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ON THE USE OF NEEM SEED KERNEL POWDER AS
A PROTECTANT FOR STORID PADDY

Neem seed kernel powder has been reported to be useful in protecting stored wheat from external feeders like *Trogoderma granarium* (Girish and Jain, 1974). The present study was undertaken to evaluate the effectiveness of this material as an antifeedant (supplied by Khadi and Village Industries Commission, Poona — 16) in controlling pests of stored paddy.

Paddy grains from which the undersized and chaffy gains were removed by immersing in salt water were used in these experiments. Lots of paddy seeds weighing 500 g were taken in small gunny bags (15cm x 20cm) and treated. Neem kernel powder and realathion 5% dust (which was the standard treatment) were applied by mixing with the seeds, dusting the outside of the gunny bags or by both. The doses/rates at which the dusts were used are given in Table 1. All the treatments were replicated thrice. The treated grains within the bags were exposed to infestation by pests in a pest-infested godown.

Samples of 50 g seeds were drawn out randomly and counts of pest-damaged in 1000 grains from each replication, were made at 3 occasions viz. 3 months, 4½ months and 6 months after treatments. The results are given in Table 1. It may be observed that in general mixing the seeds with the neem powder has given effective and significant (statistically) protection against the pest. Among the three doses studied 1% and 2% mixture with the seed are much superior to 0.5% mixture. It is also observed that at these two concentration neem powder is as effective as malathion in providing protection against the pest controlling the infestations (there being no significant difference between their effects though mode of action is different).

ഒരു മിശ്രിതമുണ്ടാക്കിയും ചാക്കിന്റെ പുറത്തു് പൊടി

3, 4½, 6

ഒരു ശതമാനവും രണ്ടു ശതമാനവും വേപ്പിൻകരു പൊടി
1ൽ വിതരണത്തിനോടൊപ്പം

Table 1
Mean number of paddy grains (out of 1000) damaged by pests under different treatments at varying intervals.

| Treatments | Doses/ rates. | Intervals (in months) | | |
|---------------------------------------|------------------|-----------------------|--------------------|--------------------|
| | | 3 | 4½ | 6 |
| Paddy seed neem powder mixture | 2% | 26.66 | 27.33 | 30.66 |
| Gunny bag treated with neem powder | 10 g/bag | 32.33 | 39.33 | 40.33 |
| Seed mixture - Gunny bag treatment | 2% + 10g/bag | 21.66 | 26.66 | 30.00 |
| Paddy seed neem powder mixture | 1% | 28.66 | 33.33 | 36.66 |
| Gunny bag treated with neem powder | 5 g/bag | 34.33 | 41.66 | 42.66 |
| Seed mixture + Gunny bag treatment | 1% + g/bag | 26.66 | 37.00 | 39.33 |
| Paddy seed neem powder mixture | 0.5% | 38.66 | 44.00 | 45.33 |
| Gunny bag treated with neem powder | 2.5 g/bag | 35.66 | 54.66 | 56.00 |
| Seed mixture + Gunny bag treatment | 0.5% + 2.5g/bag | 28.66 | 36.00 | 37.33 |
| Paddy seed malathion dust mixture | 0.01% | 23.66 | 25.33 | 29.00 |
| Gunny bag treated with malathion dust | 1 g/bag | 23.43 | 26.33 | 31.00 |
| Seed mixture + Gunny bag treatment | 0.01% + 1g/bag | 17.00 | 23.00 | 26.00 |
| Control. No treatment | — | 44.66 | 56.00 | 63.00 |
| C. D. | | 11.46 | 12.80 | 14.90 |
| F. Test. | | highly significant | highly significant | highly significant |

REFERENCE

Girish, G. K. and Jain, S. K. 1974. Studies on the efficacy of neem seed kernel powder against stored grain pests. *Bull Grain Tech.* (2), 226—228.

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