

Napier subterranean clover

Trifolium subterraneum subsp
yanninicum

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Pasture type and use

A new late maturing disease resistant *yanninicum* cultivar of subterranean clover (*Trifolium subterraneum* subsp *yanninicum*) intended as a replacement for the cultivars Larisa and Meteora. Most suited to long growing seasons and winter wet soils.

Origin

Derived from a cross of a Greek accession and a sister line of Riverina. Field evaluation and selection was undertaken as part of the National Annual Pasture Legume Improvement Program (NAPLIP) under the code YL012.

Area of adaptation

Suited to environments with very long growing season or where the growing season is extended by irrigation. The growing season should extend until mid-late December for adequate seed set and regeneration. Few suitable environments exist in NSW unless under irrigation. More suited to environments in southern Victoria and South Australia.

Minimum average rainfall

Requires a minimum annual rainfall of 750 mm (southern NSW) or late irrigation.

Advantages

- Napier was selected for superior winter and spring production in regions with a long growing season and soils prone to winter waterlogging.
- High levels of hard seed enable it to cope with false breaks better than Larisa.
- Produces significantly higher seed yields than Larisa.
- Seedling regeneration is superior to Larisa, averaging 35% more plants than Larisa in 3rd year.
- Napier produces 5% more autumn feed and 7% more winter feed than Larisa.



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Napier leaf, stipule and flower.

- Late spring production of Napier is 15% greater than Larisa and 46% greater than Trikkala.
- Napier is better able to exploit long growing seasons than Trikkala and its excellent late spring production makes it suited to hay and silage production.
- Napier is a low oestrogen cultivar with formononetin levels similar to Trikkala, Gosse and Riverina, but much lower than Meteora.

Leaf and flower markings

Leaves have a light green crescent extending to the margins. Faint white arms beneath the crescent are sometimes present but fade later in season. Under cold conditions a brown anthocyanin flush extends along the mid rib but this fades later in the season. Stipules can be strongly pigmented (red colouration) under a closed canopy. Flowers are white with no red bands. Petioles and peduncles are weakly pubescent to glabrous (smooth).

Seed

Napier produces large cream to amber seed with an average seed weight of 11 mg. Napier is a high seed



Napier being seed increased in Perth

yielder with its seed bank being 61% greater than Larisa.

Maturity

Flowers in mid to late October at similar time to Larisa, about 2–4 weeks later than Trikkala and 10 days later than Gosse.

Hard seed

Napier is hard-seeded for a late maturing cultivar which are usually softer seeded. Has a similar level of hard seed as Meteora, but more hard seed than other yannincum cultivars. Napier has about 62% hard seed in autumn compared to 36% in Gosse, 45% in Riverina.

Disease and pest resistance

- Napier has good resistance to race 1 of clover scorch, the most widely distributed form of scorch.
- Napier has good resistance to the 3 most widespread races (Race 0, 1 and 3) of *Phytophthora clandestina* root rot. It has much greater resistance than Larisa and Trikkala to Races 1 and 3 which should convey a significant advantage in root disease prone areas.
- Napier is more susceptible than Larisa and Riverina to root rot caused by *Pythium irregulare* and similar to that of Gosse and Meteora. Napier is as susceptible to *Fusarium avenaceum* as Goose and Larisa and is more susceptible than Riverina, Meteora and Trikkala. These levels are unlikely to be of great consequence since these diseases are sporadic and effects vary between seasons.
- Napier is resistant to both *Cercospora* leafspot and leaf rust and appears to have a low level of susceptibility to powdery mildew.
- Napier has a similar susceptibility to red-legged earth mites as other subterranean clover cultivars.

Soil requirements

Similar requirements to most subterranean clovers. Prefers soils with a pH (Ca) > 5.0. Moderately tolerant of soil aluminium (< 15% of CEC). Tolerates poorly drained and winter wet soils.

Inoculation

Requires inoculation with Group C inoculant.

Companion species.

Can be sown alone or with perennial grasses.

Seed production

Napier is protected under Plant Breeders Rights (PBR).

Further reading

See Agfact *Subterranean clover in NSW-identification and use*. www.agric.nsw.gov.au/reader/past-varieties/p2516a.htm

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Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing (April 2004). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up-to-date and to check currency of the information with the appropriate officer of New South Wales Department of Agriculture or the user's independent adviser.

Pasture Improvement Cautions

Pasture improvement may be associated with an increase in the incidence of certain livestock health disorders. Livestock and production losses from some disorders are possible. Management may need to be modified to minimise risk. Consult your veterinarian or adviser when planning pasture improvement.

The *Native Vegetation Conservation Act (1997)* restricts some pasture improvement practices where existing pasture contains native species. Inquire through your office of the Department of Infrastructure, Planning and Natural Resources for further details.

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