

COMPETITIVE CLOVERS

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The causes and effects of cultivar competition in sub. clover during vegetative growth.

The work for this poster is part of an overall programme being carried out to assess cultivar competition at all stages of the life cycle of sub. clover.

The overall programme is aimed to develop information on the competitive abilities of sub. clover cultivars in the field. The programme will provide quantitative information on the meaning of competitive mechanisms to plant production. This information will then be able to be incorporated into simulation models of clover production and used in breeding programmes when selecting desirable agronomic characteristics.

The poster provides information on plant characteristics that influence competition over a growing season in the field (at Marulan). The effect of this competition will show up in seed yield and plant establishment differences the following season. A table of data showing seed and plants established per m<sup>2</sup> numbers is presented (in the poster) and a selection of agronomic characteristics that would influence these results is described. The characteristics chosen will be those primarily influencing competition for light, e.g. leaf area, number and size, leaf distribution in the profile, petiole length, plant height.

**Example**

A preliminary experiment carried out in 1984 with CV's Yarloop, Woogenellup and Larisa showed the effect of one cultivar on the growth of another through plant competition, i.e. when Larisa and Yarloop were grown in a sward together, the growth rate of Larisa was suppressed by the ability of Yarloop to intercept light higher in the profile - owing to the plant's longer petioles. Larisa and Woogenellup grown together - however showed a marked suppression in the growth of Woogenellup compared to when it grew alone. This was due to initial shading as Woogenellup and Larisa hold their leaves at practically the same height in the sward canopy.