



A VARIETY called Beltsville 2-69, right, is one of the wildfire and mosaic resistant tobaccos that has been developed at the Southeast Field Research Laboratory. At the left is a stalk of Swarr-Hibshman, the common variety now planted. No new varieties have been released by the station as yet. (Penn State Photo)

Tobacco Characteristics May Be Changed by Using Radiated Seed

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During the coming summer you should be able to see some strange looking tobacco plants at the Southeast Field Research Laboratories near Landisville. Plant scientists there have radiated four lots of tobacco seed, using doses of radiation that would be many times enough to kill a human being. The object of the radiation is to cause divisions in the chromosome structure of the seed. It is the chromosomes, or actually the way the chromosomes are arranged, that give plants their characteristics. Sometimes the characteristics are grotesque formations, but what the researchers are hoping for is a few plants of the common Swarr-Hibshman

variety that will be wildfire and mosaic resistant.

IT WILL TAKE several seasons of testing after the initial plants are produced to make any specific findings.

Tobacco breeding, which has been directed at producing a wildfire and mosaic free variety with acceptable standards of taste and yield. This is a long process due to the length of time in curing and evaluating.

Thus far no varieties have been released from the station, although there are several in the final stages of selection at this time.

OTHER TESTS AT the station this year include soil fumigants, soil sterilizers and antibiotics.

The soil sterilants this generally did not do the job of stopping weed growth in the seed bed as well as steam sterilization.

While most did a good job on the grasses, clover proved to be a problem. It is reported that the action of the sterilants varied greatly from farm to farm this spring, and the only general statement as to their effectiveness is that spring applications proved to

be better than fall applications. **THESE TESTS**, the scientists said, proved that soil and climate make a great difference in the effectiveness of the commonly used materials and that a farmer should try several if he decides not to steam his bed.

The new plant anti biotic, Agrimycin, is proving to do a good job of wildfire control in the lab test plots. However the material must be applied according to directions, for any variations in

procedure show up in stunted growth of the seedlings. Wildfire has not been too troublesome this spring. Tests with MII 30 last year showed that the material not only does a good job of stopping such as on the tobacco plant but it will also increase yields as much as 500 pounds an acre over hand siskering. The best time to apply the hormone material is the same day the tobacco is topped.

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