During germination of *Tropaeolum* seeds starch grains appear in the cells of the cotyledons. It is uncertain whether this arises from the slowly disappearing amyloid, or from the oil in the cells. A remarkable fact is that in unripe seeds the cell-walls do not show the amyloid reaction, whereas the cells contain much starch. Only in the very last phase of ripening does amyloid appear while the starch disappears wholly. Therefore it is likely that amyloid in *Tropaeolum* is stable only during the resting period of the seed.

Details of these investigations will be published elsewhere.

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Differential Insecticide Damage in Maize Varieties

A MIXTURE of three parts of ethylene dichloride and one part of carbon disulphide (by volume) applied at the rate of 0·6 c.c./litre of storage space by pouring the liquid on to the surface has been effective for some years in preventing insect damage to maize grain (var. Tsolo) stored in closed bins for subsequent sowing. In 1956 the variety Mexican Elite was grown instead of Tsolo, and the grain after storage was found to have a very low germination capacity. A series of experiments was carried out to test the hypothesis that the insecticide was affecting the grain adversely, and that some varieties of maize were more susceptible than others to this treatment.

Grain of each of four varieties of maize was divided into two portions, one being kept as control and the other given the normal insecticidal treatment. Ten days later, seventy-eight grains from each of the treated and untreated samples of each variety were planted in garden soil under conditions suitable for germination. After seven days the number of plants that had germinated was determined by counting the number of shoots that had emerged. These results are summarized in Table 1.

Many of the emergent seedlings from the treated grain were distorted, and in order to obtain a measure of this distortion and the resultant stunting of the shoots, all seedlings were harvested at the first node and weighed on the eighth day after sowing. The results are summarized in Table 2.

It can be seen from the tables that in every instance treatment of the grain resulted in an increase in the number of plants that failed to emerge, and that response to the treatment differed from variety

Table 1. PERCENTAGE GERMINATION OF TREATED AND UNTREATED GRAIN, SEVEN DAYS AFTER SOWING

Variety	Untreated	Treated
Lagos White	97	90
Abakaliki Red	99	77
Mexican × Sie	91	71
Trinidad	97	86

Table 2. MEAN FRESH WEIGHT OF SHOOTS (IN GM.) ON EIGHTH DAY FROM SOWING

Variety	Untreated		Treated		S.E. of diff.	p (per cent)
	m	δ^2	m	δ^2		
Lagos White	2·15	0·48	1·76	1·06	0·15	1
Abakaliki Red	2·05	0·42	1·85	0·50	0·12	5–10
Mexican × Sie	1·78	0·31	1·04	0·31	0·09	< 0·1
Trinidad	1·82	0·26	0·27	0·05	0·06	< 0·1

to variety both in this respect and also in the degree of stunting suffered by the seedlings that did emerge. Further, the suppression of germination and the stunting of growth are not necessarily parallel. On one hand, in Abakaliki Red the germination was strongly suppressed, but the majority of seedlings from the treated grain showed normal growth. On the other hand, in Trinidad, the treatment did not markedly affect germination but caused severe stunting.

It would seem desirable that the effect of the above insecticidal mixture on the viability of maize grain should be determined before this method of protection is employed for seed corn.

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Lungworm from Rats captured in Britain

DURING the period December 1954–April 1956, the lungs of a total of 191 wild rats from Cambridge, Cardiff, Liverpool, London, Nottingham, St. Albans and Wolverhampton were examined for lungworms. They included 24 *Rattus rattus* L. and 167 *Rattus norvegicus* Erkl. It was only possible to examine fresh lungs of nine *Rattus rattus* from London. The remaining lungs were collected by staff of the Infestation Control Division of the Ministry of Agriculture, Fisheries and Food. They were preserved in 10 per cent formalin and examined later. None of these rat lungs was infested with *Angiostrongylus cantonensis* (Chen., 1935), and in no case did the lung tissue appear to be abnormal pathologically.

Table 1 shows the number of rats examined from each location. The *Rattus rattus* were collected from British ports.

Table 1

Locality	*Rattus norvegicus*	*Rattus rattus*	Total
Cambridge	51	—	51
Cardiff	35	5	40
Liverpool	2	10	12
London	—	9	9
Nottingham	58	—	58
St. Albans	4	—	4
Wolverhampton	17	—	17
Total	167	24	191

In examining several hundreds of wild rats from England over a number of years, Mr. F. R. N. Pester, London School of Hygiene and Tropical Medicine, has not observed any lungworm infestations (personal communication).

In the present survey, although the results from the examination of such a small number of rat's