Rh factor can not have children with blood lacking the corresponding Hr factor; and parents lacking any of the Hr factors can not have children lacking the corresponding Rh factors.

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EFFECT OF DDT, SULPHUR AND LETHANE DUSTS ON GERMINATION OF SUGAR-BEET AND ONION POLLENS

GERMINATION tests were made with sugar-beet pollen collected from portions of sugar-beet seed fields that had been given a single application (20 pounds per acre) of a dust containing 5 per cent. DDT and 95 per cent. pyrophyllite in comparison with similar tests with pollen from undusted portions of the field. Sugar-beet pollen throughout the entire blooming period had shown very poor germinations, making it difficult to obtain exact quantitative data. However, the results of numerous tests were appraised as showing approximately the same germination ratings for pollen from dusted plots as for pollen from undusted plots. The germination tests with sugar-beet pollen were made on an agar medium containing 40 per cent. sucrose, found to be the optimum sucrose concentration to use. Companion tests with onion pollen showed excellent germinations regardless of whether the flowers had been exposed to DDT dust or not. An agar medium containing sucrose at concentrations ranging from 15 to 32 per cent. was used. The indications are that germination of these two kinds of pollen was not adversely affected by the DDT dust. No observations were made on the effects of DDT upon the insects that frequent the sugar-beet and onion flowers. Obviously, DDT should not be used in onion-seed fields after the flowers begin to open because of its known lethal effect upon the insects that pollinate onion flowers.

Sulphur dust as a single application of superfine sulphur at the rate of 20 to 30 pounds per acre, shortly after the blooming period of sugar beets commenced, appeared in the preliminary tests to slow up or inhibit germination of sugar-beet pollen. However, if care was taken not to get sulphur particles on the agar medium along with the pollen, the rate of germination and energy of germination were not greatly affected as a result of the field having been dusted with sulphur. When sugar-beet fields are dusted heavily with sulphur, some of the dust falls upon the anthers and stigmas, so that direct inhibitory effects of sulphur comparable to those observed on artificial media may be a factor in nature.

Lethane B 71 (an organic thiocyanate dust containing beta, beta-dithiocyanodiethyl ether) used at the rate of 30 to 40 pounds per acre on onion fields during the blooming period did not adversely affect germination of onion pollen. During the first few tests agar plates receiving a considerable amount of Lethane dust together with the onion pollen showed no germinating pollen grains. To avoid these direct effects of the dust on the agar medium, both broken and intact anthers from onion flowers were removed individually and placed on the agar medium. Pollen from broken anthers germinated abundantly whether removed 2, 3 or 5 hours after exposure to the fumes of the Lethane dust. The germination energy of pollen from plants dusted with Lethane appeared to be slightly higher than that of pollen from control plants. The material for the pollen studies with onion was supplied by the Division of Horticulture of the New Mexico Agricultural Experiment Station.

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THE DEVELOPMENT OF LITOMOSOIDES CARINII FILARIID PARASITE OF THE COTTON RAT IN THE TROPICAL RAT MITE[1, 2]

VARIOUS blood-sucking arthropods have been explored as possible vectors of the cotton rat (*Sigmodon hispidus litoralis*) filariid, *Litomosoides carinii*. To date, only in the mite, *Liponyssus bacoti*, has development of the filariid been demonstrated.

In mites fed on infected rats, all stages of development have been recovered. The microfilariae grow in length from 69 μ (not including the sheath) to 105–109 μ while there is a rather gradual increase in width from 5.5 μ to 7 μ. At this point in the development there is a sudden expansion in width to 13.2 μ and a typical sausage form with a short sickle-shaped tail is formed. The width increases and individual variations ranging from 15.6 μ to 20.8 μ were found among those larvae between 125 μ and 510 μ in length. From this point on in the development of the worm the width appears to become fixed at 15.6 μ. Those forms which were presumed to be the infective stage reached a length of 800 μ. Further studies are being made on the development of the worm within the mite and its transmission to the cotton rat.

Other ectoparasites of rats that were examined, including fleas, lice and ticks, did not harbor developing filariae. In five species of mosquitoes (*Aedes aegypti, A. taeniorhynchus, A. sollicitans, A. albo-*

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