phagus. In [2]*Ancylostoma caninum* and *Necator* sp. the digestive enzyme and an anticoagulant are secreted from the pharyngeal glands and abraded tissues are digested in the intestine[1]. *Bunostomum trigocephalum* also secretes an anticoagulant.

Four specimens were recovered in the act of copulation. The male worm is oriented at an angle to the body of the female in the region where the vulva is

FIG. A. *Bunostomum trigocephalum* (Rud., 1808) Railliet, 1902; The worm drawing a plug of tissue into the buccal cavity.

situated. The bursa of male folds over the body of female and the spicules are inserted in the vulva (Fig. B) to widen its opening. The tip of the spicule is bent inside to keep the opening widened for the discharge of sperms. This obviously ensures insemination.

FIG. B. Microphotograph of *Bunostomum trigocephalum* (Rud., 1808) Railliet, 1902; showing insertion of spicules in the vulva during copulation.

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TALC PELLETING AS AN AID TO LEGUME SEED INOCULATION

LEGUME seed inoculation involves introduction of rhizobia in a vegetative state into an environment to which it is not immediately adaptable and, therefore, must compete with an existing established microbial complex, until such time as more favourable rhizosphere zone of the legume seedling is available. Foci of infection are available for a limited time only[1] and their location moves progressively down and away from the crown in the root system[2]. The pelleting of seed provides a micro-environment much more favourable for the rhizobia and thus provides a greater nucleus population when the first infection foci become available.

The present study was, therefore, undertaken to examine the seed pelleting as an aid to legume seed inoculation. A variety of pelleting materials were used to see their effect on soybean (*Glycine max*) in the pot culture experiment. Pelleting was done according to the method described by Iswaran[3].

It is clear from the perusal of the data in Table I that nodulation pattern is influenced by different types of pelleting materials along with the incoulation with *Rhizobium*. Of the six pelleting substances used in the present investigation, talc was found to be the most efficient and comparable to calcium sulphate and charcoal. Although dicalcium phosphate and rock phosphate could also be used, their influnce was significantly lower than that of talc as measured by the total number of nodules produced. In terms of fresh weight of nodules also, the trend was nearly the same. The efficiency of pelleting the seeds with talc is very clearly registered in the dry weight of root and top of the plant when examined at the end of 8th week and also in the final grain and shoot yield at the harvesting stage. An additional increase of

TABLE 1
Effect of pelleting on plant characters of soybean

Sl. No.	Treatment (pelleted with)	At the 8th week*			At the time of harvest**			
		No. of nodules (per pot)	Wt. of noudles (g/pot)	Dry wt. of top (g/pot)	Dry wt. of root (g/pot)	Grain yield (g/pot)	Top yield (g/pot)	Nitrogen uptakes (mg/pot)
1.	Control (No inoculation, no pelleting)	8·00	0·284	3·239	1·644	5·21	7·64	337·80
2.	Inoculated	15·00	0·617	4·863	1·732	6·32	11·82	458·51
3.	Calcium carbonate	10·00	0·492	4·415	1·695	5·66	10·21	399·81
4.	(3) + (2)	17·66	0·797	5·082	2·156	7·47	11·80	539·20
5.	Dicalcium phosphate	10 00	0·375	3·309	1·530	5·33	9·75	371·33
6.	(5) + (2)	19·33	0 835	5·305	1·893	7·51	11·99	549·54
7.	Calcium sulphate	5·00	0·385	4·055	1·660	5·66	10·10	399·43
8.	(7) + (2)	21·66	0·774	5·538	2·068	7·54	12·19	579·41
9.	Rock phosphate	6·66	0·363	3·580	1·581	5·35	10·69	374·03
10.	(9) + (2)	18·66	0·731	5·465	1·863	7·49	12·31	553·79
11.	Talc	9·00	0·575	4·228	1·674	5·82	10·54	424·53
12.	(11) + (2)	30·00	1·075	7·210	2·790	9·19	13·26	719·40
13.	Charcoal	9·33	0·416	3·394	1·674	6·10	11·52	444·72
14:	(13) + (2)	24·66	0·899	5·181	1·951	8·35	12·78	639·03
	C.D. at 5%	8·65	0·379	0·794	0·632	1·30	0·75	

* Values average of 3 replications.

** Values average of 4 replications.

about 10% in the grain yield was obtained with talc pelleting over charcaol pelleting along with inoculation. The total nitogen uptake followed the same trend as that of the total crop yield. Our studies point out that the treatment of incoulation and pelleting was better over the simple inoculation.

The results obtained here are in conformity with the observations made by Hastings and Drake[4], and Iswaran and Jauhri[5]. The materials like talc and charcoal used by us have excelled in the performance over lime and rock-phosphate used by them. The talc in the native form is hydrous magnesium silicate. Though its superiority over other materials is intriguing, one possible explanation could be its hydrous nature thereby making more moisture available to the *Rhizobium* in the micro environment of pellet. The other reason could be the availability of magnesium in the viscinity, if it can be somehow rendered in the available form. Norris[6] has suggested that magnesium is more important divalent cation and is needed in enzymic mechanisms of phosphorylation and degradation of glyceric acid.

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TELSON SETAE AND SEXUAL DIMORPHISM OF THE SAND LOBSTER, *THENUS ORIENTALIS* (LUND)

KNOWLEDGE on secondary sexual characters and sexual maturity of the commercially important lobster, *Thenus orientalis*[1,2] is essential for tactful management of fisheries in various ways. Telson is used for propulsion along with other appendages like uropod. The telson of *T. orientalis* is a dorsoventrally depressed and