

# ***Chloris truncate***

**Common name – Windmill grass,  
Umbrella grass, Star grass**

**Chloris truncate** (Windmill grass) is native to all mainland States of Australia but not found in the tropical north

It grows in most soil types but prefers red earths and grey clays. It is a vigorous colonising grass becoming a weed problem in some farming areas.



Windmill grass is a biennial or short-lived (2–3 years) perennial grass. It grows in summer, relying on effective spring and summer rainfall for both its leaves and flowers. It grows up to 50 cm under ideal conditions often forming a dense low tussock-like crown with occasional short branched runners (stolons). The stems are erect and tufted often with rooting on the lower nodes producing the stolons. The leaves are short, pale green or blue green, with an abrupt taper at the tip (boat shaped). They are narrow, 50–140 mm long and 1–5 mm wide. New leaves are folded

## **Flowers**

Windmill grass flowers from winter into summer. In grasses, the flowering unit is called a spikelet. It is made up of a number of parts including husks (petals) and florets (small flowers that produce the seeds). These florets have a number of bracts, the lowest, the lemmas, usually have awns or bristles growing out of them.

In Windmill grass, the seed stalks have very distinctive 6–9 windmill-like spikes radiating from the end of a stalk with minute spikelets arranged along the spike in two rows. Each spikelet has two tiny florets attached directly to it. Florets mature into seeds, turning from green to purplish when mature and to black when ripe. Windmill grass is a prolific seed producer with up to 20,000 seeds per plant.



## **Seed Heads**

Seeds are spread by the wind breaking the mature spikes from the plant. The spikes are then blown until blocked by a fence or vegetation.

Maximum germination is 7 months after seed maturity, but up to 30% of seeds can germinate immediately after maturity. Seedlings emerge from shallow depths (0–2 cm), and will not germinate if buried. The seeds remain viable for only 12 to 18 months in an average year.

The grass spreads by both seed and stolons (runners). Windmill grass is considered a good colonising species. As the seedlings germinate on the surface or at shallow depths, the grass is well suited to no-till systems.

Unfortunately, Windmill grass is a significant weed in some farming areas. Large windmill grass plants are very difficult to control and populations of this grass have developed high tolerance to glyphosate. Modelling shows that the spread and density of this weed could increase with predicted climate changes, making it an ongoing problem in many cropping areas.