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Topical notes on seed pelleting

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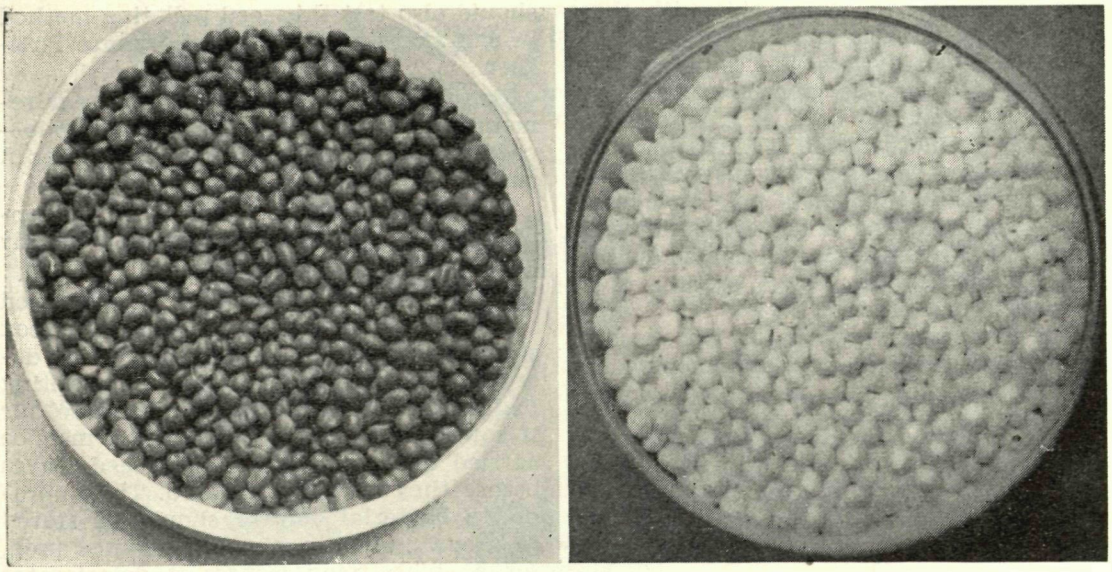


Left—Untreated subterranean clover seed. Right—Seed pelleted with powdered limestone

Topical Notes on Seed Pelleting

By W. P. CASS SMITH, B.Sc. (Agric.), Superintendent, Biological Services Division

IT is evident from recent correspondence, that during the coming season, many farmers wish to test the method of inoculating and pelleting seeds developed by the Department of Agriculture for treating seeds of plants such as subterranean clover. They are anxious to know how the pelleted seed is prepared, the conditions under which it may prove advantageous, and details regarding availability and cost of materials.

Most commercial samples of pelleted seed are merely coated with powdered limestone, and the necessary peat culture of nodule-forming bacteria is dusted on to the coated seed just prior to planting.

When prepared by our technique however, the seed is first **wet inoculated** with the peat culture mixed in skimmed milk, to which has been added a selected sticking agent, known commercially as Cellofas A.

As soon as the seed is uniformly moistened with this mixture, very finely ground limestone is added immediately, and stirring continues until the seeds are thoroughly coated, and well separated. The pelleted seeds should then be allowed to set for about 24 hours before planting.

Small quantities of seed sufficient to plant a few acres, are easily prepared in this way in ordinary kitchen utensils, and for larger quantities, a **clean** cement mixer does a very satisfactory job.

It will be noted that in this seed-pelleting method, the nodule-forming bacteria are incorporated within the pellet of powdered limestone; and therefore they are afforded some protection against harmful contact with acid fertilisers such as superphosphate, and from rapid drying-out which are both fatal to the bacteria.

The value of this pelleting technique was amply demonstrated in an experiment conducted at Mr. Eric Smart's Mingenew property last year. Inoculated clover seed mixed and planted with superphosphate proved a failure—whereas inoculated seed mixed and planted with basic superphosphate gave excellent establishment. However, when **inoculated pelleted** seed was used the results with superphosphate were

also excellent and comparable with those obtained with basic super.

It is noteworthy too, that the inoculated pelleted seed for this experiment, was prepared in Perth, but because of unforeseen delays it was not planted at Mingenew until a week later. The lengthy survival of the bacteria within the pellets may prove beneficial when planting in dry soil is unavoidable, and if required, it will enable quantities for three or four days' seeding to be processed at a time.

The cost of seed pelleting by this method, compared with the extra cost incurred by using basic super. in preference to ordinary superphosphate, is well worth considering. At current prices, and excluding the cost of the bacterial culture, it will cost about 1s. 3d. an acre to pellet subterranean clover seed at a sowing rate of 6 lb. to the acre. On the other hand if a farmer who applies 1 cwt. of super. per acre, decides to use instead, basic super. containing an equivalent amount of phosphate, it will cost him an extra 4s. per acre.

Because of this difference in relative costs it is suggested that farmers who prefer basic super. for legume establishment should also test this seed pelleting method in conjunction with superphosphate fertiliser.

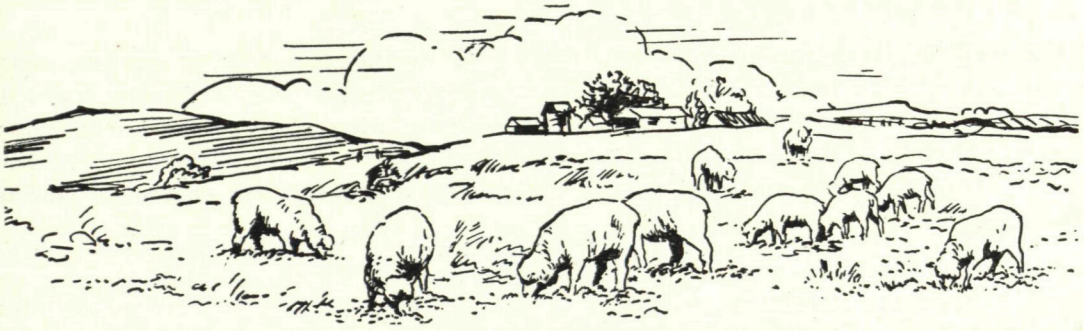
For pelleting 30 lb. of seed the requirements are 10-15 lb. of ground limestone—costing 3d. per lb. and 2 oz. of Cellofas A costing 1s. 10d.

These materials together with the appropriate bacterial culture are now readily available.

When planting inoculated pelleted seed with a small seeds attachment, the box should be kept full, as sowing rate decreases as the box empties. A planting depth of 1 to 1½ in. is also desirable, for if sown too shallowly, the pellets may be carried above ground on the seed leaves before they are disintegrated. The appropriate bacterial culture should be stored in a cool room or refrigerator until used, for at high temperatures it deteriorates rapidly.

Further details on seed pelleting may be obtained from your local Agricultural Adviser, or the Department of Agriculture.

(From a recent A.B.C. Country Hour broadcast.)



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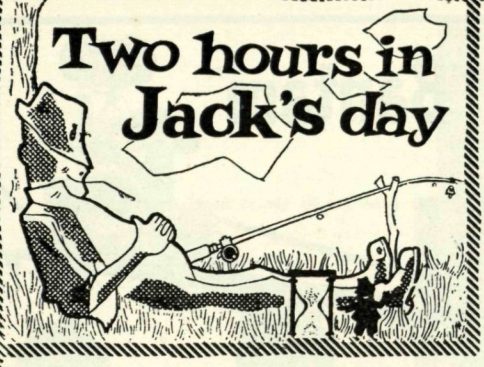
Arrangements have been made for the compilation of a comprehensive index to be incorporated in the December issue—a feature which will greatly enhance the value of the Journal as a work of reference.

Two hours in Jack's day



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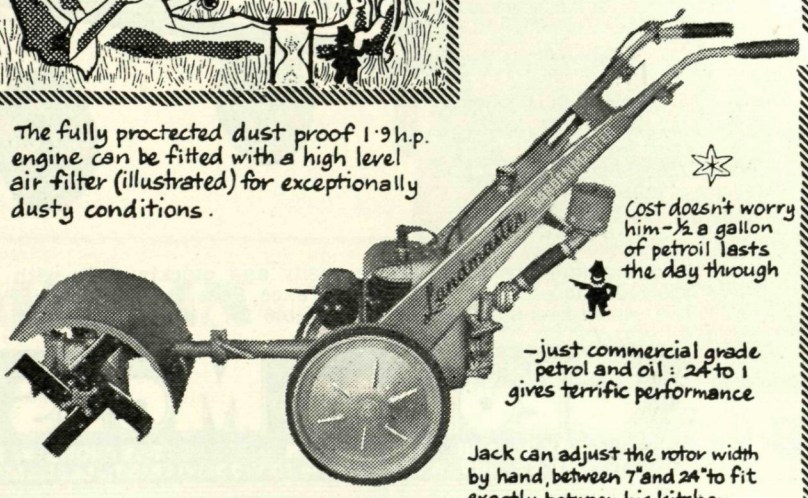

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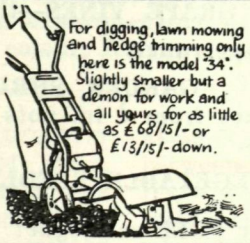

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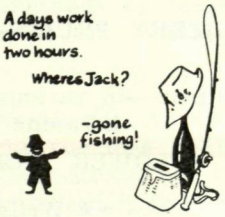
Where's Jack?



– gone fishing!

To: Sandovers Ltd.,
Hay St., Perth

Please send me the same literature that first interested Jack in the "Gardenmaster". I will write you again if I want a demonstration on my own land.

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