurity staff and LAGs are responsible for the delivery of the program in affected areas, including surveillance, audits, managing infested properties and a reference point for infested landholders.

Visit DPIRD's website: [agric.wa.gov.au/skeletonweed](http://agric.wa.gov.au/skeletonweed)

## Objective

**Assisting Western Australian landholders to eradicate skeleton weed and to prevent its further spread within the State.**

## Strategies

- Improve landholders' ability to find and eradicate skeleton weed.
- Increase landholders' awareness of skeleton weed as a highly undesirable weed.
- Widely publicise descriptions and pictures of skeleton weed to help landholders identify infestations.
- Inform landholders about the most up-to-date techniques available for the management and eradication of skeleton weed.
- Provide assistance with searching and eradication.
- Encourage local grower groups (LAGs) to participate in cooperative surveillance and reporting of infestations.
- Encourage LAGs to assist in the management and eradication of skeleton weed in their local areas.



- Implement practical compliance regimes in affected areas.
- Provide landholders with incentives to report infestations.
- Provision of winter control treatments where landholders are compliant with program requirements.

## Landholder Assistance Program

The program provides assistance to landholders, including:

- Identification of suspected skeleton weed plants.
- Technical assistance and advice for the eradication and/or management of skeleton weed on your property.
- Assistance and advice on summer and winter herbicide application.
- Mapping of infestations.
- Assistance with searching new skeleton weed finds and previously infested paddocks.
- Support from DPIRD and LAG staff.

The Program has very effective management options for eradicating skeleton weed.

The Skeleton Weed Program covers the cost of a Departmental or LAG officer to assist you to manage skeleton weed on your property.



# Information and advice

**Regular communication with your local DPIRD office, LAG and your neighbours is integral to achieving skeleton weed eradication on your property. It is essential to ensure you are aware of all your obligations, and what support the program provides.**

There is a lot of information available to landholders who find skeleton weed on their land, and a lot to remember, too. If you are unsure of what to do, there are several avenues for you to follow.

- **Pest and Information Disease Service:** a DPIRD service, for identification and advice. If confirmed as skeleton weed, Skeleton Weed Program staff will be notified on your behalf.
- **DPIRD officer or LAG coordinator:** your local DPIRD or LAG in the first instance, can assist. You will be issued reference material in a **Landholder Information Pack** (which includes this Management Guide) containing all the information you need to manage and eradicate skeleton weed from your property. Take the time to read it and make a note of any additional questions that come to you later. Officers will also help you map out the best way to manage skeleton weed on your property. Regular communication with DPIRD and/or LAGs is essential to ensure you are aware of all your obligations, and what support the program provides.
- **DPIRD website:** visit for more information about the Industry Funding Scheme, the Skeleton Weed Program, and control recommendations. Most of the information contained in this Management Guide will be available on the website.
- **Neighbours:** neighbour notification is part of your obligations should your property become infested. Neighbours may be able to assist you, and you can share knowledge with others.

**Early detection is the best treatment for skeleton weed – the earlier we can start an eradication plan on your property the better the outcome.**

## Pest and Disease Information Service

The Pest and Disease Information Service (PaDIS) provides advisory and identification services on animal and plant pests, weeds and diseases that impact Western Australia's agriculture and food industries. This service plays an important frontline role for the detection and reporting of unfamiliar and potentially damaging pests, weeds and diseases of agricultural and quarantine concern.

Reports can be phoned in, emailed or via the MyPestGuide Reporter app, available from our website.

**Phone:** (08) 9368 3080 **Email:** [padis@dpird.wa.gov.au](mailto:padis@dpird.wa.gov.au)

**Web:** [agric.wa.gov.au/PaDIS](http://agric.wa.gov.au/PaDIS)

All landholders need to prevent the movement of seed and/or root fragments from their properties in produce (grain, seed and hay), wool, machinery and vehicles.

## Biosecurity Officers

The Department has a dedicated team of program funded project staff who provide support to land managers and LAGs, undertaking operational activities within rural and metropolitan locations.

These include a Compliance Officer, and Quality Assurance Officers to ensure the Program meets its annual Approved Program objectives. Your local Skeleton Weed Biosecurity Officer can assist you or put you in touch with your local LAG Coordinator. Regional office details are located on the back of the Control Program booklet.



If you live in an area where skeleton weed is prevalent, neighbours may be able to assist you.

You may even find yourself in a position to share knowledge with those who have not yet encountered skeleton weed themselves.

## Local Action Groups

A Local Action Group (LAG) is a network of local farmers in a district affected by skeleton weed, who have a shared interest in helping other landholders around them cope with the issues skeleton weed presents. LAGs are designed to provide you with additional local support.

Each LAG applies annually to DPIRD for funds from the approved Skeleton Weed Program budget which is endorsed by the GSHIMC. They aim to promote awareness of skeleton weed, support local landholders with skeleton weed and assist them with management and eradication.

They liaise between landholders and DPIRD to provide input into management of local non-compliance issues and formulate local/ regional strategies to deal with skeleton weed within the framework of the state-wide program. Most LAGs also appoint a LAG Coordinator to work with landholders and in conjunction with DPIRD to undertake operational activities.

LAGs are designed to provide you with additional local support. Office details are located on the back of the Control Program booklet.

There is an extensive local support network for you to call on to assist in identification and control. Your district may have a well-established Skeleton Weed Local Action Group.



# What does skeleton weed look like?

Skeleton weed (*Chondrilla juncea* L.) is a perennial daisy-like plant that develops from a rosette into a sparsely leafed plant up to 1m tall. Erect, branched stems, with little or no foliage, are produced from early October, giving the plant an untidy look. The rosette and the adult plant exude sticky white sap when cut.

## Identification guide

**Rosette leaves** 5-10cm long present hairless barb-like lobes that point backwards towards the centre of the rosette. Appear over winter in clusters due to suckering. A rosette can be sparsely or densely leafed, depending on plant age, soil type and how extensive the root system has become. In late spring, stems form and the rosette usually dies off, though a healthy rosette with a well-established root system may persist well into summer if there is adequate soil moisture.



Rosette leaves vary in shape, but barbed lobes remain a key feature

Summer rain or high residual soil moisture will encourage old rosettes to re-emerge, even after chemical treatment.

**Mature plants** have an extensive root system. The tap root can be over 2m long and the lateral roots can radiate up to 50cm from the main tap root.

The plant develops one or more wiry-branching hairless stems growing up to 1m tall. Stems present stiff, downward-pointing bristles at the base. Leaves, if present, are narrow and elongated. Plants can live for several years; stems dying off in late summer as seeds mature. Summer rain may cause regeneration and further seed production.



Can have prominent leaves along the stem in good growing conditions

Lateral root fragments as small as 5-10mm can generate new plants. These fragments are usually dragged by farm machinery.



**Flowers** are bright yellow and daisy-like with 9–12 petals. Individual flower heads are about 20mm wide.

Flowers appear on short stalks, in the angle between the plant stem or branch and a leaf or bract. They may occur singly or in clusters of two to five flowers.



Each petal has small teeth across its blunt tip

Flowers are found along the full length of the branches and at the tip of the main stem, and appear from December to May.

**Seeds** are arranged in ten or eleven seeds per flower. Each seed is 5mm long, with a white parachute attached to the top (to aid wind dispersal). Seeds are grooved, acting like 'teeth' to catch on wool, hair or fur.

Seeds are fragile and susceptible to mould and bacteria (causing desiccation in unfavourable weather conditions), and predation by insects and birds.

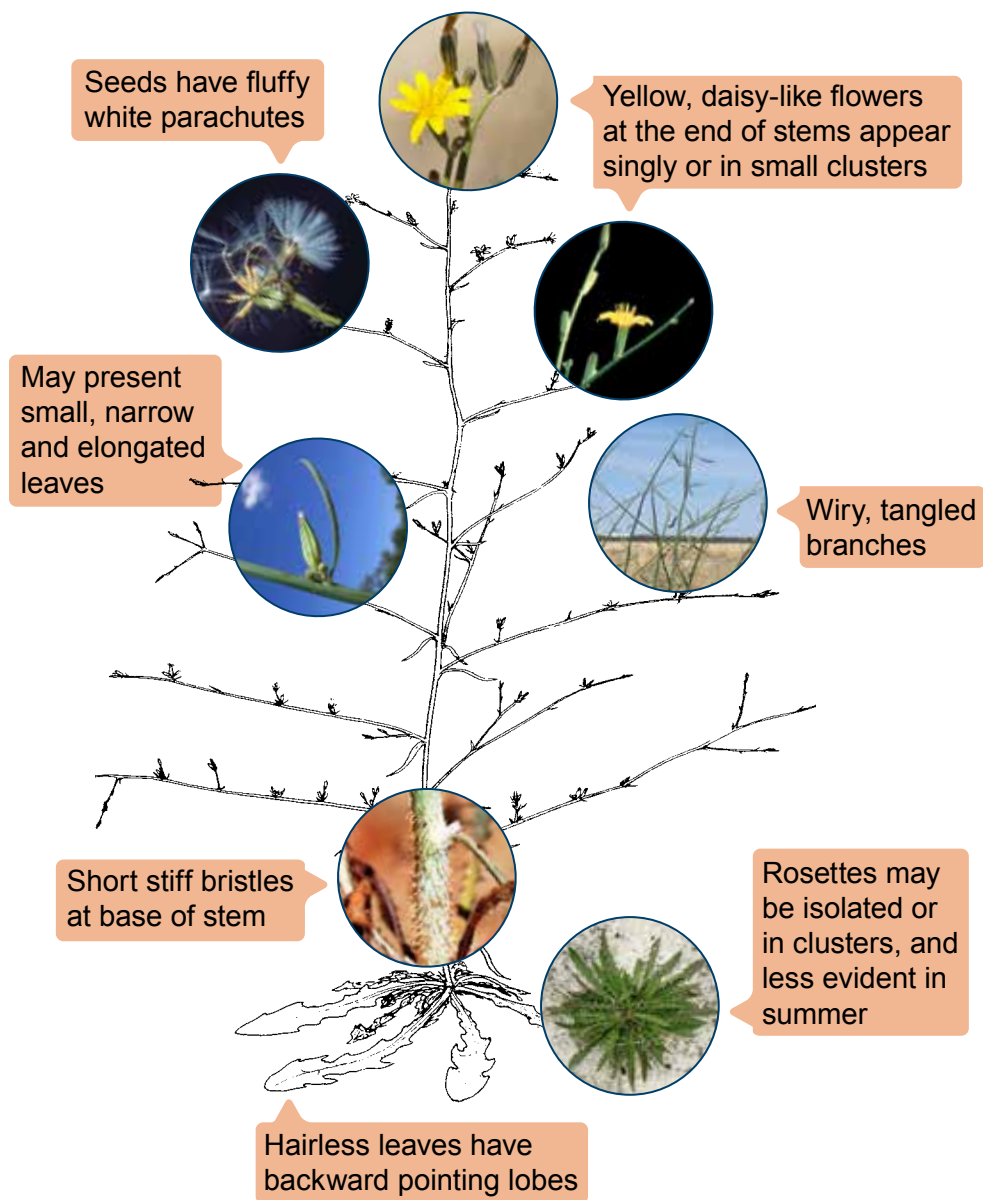
If adequate summer rainfall occurs, seeds germinate quickly, but usually die if there are no follow up rainfall events. If no rain falls during summer and the seed remains viable and survives predation, it will germinate in the following autumn or winter.



A healthy, mature plant produces 10 000 to 20 000 seeds

Seeds rarely survive more than 12 months under field conditions, so there is no long-term seed bank.

## Quick glance of skeleton weed features



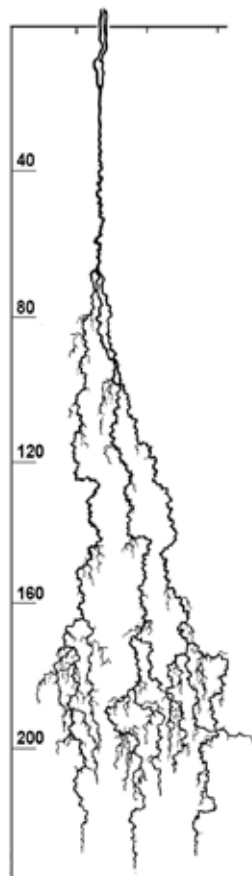


## The skeleton weed root system

Mature plants can have an extensive root system. The tap root can be over 2m long (in sandy soils) and the lateral roots can radiate up to 50cm from the main taproot. The winter treatment aims to get chemical deep down into the soil profile to kill these roots. This is the reason why early detection and treatment of new sightings is most successful by killing the root systems before they establish deeply.



Skeleton weed rosette  
and tap root



*Chondrilla juncea* root system  
(source : Pagès et al. 2004)

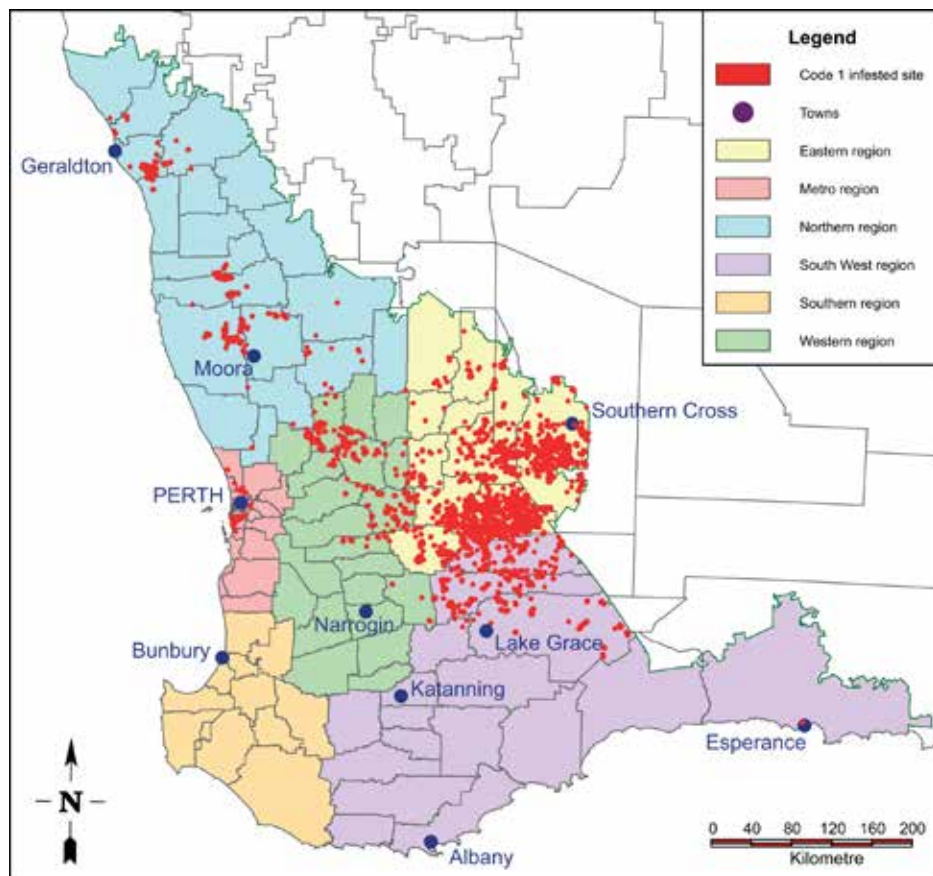
Pagès, L., Vercambre, G., Drouet, J.L., Lecompte, F., Collet, C. and Le Bot, J., 2004. Root Typ: a generic model to depict and analyse the root system architecture. *Plant and soil*, 258(1), pp.103-119.

# Where is skeleton weed found in WA?

Skeleton weed is mainly found in crop and pasture paddocks but can also be found growing in various types of environments including road verges, railway lines, industrial sites, tree plantations and bush areas.

## Distribution

Skeleton weed has been found between Geraldton and Esperance, and Albany, and within the Perth metropolitan area.



## Plants confused with skeleton weed

### Flatweed and smooth catsear (*Hypochaeris* spp.)

Flatweed is a short-lived perennial, and smooth catsear is an annual plant. Hybrids of these two species exist throughout the south of the State.

#### Characteristics:

- fleshy basal rosette with club-shaped leaves and a rounded apex
- simple or slightly branched, semi-erect stem up to 30cm tall
- more than 11 seeds per head that disperse with a parachute of silky hairs.



*Hypochaeris* species have more than 11 yellow petals

### Wild lettuce (*Lactuca serriola* L.)

A biennial plant, seen in townsites, on road verges and in paddocks.

#### Characteristics:

- Stiff, prickly stem up to 1.5m tall
- Stalkless, deeply lobed or toothed, leaves, with spines along upper margins and along the lower midrib
- Pale yellow flowers borne on florets.
- Lower leaves are spiny. Less divided upper leaves held upright in a north-south alignment.



Wild lettuce has deeply lobed leaves

## Prickly lettuce

(*Lactuca saligna* L.)

Prickly lettuce is a biennial herb often confused with wild lettuce. It is common in townsites and around farm buildings.

### Characteristics:

- reaches up to 1–1.5m tall
- very narrow leaves up to 15cm long and free of spines
- flowers are pale yellow
- seeds disperse by air, aided by a parachute of silky hairs



Prickly lettuce grows taller than skeleton weed

## Wild turnip

(*Brassica tournefortii* G.)

An erect annual plant up to 60cm tall.

### Characteristics:

- basal rosette leaves with scattered hairs on the midrib and veins
- plants with one or more stems, with soft, downward-pointing bristles
- small, pale yellow to cream flowers 10-20mm in diameter, with four petals
- elongated and segmented seed pods 7cm long



Wild turnip flowers much earlier than skeleton weed

### Wild mustard, Indian hedge mustard (*Sisymbrium orientale* L.)

An erect annual, sometimes biennial plant, up to 1m tall.

#### Characteristics:

- presents dense, dark foliage on one or more stems, no lasting basal rosette
- arrow-shaped leaves densely covered in imperceptible fine hairs leaves on short stalks along the stems
- yellow flowers 10–20mm in diameter with four petals
- smooth, elongated seed pods 11cm long, splitting lengthways when mature



Seeds are contained in smooth elongated pods

### Wild radish (*Raphanus raphanistrum* L.)

An erect annual plant up to 1m tall.

#### Characteristics:





























- basal rosette with broadly lobed, hairy leaves that die off before maturity
- hairy stems with oblong and toothed or lobed stem leaves
- pale orange or yellow to white flowers, and sometimes lilac, 30–40mm in diameter, with four dark-veined petals
- seed pods are up to 8cm long



Wild radish flowers much earlier than skeleton weed



# Spot the difference chart

	Rosette	Flowers	Leaves	Seeds
Skeleton weed				
Flatweed and smooth catsear				
Wild lettuce				
Prickly lettuce				
Wild turnip				
Wild mustard				
Wild radish				

# Targeted Surveillance Program

**Skeleton weed control requires effective surveillance and monitoring. The earlier skeleton weed is detected, the easier it is to eradicate.**

The effectiveness of skeleton weed control treatments depends on:

- correct location of the skeleton weed in the paddock
- correct identification of the growth stage
- applying the recommended chemicals at the right time
- monitoring the infested sites (particularly over summer) to prevent seed set

DPIRD has been carrying out a targeted surveillance program since 2002 with the objective to find infestations in areas considered a high risk of having skeleton weed. This program also raises awareness of the presence of skeleton weed on high-risk properties.

Surveillance involves checking a minimum of three paddocks over summer (preferably crop stubbles) on each selected property. The aim is to search up to 300 hectares per property.



Surveillance being carried out with two utes with a single person in each



Since 2008 DPIRD has increased its surveillance effort to include areas outside of the known infested areas, in an attempt to properly delimit the true extent of skeleton weed infestations across the Western Australian cereal growing districts. The main focus is in areas of likely spread, for example shires on the western and southern edges of the current infestation areas.

The Skeleton Weed Program is also using a “spread modelling” computer program developed to identify properties with a higher risk of having skeleton weed – thus enhancing surveillance searching.

Since 2019/20, the program has also been using drones to undertake part of the surveillance program. This is progressing well and the aim is to have a larger part the surveillance program undertaken by drones in the near future.

Surveillance helps landholders locate skeleton weed that they may not be aware is present on their property.



Surveillance being carried out with drones limits biosecurity risks













# Searching infested paddocks

- **Landholders with paddocks already on the infested list** will be issued with an **Infested property and paddock record** book for each infested property indicating the paddock infestation status (Paddock Code) i.e. which paddocks require **Full or Surveillance** searching.
  - **Full Search** of all **Code 1** paddocks.
  - **Surveillance Search** of all paddocks adjacent to **Code 1** paddocks from last season.
  - **Surveillance Search** of all **Code 2** paddocks.
  - **Full Search** of **Code 3** paddocks followed by a search audit is required to progress to **Code 4** and release from the infested list.
  - **Remember to inform your local DPIRD office post-search, to allow an audit prior to stock being introduced.**
- **Code 1** paddocks should be searched as soon as possible after harvest. It is advisable to allow 5–10 days before searching harvested paddocks as this will allow skeleton weed plants to grow above the stubble; and ideally in early December, before flowering. Search all current **Code 1** paddocks by **31 December**.
- Search **Code 2 and 3** paddocks and paddocks adjacent to **Code 1** paddocks from last search season (summer) by **31 January** and record details of all searching and plant treatments on your **Infested property and paddock record**. If paddocks adjacent to **Code 1** paddocks from last season are on a neighbouring property, your neighbour(s) are responsible for searching them and also need to record their search activities.
- Regular **monitoring of all paddocks**, infested sites in particular, should be ongoing particularly over summer when plants are actively flowering and setting seed.

All paper records, including property maps indicating paddocks searched and the location of all infestations, must be submitted to your local DPIRD or LAG office by **15 February**. **Audits will be undertaken on 100 percent of all records.**

# Which search method to use?

The diagram below helps to determine which search method and monitoring is required, according to the paddock codes assigned to the infested paddock.

	Full search	Surveillance search	Ongoing monitoring
<b>Code 1</b> paddock infested last season			
Adjacent to <b>Code 1</b> paddock last season			
<b>Code 1</b> paddock New infested paddock this season			
Adjacent to <b>Code 1</b> paddock this season (new find)			
<b>Code 2</b> paddock			
<b>Code 3</b> paddock This must be a Full Search to progress to <b>Code 4</b> and be eligible for release			

## Action checklist for infested properties

This quick checklist will assist landholders in ensuring compliance with responsibilities and obligations

- ☒ Report all suspected skeleton weed finds within 48 hours.
- ☒ If skeleton weed is confirmed, notify all neighbours of the discovery and location of all infestations within five working days.
- ☒ Complete a **Full Search** of all new infested paddocks within 14 days of confirmation.
- ☒ Complete a **Full Search** of all current **Code 1** paddocks by **31 December**.
- ☒ Complete a **Full Search** of all current **Code 3** paddocks by **31 January**.
- ☒ Complete a **Surveillance Search** of all **Code 2**, and all paddocks adjacent to **Code 1** paddocks from last season by **31 January**.
- ☒ Keep the minimum required search and treatment records and submit with property maps by **15 February**.
- ☒ Prevent active movement of skeleton weed by minimising the risk of contaminated produce and equipment moving around and off the property.
- ☒ **Do not cultivate through marked infestations during the first seeding period after discovery of skeleton weed.**



## Paddock codes explained

When skeleton weed is found on a property (usually in summer and autumn), it is referred to as an 'infested property'. Each infested paddock on the property is **assigned a code that signifies a particular stage** in the eradication process.

### Cropping areas

- A current infested paddock becomes a **Code 1** paddock. Infestations are marked with a 10m buffer. This will allow the winter treatment application of picloram based herbicides, as these are highly effective at moving through the soil profile and destroying the plant roots.
- The paddock remains **Code 1** until the pegged infestation(s) has received both a winter treatment **AND** a **Full Search** by the landholder (or Skeleton Weed Program registered contractor) the following summer. If the paddock is found to be reinfested it remains **Code 1** for the next season. If it receives a Clear Search, it progresses to **Code 2**. The entire paddock should then be cropped the following season (**including old, pegged infestation sites**).
- A **Code 2** paddock requires a **Surveillance Search** post-harvest. If no plants are found it becomes **Code 3**. A clear **Full Search** the next summer results in the paddock becoming **Code 4**, and it is released from the 'infested list' of paddock/s on the property. If the paddock is re-infested at any time during this period, it returns to **Code 1** and the process starts over.

### Grazing areas

- The codes for the pasture paddocks remain the same, and the summer searching and winter treatment regimens still apply.
- As there is no cropping, fragments of plants are unlikely to be moved and re-established, so spread is **generally only by seeds**.
- However, **two additional surveillance searches are required** once the paddock becomes a **Code 4** paddock. In essence, five (5) consecutive clear searches are required for non-cropping paddocks.
- **This mainly applies to areas west of Gingin, Moora and Geraldton.**

**Table 1: Skeleton weed paddock codes**

Current paddock code status	Status description
<b>New</b>	<b>Newly infested paddock</b> Previously un-infested paddock where plants are found this search season
<b>Code 1</b>	<b>Currently infested paddock</b> Plants found <b>last</b> search season
<b>Code 2</b>	<b>First clear search</b> No plants found <b>last</b> search season
	<b>Re-infested Code 2 paddock (reverts to Code 1)</b> Plants found <b>this</b> search season
<b>Code 3</b>	<b>Second consecutive clear search</b> No plants found <b>last two</b> search seasons
	<b>Re-infested Code 3 paddock (reverts to Code 1)</b> Plants found <b>this</b> search season
<b>Code 4 *</b>	<b>Third consecutive clear search</b> Paddock can be released from 'Infested list'
<b>Code 5 **</b>	<b>Surveillance Search</b> No plants found

\*Code 4 paddocks require a 'paddock audit' by DPIRD or LAG staff before release from the infested list.

\*\*Paddocks that are not infested, but where a Surveillance Search is undertaken, are recorded as Code 5 paddocks on the Infested property paddock records.

**Table 2: Skeleton weed winter treatment**

Type	Description
Infested squares	Mapped (dGPS) areas within the paddock that are currently infested with skeleton weed.
Heavily infested paddocks	Defined paddocks that are more than 10% infested across the paddock area.

# Search Protocols

This summary of search protocols outlines the steps and the search methods for searching infested paddocks. A more comprehensive list is provided to landholders.

- Searching while harvesting or spraying **is NOT a Full Search.**
- Paddocks should be livestock-free at least **four weeks before searching.**
- Allow 5–10 days before searching harvested paddocks; this will allow skeleton weed plants to grow above the stubble.
- Search paddocks as early as possible after this period and ideally search **Code 1** paddocks in early to mid December **before plants begin flowering.**
- Keep stubble to a maximum height of 45cm to enhance searching and limit the fire risks (particularly in heavy stubble or frosted paddocks).
- Always be prepared to find skeleton weed. Ensure all vehicles used for searching are fully equipped with flagging tape, posts and /or drums to mark finds.
- Take a farm/paddock map and pen with you to accurately mark finds as they are found.
- Search speed should range from 10 to 20km/h, depending on stubble density or pasture density.
- Use only elevated cab, diesel-powered vehicles to reduce fire risk.
- DPIRD recommends a minimum of a 400L firefighting unit to be present whilst searching.

## **If plants are found:**

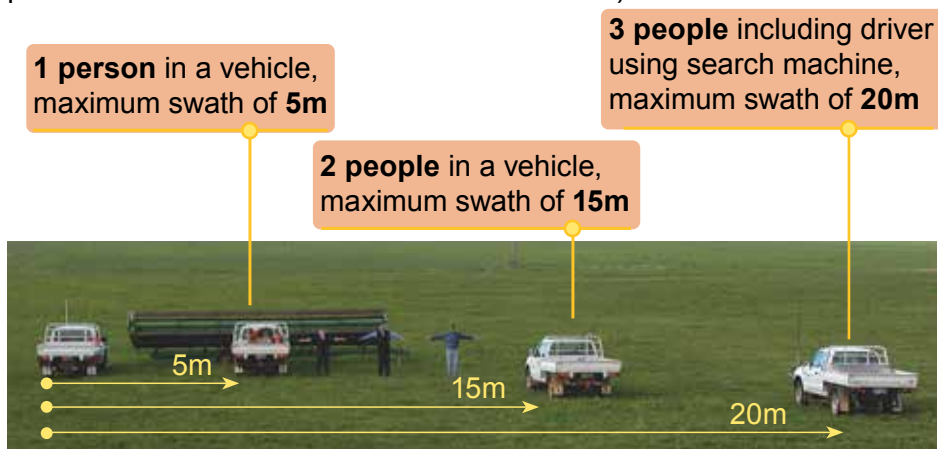
- Stop and search the immediate area on foot.
- Clearly mark all the infested area with flagging tape, drums, spears or steel posts around each plant; or clumps of plants (refer to **How to mark search squares**).
- Clearly mark the infestation on the farm/paddock map.
- Let your DPIRD or LAG officer know – as soon as possible – of the finds and they can advise on the best treatment for your situation. They will also (GPS) map the infested areas and list them for the Winter Spraying Program.



# How to do a Full or Surveillance Search

## Full Search

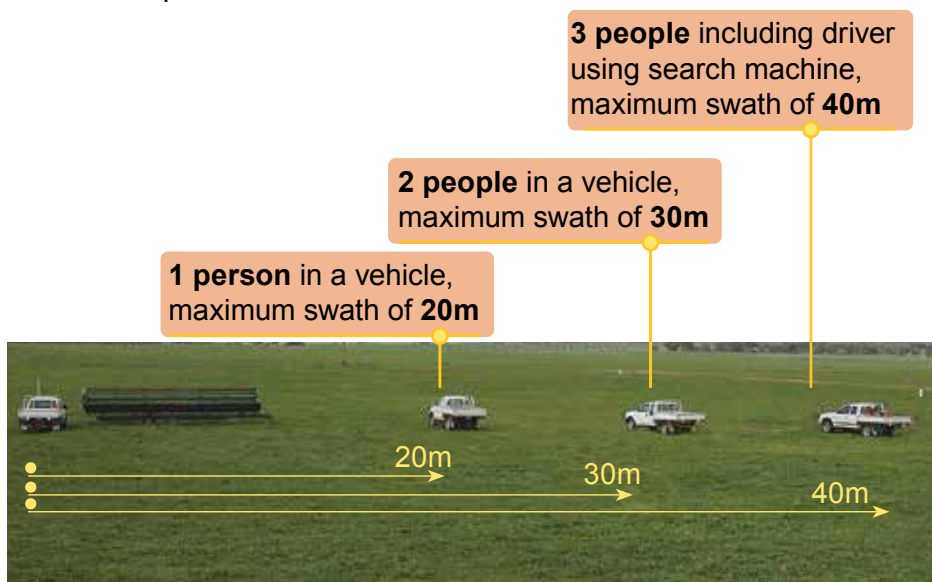
These protocols are applicable to all **Code 1** paddocks and **Code 3** paddocks due for release from the infested list).



## Surveillance Search

Applicable to **Code 2** paddocks and paddocks adjacent to:

- **Code 1** paddocks from last year
- **New find** paddocks.



## How to mark search 'squares' (single and multiple finds)

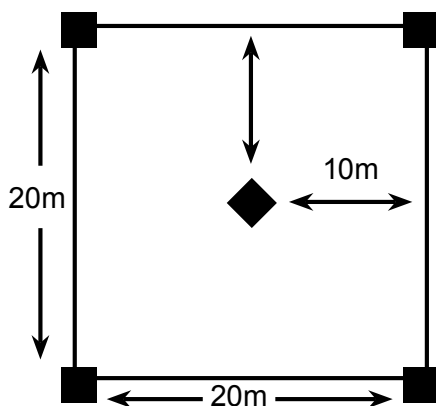
Square sizes will depend on the number of plants found in the paddock.



Marking a single plant find square on a paddock

### Single plant find

- Mark the plant(s) using flagging tape, a star picket or a drum.
- Search thoroughly to ensure there are no other plants and step out a 10m buffer in all directions as shown.
- Where adjoining squares with single plants are within 50m of each other, combine the squares into one large square (while keeping a 10m distance between each individual plant and the edge of the square).
- Place star pickets or drums in each corner of the square.
- Mark the find on a farm/paddock map and submit with a Record Sheet from your **Infested property and paddock record** to your local DPIRD or LAG office by **15 February**.

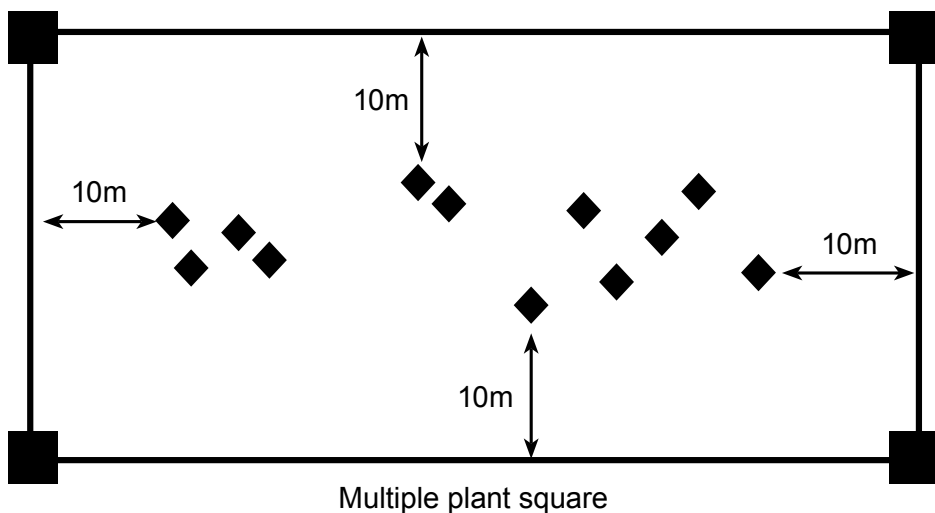


Single plant square 0.04ha

## Multiple plant find

- Where the site contains multiple plants, search thoroughly to locate the extremity of the infestation and mark using flagging tape, star pickets or drums. Step out a 10m buffer from the outermost plants, as shown above.
- Place star pickets or drums in each corner of the square.
- Mark the find(s) on a farm/paddock map and submit a Record Sheet from your **Infested property and paddock record** to your local DPIRD or LAG office by **15 February**.

All marked squares will be dGPS mapped by the Searching contractor or your local DPIRD or LAG officer. Landholders will be provided with detailed maps showing infested squares and paddocks after the summer search.



## Recording search results (paddock records)

Infested landholders are issued with **Infested property and paddock record** books. Individual sheets are to be completed and returned to your local DPIRD or LAG office as a record of landholder searching efforts. Data is collated and entered onto a database which assists with our annual reporting to grain growers. More recently, **database generated Infested property and paddock record** sheets will be issued to some landholders.

**Paddock records must be completed, signed, and returned by 15 February.**



# Sample form of an Infested property and paddock record.

**Skeleton Weed Program**  
**Property and paddock records**

Property number: 1161000

Owner/occupier: A Grower & Co.

Season: 2021 / 22

Paddock number / name	Paddock area (ha)	Search date	Search method F or S	Paddock code last season	Paddock code this season	New find (Y)	Approx. number of plants	Number of infested squares	Estimated infested area (ha)	Chemical / treatments used	Comments (C) for Contractor search or (L) for Landholder search
A1	90	2/12/21	F	1	1		30	2	0.5	Glyph / ester	C
A3	100	2/12/21	F	N/A	1	Y	250	5	1.1	Glyph / ester	C - found during harvest
A2	80	5/12/21	S	N/A	5						L - paddock very bare
B1	85	5/12/21	F	3	4						L - final clear search
E1	200	6/12/21	S	N/A	3						L
Mill	100	5/1/22	F	3	1		50	1	0.7	Spray Seed	L - found while moving sheep
New Land	100	6/1/22	S	2	3						L
Ram	95	6/1/22	S	1	2						L

**Search method** Use (F) for Full paddock search and (S) for Surveillance search

**Paddock codes** 1 – Plants found  
2 – First clear search  
3 – Second clear search

**Comments** Use (C) for Contractor search or (L) for Landholder search

Completed forms to be faxed, posted or emailed to Department of Agriculture and Food by 15 February each year

# Landholder responsibilities

These requirements are legal obligations under the Biosecurity and Agriculture Management Regulations 2013.

## Infested properties

- All paddocks should be monitored throughout the summer and autumn, to increase the chance of detecting (and treating) plants that emerge in the weeks following the **Full Search**.
- Follow required search and treatment protocols once identification is confirmed by DPIRD or LAG staff.
- Notify neighbouring landholders of the skeleton weed finds
- Landholders with skeleton weed infestations are eligible for assistance if a **Landholder Acknowledgment of Obligations for Assistance (LAA)** is signed and returned by **10 December** each year.
- All infestations are to be treated in summer and winter according to **Table 3** in the **Skeleton weed in Western Australia: Control Program** booklet. Landholders must provide a full record of their searching, plus list the summer and winter treatments applied. **Infested property and paddock records** are issued to landholders for this. Paddocks with two consecutive clear searches (**Code 3** paddocks) must be searched following the **Full Search** protocol to qualify for release from 'infested' status. The **Full Search** will be audited by DPIRD or LAG staff.
- For pasture paddocks to qualify for release, at least two of the Clear Searches must have been done in a crop year. If no cropping occurs, two additional surveillance searches are required once the paddock becomes a **Code 4** paddock.





## Neighbouring landholder notification

- As part of this coordinated action, **landholders are required to notify neighbouring landholders** of the presence and location of skeleton weed infestations on their property. This is particularly important, where there is a likelihood the infestation will spread to adjoining properties. DPIRD or LAG staff will undertake this notification if landholders fail to provide notification.

**The Skeleton Weed Program is funded by farmers to help farmers get rid of skeleton weed.**

## Non-infested properties

- Ensure ability to identify skeleton weed plants at various growth stages of development.
- Maintain vigilance for skeleton weed plants during normal operations and particularly at harvest time.
- Mark the location of **any suspected skeleton weed plants** and report the finding to the nearest DPIRD or LAG office.



# Non-compliance

**The focus of the Skeleton Weed Program is to assist landholders to eradicate and/or manage skeleton weed from their property. By following the protocols to manage skeleton weed, landholders ensure the success of the Skeleton Weed Program.**

However, failure to comply with any of the protocols can result in regulatory management, and this applies to both broad acre and urban landholders.

Management of non-compliance can include the following:

## Direction Notices

- The issuing of a Direction Notice under Regulation 36 of the Biosecurity and Agriculture Management Regulations 2013 will require the landholder/manager to complete the nominated search/treatment work as directed and complete and submit fully compliant records to DPIRD within a specified time frame (usually seven days).
- Failure to comply with a Direction Notice will result in the work being carried out by DPIRD under Section 38 of the *Biosecurity and Agriculture Management Act 2007*, with all associated costs being recovered from the landholder/manager.

## Pest Control Notices

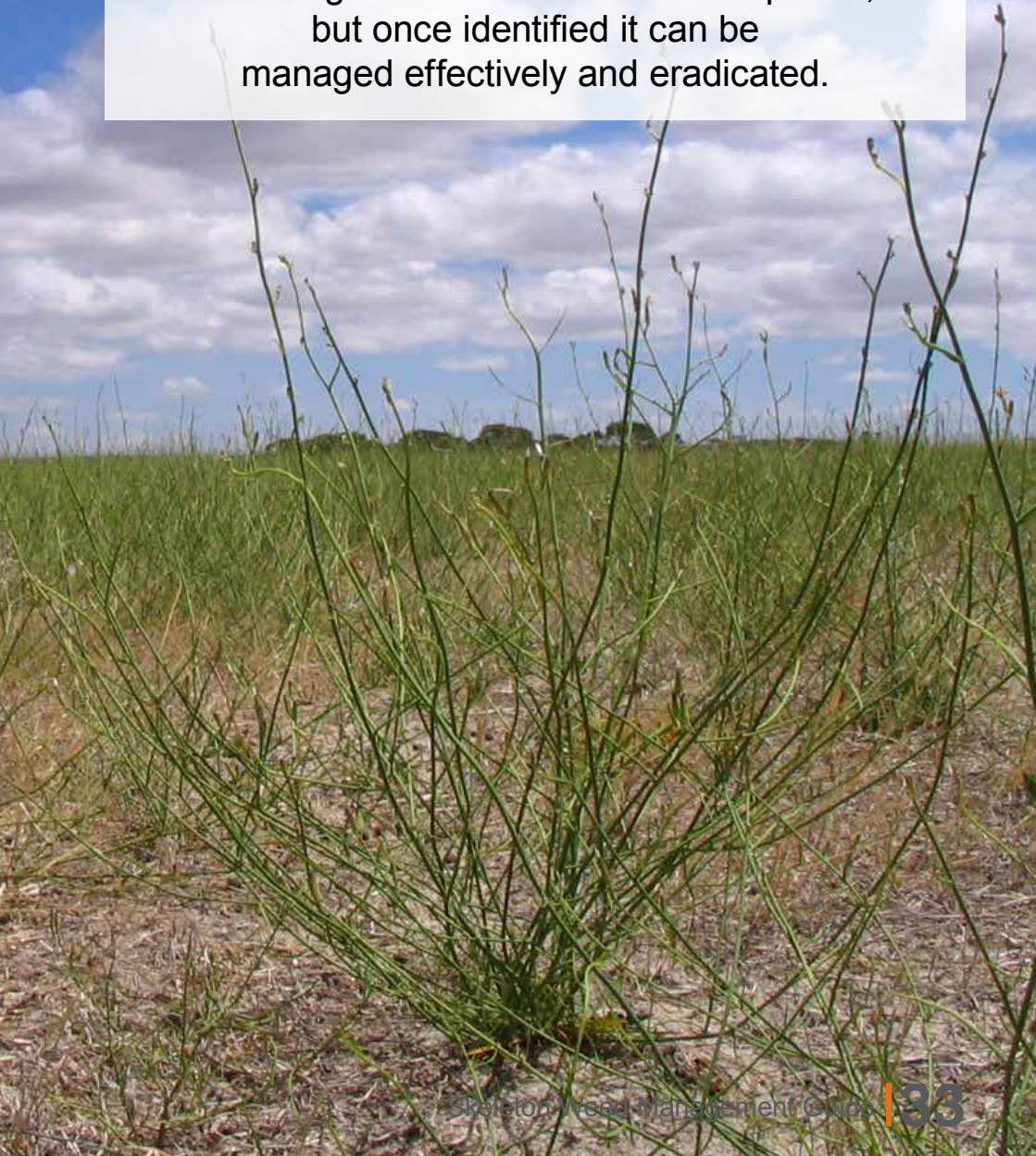
- In the shires where skeleton weed is declared category C2 (Eradication) and C3 (Management), DPIRD can issue a Pest Control Notice (PCN) under Section 31 of the *Biosecurity and Agriculture Management Act 2007*.
- The PCN will require the landholder to treat the land area, described within the notice, with herbicide to prevent seed set and will negate the need to conduct a search.
- **A PCN will only be issued for paddocks with widespread infestations of skeleton weed.**
- Landholders issued with a PCN **will not be eligible** for assistance from the program.

All landholders need to prevent the movement of seed and/or root fragments from their properties in produce (grain, seed and hay), wool, machinery and vehicles.



**If you find skeleton weed on your property,  
we can help you get rid of it.**

Skeleton weed is unpredictable and can spread  
over long distances due to wind dispersal,  
but once identified it can be  
managed effectively and eradicated.



Annual Program changes and control  
recommendation updates are described in the  
enclosed Skeleton weed: **Control Program 2021/22**

P R E V E N T   T H E   S P R E A D

**REPORT  
Skeleton  
Weed**

 **08 9368 3080**



 Department of  
Primary Industries and  
Regional Development

**EARLY DETECTION  
is the BEST PREVENTION**

 Grains, Seeds and Hay  
Industry Funding Scheme