Beneficial species to improve grassland quality, productivity and visual appeal.

Complimenting current farming practices, *not* implementing revolutionary ideas!!

Think clover.....

Then forget it!!

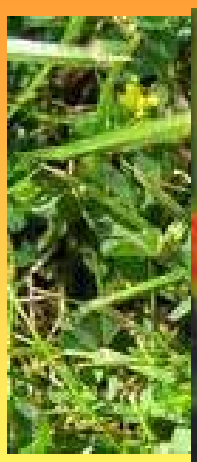
Traditional clovers produce a pasture that is too lush and full of sugar, leading to scouring and loss of condition of horses and deer.

Trefoils *Lotus spp.*

(Pictures to follow)

1. A long lived ***legume*** of ten or more years on a wide range of soil types.
2. Root depth of 25mm
3. All species require rhizobium bacteria to stimulate root nodulation.
4. Survives under continuous grazing, but only after the first year.
5. Tolerant of dry summers once established.
6. Once established, Trefoils naturally re-seeds the sward.
7. **Bloat free feed of high nutrient value**.
8. **Generates a ten-fold increase in sward productivity when compared to grass alone**.

Trefoils *Lotus spp.*



Ideal for inclusion in EFA's (Ecological Focus Areas)?

Burnet *Sanguisorba Spp.*

1. **Sheep's Burnet**, often called **Salad Burnet,** is a fodder herb and an excellent addition to pasture grass.
2. Root depth of 75mm, and is therefore ideal for preventing soil erosion.
3. Burnett is a perennial evergreen herb that stays green in the autumn.
4. Burnet is highly nutritious for both ruminants and pseudo-ruminants (**Horses**) alike.

Black Medic *Medicago lupulina*

Ideal for inclusion in EFA's (Ecological Focus Areas)?

1. **Black Medic**, is a prostrate legume that is an excellent addition to pasture grass.
2. Root depth of 25mm, but it spreads via Stolons that make it ideal for preventing soil erosion.
3. Extremely drought tolerant, significantly maintaining food supply.
4. Flowers from April through to October.

Sainfoin

***Onobrychis viciifolia* Scop.**

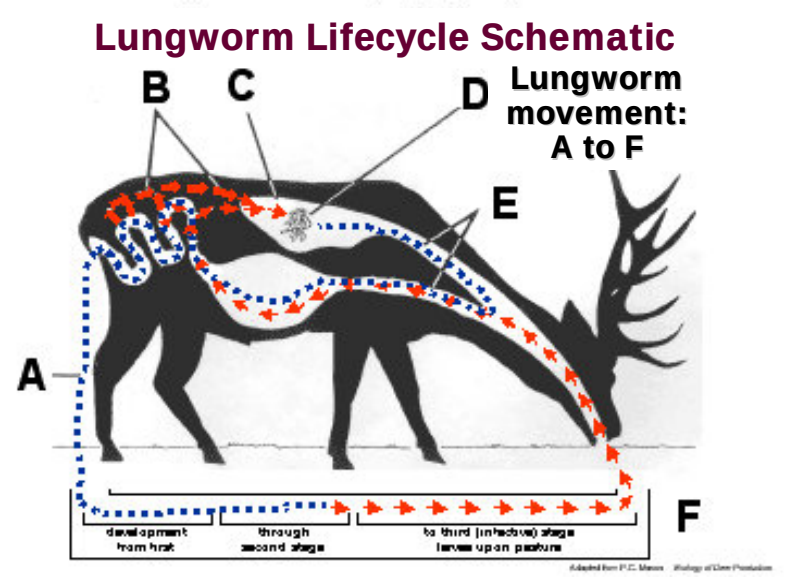
1. Sainfoin is highly palatable to both sheep and deer.
2. It is a valuable non-bloat legume.
3. Rooting depth of 400mm (16 inches) ensures that it is drought tolerance.
4. Once established it generates 20 to 30% Dry Matter (DM)
5. The flowers are highly attractive to a wide range of birds and pollinating

Ideal for inclusion in EFA's (Ecological Focus Areas)?

Yarrow
Achillea millefolium

1. Yarrow is a *diaphoretic* herb that ensure efficient blood circulation, and sweating. This is especially beneficial to speed up the pace of recovery from laminitis.
2. It is high in Vitamin A, which helps young horses with bone remodelling.
3. It is also particularly useful to improve general blood flow, especially throughout the skin.
4. Rooting depth of 150mm.

Controlling intestinal worms



Controlling Lung worms

1. Larvae passed into faeces.
2. Infective third stage larvae are eaten with the pasture grass.
3. They pass through the stomach, penetrate intestinal mucosa. **Then migrate via lymphatic and blood circulation to the lungs**.
4. Fifth stage larvae develop in lungs, and the resulting eggs are coughed up and swallowed.
5. The eggs hatch, then pass out in the faeces.

Controlling Lung worms

Just to remind you:

1. Young stock in their first autumn are most susceptible, and also have little natural resistance. This combines with naturally high levels of larvae in the faeces at that time of year.
2. **Cold, or hot dry weather slows larval development on pasture.**
3. **Lungworm are reasonably hardy and are able to withstand soil temperatures down to 4^0 C for a year.**

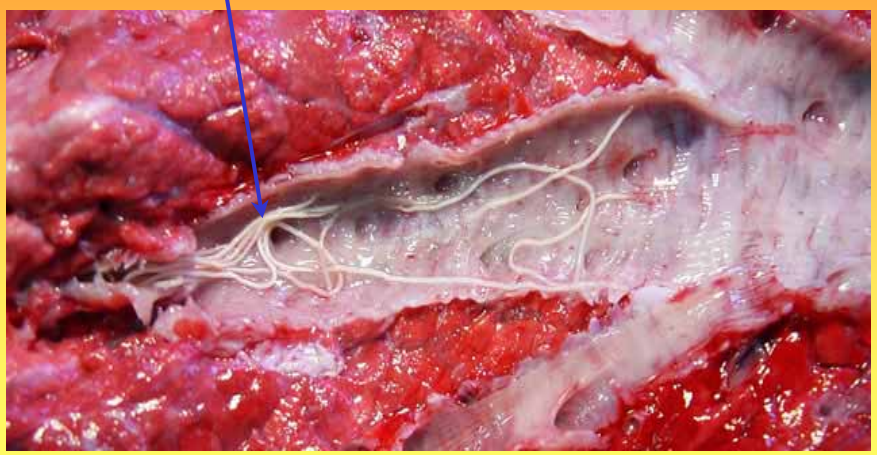
Stock reared in a healthy environment are less susceptible to parasitization.

Symptoms of Lung worms Infestation

1. Deer infected with lungworm will breathe faster due to the body requiring more oxygen than can be transferred to the blood under normal breathing rates.
2. Lungworm infestation can result in rapid loss of condition, and even death of the animal in severe cases. Coughing, especially when deer are put under physical pressure can be a clear sign of lungworm infection

Lungworm in the Trachea

Dictyocaulus eckerti



Chicory
Cichorium intybus

1. Chicory is highly nutritious.
2. Chicory contains *lactones* and *lactucin*, which in combination with chicory's 5% tannin content makes chicory forage **inhibiting toward intestinal worms.**
3. **Rooting depth of 300mm** (12 inches)
4. The relatively high levels of condensed tannins improve protein utilization efficiency in ruminants and pseudo-ruminants alike.

Other intestinal worms reduced by Chicory

Small Red Worm

Cyathostomes

Large Round Worm

Parascaris equorum (Ascarids)

Tapeworm

Cestodes