



## NZ Forage Systems Fact Sheet

# Persian clover

### Key Points

1. Persian clover is an annual legume suitable for sheep grazing, hay or silage production. Provides valuable high quality feed over late winter to early summer.
2. Recovers well from grazing.
3. Most cultivars are very soft seeded and susceptible to false strikes and are unlikely to re-establish successfully.
4. Very tolerant of water logging.
5. Photosensitization may occur in sheep when grazing pure stands of persian clover.



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### Persian clover - *Trifolium resupinatum*

Persian clover is an erect, hollow leafed, annual legume suitable for sheep grazing, hay or silage production, providing valuable, high quality feed over late winter to early summer.

Widely used in temperate Australia and USA where annual rainfall is below 500 mm. Tolerant of wet soils, frost and cold but slow growing at low temperatures.

It is relatively new to New Zealand and in the Hawkes Bay has produced 10 t/ha of high quality DM as a stand alone autumn sown crop. Has been successfully sown in mixes with plantain resulting in a significantly higher legume content in the spring following an autumn sowing.

Do not spring sow Persian clover.

Persian clover can grow to 50 cm and has flowers at the top of its stem. This means that flowers and seed heads are readily consumed by stock so setting seed is challenging under grazing. Most cultivars are also soft-seeded meaning that false strikes are common over summer.

### Strengths

- High nutritive value.
- High DM production in spring.
- Recovers well from grazing.
- Most tolerant of all new annual clovers to poorly drained soils.
- Free of estrogen risks.

### Limitations

- May produce photosensitization in stock if fed as a pure sward.
- Very palatable to insects, slugs and grazing pests (such as ducks, geese and rabbits) who will often graze on just the Persian clover in swards.
- Should not be sown greater than 4-5 mm deep.
- Susceptible to weed and grass competition as a seedling.
- Not bloat safe.
- Requires annual re-sowing under current New Zealand management.
- Poor winter dry matter production.
- Need to restrict grazing during flowering if reseeding is required.
- Will often false strike after summer rains.
- Very poor regeneration as most cultivars available in New Zealand set almost no hard seed.

## Establishment

Sow in autumn as soon as there is adequate soil moisture. Establishes from broadcasting or oversowing into a well prepared, weed-free seedbed. Do not sow deeper than 4-5 mm. Sow at 5-6 kg/ha for a single species grazing or hay crop. Higher seeding rates will boost yields and provide better weed suppression. Has been successfully sown with plantain (at 2-3 kg/ha) along with other annuals (e.g. Arrowleaf and Balansa) and perennial clovers. In this situation it contributes to a significant lift in legume content over the first spring. If Persian clover has not previously been sown, ensure that seed is inoculated with the correct *rhizobia* strain (Group O). New sowings will require P and K fertiliser to promote early root development and enhance seedling vigour. Prefers pH close to 6 or above.

## Weed and pest

Very good weed control is necessary during establishment. Post-emergence weed and grass control may be required and some farmers have been successful with 130 g ai/ha *haloxyfop-P* (Crest/Galant) plus 1440g ai/ha *bentazone* (Troy/Basagran) all in 125 litres water /ha with a suitable wetter. Clovers need to be at 3-5 leaf stage before spraying. Persian clover is susceptible to glyphosate and can be damaged by many broad-leaf herbicides. Also susceptible to a wide range of pests including slugs, red-legged earth mite and springtails and 500 g ai/ha *chlorpyrifos* (Lorsban) can be added to a post emergence spray. Also very palatable to grazing pests such as ducks, geese and rabbits who will seek it out in pastures.

## Management and animal production

Suited to winter grazing but rotationally graze to residuals of 2-3 cm (winter) and 4-5 cm (spring) to avoid over grazing which will remove developing stems. Well suited to hay/silage production. Very palatable with high soluble carbohydrate and high protein content. Has been associated with photosensitization in sheep when used in pure swards.

## Cultivars

There are two sub-species of Persian clover. *Trifolium resupinatum* var. *majus* is erect with thick hollow stems, large leaves and (normally) low levels of hard seed (1-2%). Later flowering and has been used successfully in summer dry areas. Seed often contains a wide range of genotypes resulting in a range of leaf shapes and markings. *Trifolium resupinatum* var. *resupinatum* has a more prostrate habit, thinner stems, smaller leaves and is earlier flowering. Has higher seed yield and more hard seed. Because seed is imported, supplies can be tight so order seed early

Cultivar	Maturity	Notes
Lusa	Mid	<i>Trifolium resupinatum</i> var. <i>majus</i> - late maturing; good levels of hard seed.
Lightning	Mid	<i>Trifolium resupinatum</i> var. <i>majus</i> - no hard seed; susceptible to leaf rust.
Enrich	Late	<i>Trifolium resupinatum</i> var. <i>majus</i> - no hard seed.
Turbo / Turbo Plus	Late	<i>Trifolium resupinatum</i> var. <i>majus</i> - no hard seed.

