



2-Egyptian clover (Berssem)

Trifolium alexandrinum L.

Prepared

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Introduction:

Berseem clover (*Trifolium alexandrinum* L.) is an annual pasture legume originating in eastern Mediterranean regions. It is widely grown in its area of origin as a high-quality forage conservation crop, and has been introduced to many other countries, such as India, Pakistan, South Africa, USA and Australia, where it is also primarily used for fodder conservation purposes.

Berseem clover is also known as Egyptian and Alexandria clover.



Berseem clover is frequently grown under irrigation, where, with good management, two to five forage cuts are possible in the growing season. It has moderate tolerance of salinity, and will tolerate short periods of water logging.

Berseem clover is generally only sown as a one year fodder conservation crop, as it produces soft seed, which is highly susceptible to loss via false breaks (out of season rainfall with no follow-up rain) in summer and early autumn. As false autumn breaks are common in areas where berseem clover is sown, second year stands are usually very sparse.



Berseem clover plants



Berseem:

- is an annual, hairy, erect forage legume.
- 30 to 80 cm high.
- shallow taproot system.
- stems are hollow, branching at the base, with alternate leaves.
- Flowers are yellowish-white



Root:

Berseem has a short taproot that limits its use on sandy soils with low water-holding capacity. It has a shallow taproot.

Plant height (stem):

Berseem clover is an erect annual legume, highly branching which can grow 30–80 cm tall. It has hollow stems and slender.

Leaves:

All leaves except the uppermost, alternate; adnate parts of stipules oblong, membranous with green nerves; free portion as long as or shorter than the lower part. Leaflets are commonly 4–5 cm long and 2–3 cm wide.



Leaf



Inflorescence:

The round to oblong yellowish heads, similar in size and structure to white clover heads, appear shortly after the first of the year. The florets form one seed each.

Flowers:

Berseem clover has self-sterile yellowish white florets. Flowers are 0.3 to 0.5 inches (0.8-1.3 cm). Flowers are round, white and approximately 2 cm in diameter. Flowers form dense, elliptical clustered heads about 2 cm in diameter. The flowers must be cross-pollinated by honey bees to produce seeds.



Berseem Inflorescence



Fig. 1 Egyptian clover



Seed:

Seeds are yellow, with approximately 400,000 seeds/kg. Seeds range in color from yellow to purple; there is approximately 200,000/lb (440,000/kg).

Berseem Weeds:

Doodder *Cuscuta brevisflora*

Belonging to the morning glory family, the many species of *Cuscuta* are leafless, rootless, parasitic plants with thread-like stems that coil around and attach to host plants. Dodders lack chlorophyll, which is why they penetrate the tissues of host plants and steal their nutrients. **Stems can range in color from white, to yellow and orange, and even to purple. Dodder bears small clusters of flowers in white, pink, or yellow in the summer months.**



Egyptian clover seed



Broomrape and Dodder



Broomrape *Orbanche ramosa*:

Bract and bracteoles equaling a lanceolated division calyx, corolla blue-purple with curved tube, bilobed and ciliated upper and lower lips with three spreading lobes and hairy external face, four hairy stamens in the basis with glabrous anthers or shortly haired, and unilocular capsule with two valves adherent at the basis. **To confirm the attachments of the parasitic plant to the host roots, berseem clover plants were gently dug up and the root systems were washed. Clear *O. ramosa* attachments were observed.**



Broomrape on Berseem



Sown in present of water

Grazed



Cut and given to animals





Animal eating berseem



Berssem, clover (*Trifolium alexandranium* L.) Fabaceae

Germination	Germination is Epigeal, Seed leave (cotyledon) above the ground.
Root	Root is short tap root 30-60 cm tall in the soil, branched included bacterial nodules. <i>Rhizobium trifolii</i> .
Stem	Berseem clover is an erect, hollow, hairy, highly branching, which can grow 60–80 cm tall. It has hollow stems, slender, and branched.
Leaf	The true leaves are trifoliate with 3 leaflets, All leaflet are borne on short stalks seated. The leaflets are a pointed oval shape, adnate parts of stipules oblong .
Inflorescence	Flowers form dense, elliptical clustered heads about 2 cm in diameter.
Flowers	Berseem clover has self-sterile yellowish white florets. Flowers are round, white and approximately 2 cm in diameter.
Fruits	The fruit is a pod containing one single white to purplish-red seed



1. Berssem belongs to the genus

a) Arachide.

c) Trifolium.

b) Cicereae.

d) Leguminosae.

2- The scientific name of cultivated Berssem is

a) *Cicer arietinum*.

C-Trifolium alexandrinum L.

b) *medicago sativa*.

d) *faba bean*

3- **(true)** Berseem clover is an erect annual legume,
It has a shallow taproot.



4-(**true**) Berseem has a short taproot that limits its use on sandy soils with low water-holding capacity.

a- **tap root**

b-Seminal roots

c- brace roots

d-both a and b

5-(**true**) Berseem clover has hollow stems, slender, and branched.

6-(**true**) All leaves of berseem except the uppermost, alternate; adnate parts of stipules oblong.

8-(**true**) Berseem Flowers has self-sterile yellowish white florets. which are round, white and approximately 2 cm in diameter.



Thank
You!