Diseases recorded on cereals, grasses and pasture legumes in Western Australia

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It is unlikely that benefits will be obtained from inoculating Dwalganup or Bacchus Marsh subterranean clover seed sown in the Jerramungup or Gairdner River districts other than on the fine sands of different geological origin (Miocene) occurring in some southern areas of the Gairdner River District.

In Western Australia it is common practice to inoculate the seed of subterranean clover prior to seeding. In many cases it is known that response to inoculation is very unlikely, yet it is felt that it is insurance against a complete failure. Sometimes farmers inoculate seed used to reseed cropped paddocks that had previously grown good subterranean clover stands. Seed inoculation is not necessary in these cases.

If it is necessary to inoculate seed, evidence suggests that lime pelleting (1) is also an advantage, especially if dry conditions follow seeding (Fitzpatrick, Cass Smith, private communication).

The cost of labour and materials for pelleting and inoculating sub. clover seed is roughly 2s. 6d. an acre. In terms of total cost of establishing sub. clover on new land this cost is not great. However it has been demonstrated in some areas that this expenditure is of no benefit.

Results, both from experiments and from War Service Land Settlement bulk sowings, so far indicate that it is not necessary to inoculate seed to be sown on the majority of soils in the Jerramungup, Gairdner River areas.

However, in the southern portion of the Gairdner River project, there are areas of fine sand of Miocene origin varying in depth from a few inches to many feet. In general, these areas occur south of Swamp Road. Experimental work has shown that seed inoculation is essential when planting sub. clover on this type of soil.

On the deep sand ridges, satisfactory establishment of sub. clover has not been obtained—regardless of treatment. It is recommended that this plant should not be sown on such areas.

Off the sand ridges, in areas where fine white sand up to a depth of 3 ft. overlies clay or consolidated ironstone, good stands of sub. clover are obtained with inoculated seed. The clay or ironstone holds up the water in these soils and their higher moisture level is probably the reason for the better clover growth on them compared with that obtained on the ridges. Yields from first year stands on these soils are trebled by the use of inoculum.

If no inoculum is used, good stands of sub. clover are not obtained until the third season.

**SUMMARY**

(1) Seed planted on fine-textured sandy soils, mainly occurring south of Swamp Road, must be inoculated.
(2) Sub. clover should not be planted on the deep sand ridges.
(3) It appears unlikely that responses to seed inoculum will be obtained in the Jerramungup or Gairdner River areas other than on the soils mentioned in 1 above.
(4) After cropping, it is not necessary to inoculate seed used to re-seed paddocks that had previously grown good stands of clover.

REFERENCE

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