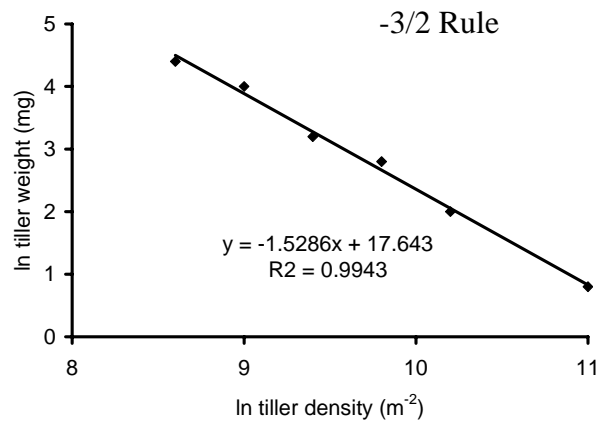
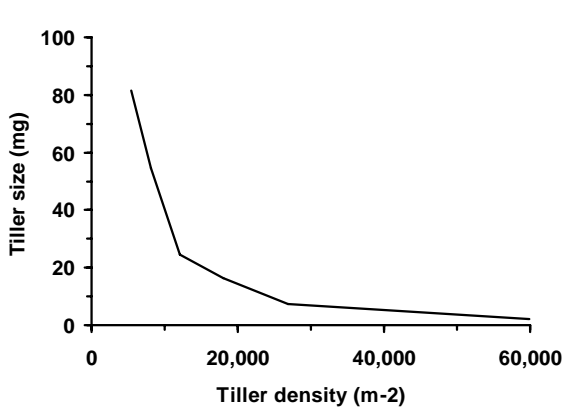


**Vegetative vs reproductive pathways**

- ♣ Seed survival .....
- ♣ Some people manage .....
- ♣ In NZ Chapman found .....
- ♣ .....
- ♣ .....
- ♣ .....
- ♣ .....
- ♣ .....
- ♣ .....
- ♣ .....

**Principles of tillering**

- Yield = .....
- These components are .....
- 



- Fertilizer will drive the relationship .....
- Tillers form in .....
- Leaf ..... and tiller ..... are .....
- Seed head formation marks the end of leaf appearance (for that tiller) – .....
- Not all the potential tiller sites actually become tillers

- Factors controlling site filling:
  - .....
  - .....
  - .....
- Leaves intercept red light – .....  
which .....
- Defoliation (or artificial red light) allows red light .....  
.....  
.....
- Short pastures (e.g. ....) will have  
.....

**Seasonal patterns of tillering**

- During summer and fall – .....
- Spring growth is dramatically affected by ..... tillers. Taller pastures and the number of dying tillers can result in .....  
.....

**Tiller density and drought**

- Inadequate control of spring pasture can result in .....
- ..... tiller density and ..... conditions preventing large tillers can result in .....
- Close spring grazing to increase tiller density did not result in any difference in summer yield, but did .....  
.....

**Legume dynamics**

*alfalfa (text p12)*

- Has no mechanism for .....
- Regrowth occurs in .....,  
however, for most of these ..... sites the leaves have long since died and the new growth comes  
.....
- Damage to the plant crowns by ..... or .....can  
irreversibly .....
- The trigger for activation of these otherwise dormant meristems is .....  
.....
- The grazing alfalfa ‘Alfagraze’ has been selected for ..... –  
resulting from a greater proportion of .....  
Alfagraze also has a tendency for crowns to be .....  
.....

*Red clover (contd)*

- Similar pattern as alfalfa
- One variety of red clover (Astrid) has stems which can ..... (Tasmania). Astrid has poor production in USA.
- There is potential for selection of more persistent red clovers – which have the ability for .....
- The rooting phase is more seasonal than for white clover (occurring in fall) and is especially sensitive to grazing damage during that period.

*White clover*

- ♣ White clover produces stolons which .....
- ♣ Each node has a meristematic zone which can produce ..... or a ..... As for grasses not all meristematic zones become active – reasons for variation are not well understood.
- ♣ Clover population density is measured by ..... (.....)
- ♣ In NZ there is a wide range in the extent of branching between varieties.
- ♣ Densely branching white clovers (similar to Dutch) are used in ..... These varieties have ....., tend to have ....., and are more tolerant of .....
- ♣ Sparsely branching varieties (similar to Ladino) are used in .....
- ♣ There is a negative correlation between .....
- ♣ Branching is triggered by ..... As for grasses – close grazing will result in .....
- ♣ Inter-node distance is also controlled by ..... The distance between nodes will ..... – the plant appears to be growing in search of a more desirable light regime.

Species Mixes

Root Shoot competition