On farm establishment of Trikkala sub clover in South West Victoria

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In six ungrazed experiments in south-west Victoria and south-east South Australia, the average autumn-winter growth of Trikkala sub clover has been more than double that of Mt Barker (1.51 v 0.74 t DM/ha), the most common cultivar on farms in the region (K.F.M. Reed, pers. comm.). A.D. Craig (pers. comm.) found that ewes, and their lambs, grazing pastures at Kybybolite where Trikkala was the main legume, were heavier and cut more wool ($p<0.05$) than those grazing pastures where Mt Barker was the main legume. Seed sales show that farmers are keen to take advantage of this new cultivar. While Trikkala has been easy to establish and maintain in experimental plots, observations suggested that farmers were not achieving good results when sowing it.

Method

In the winter and early spring of 1983, 36 paddocks in the Hamilton District were surveyed to measure the results of sowing Trikkala and to document the conditions under which it was sown. The criteria used for selecting paddocks were that at least 10 ha had been sown before winter 19B1 and they be spread evenly within the district.

The results of the sowing were measured by scoring Trikkala and other cultivars of sub clover for presence or absence in 100 quadrats (10 cm x 10 cm), located at random. A questionnaire was completed for each site. The Student t test, with $p=0.05$, was used to analyse the data.

Results and Discussion

Trikkala was present, on average, in 29% (range 0-98%) of the quadrats examined and other cultivars in 74% (38-98%). OD one-quarter of the paddocks Trikkala was present in <10% of quadrats and on one-fifth it was present in >50%. To obtain most of the benefits Trikkala offers, it was considered that it should be present more often than the other cultivars. This occurred in two paddocks. In 22 paddocks other cultivars were present at least twice as often as Trikkala.

The average seeding rate used when sowing Trikkala was 1.9 kg/ha (range 0.54.0). Where the seeding rate was >2.2 kg/ha the results (41%: 14-72%) were significantly better than where it was sown at < 1.5 kg/ha (22%: 1-59%). Nineteen farmers sowed another legume and 33 included a perennial grass when sowing Trikkala.

Growing two or three crops before sowing Trikkala significantly increased its occurrence (57%: 26-95%) compared with growing one or no crops (22%: 0-60%). using a cover crop, the method of sowing, inoculating the seed before sowing and applying insect control measures within three months of sowing had no effect on the result. None of the practices affected the occurrence of the other cultivars.

The low seeding rates are one of the main reasons for the poor results. Part of the disappointing results may be due to the poor seasonal conditions for clover growth in 1981 (late break, very wet winter, dry spring) and 1982 (dry spring).

Changing the cultivar of sub clover in a pasture is possible if appropriate practices are used (1) after growing two or three crops during which good weed control is practised (2), or after carrying out an intensive cultivation (3). However there are large areas in Victoria where these practices are either unattractive (low returns from cropping) or impractical (non arable). Methods which involve no cropping and minimal cultivation need to be evaluated.

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2. Anon 1983. Oestrogenic clovers in the Young District. Field day notes.

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