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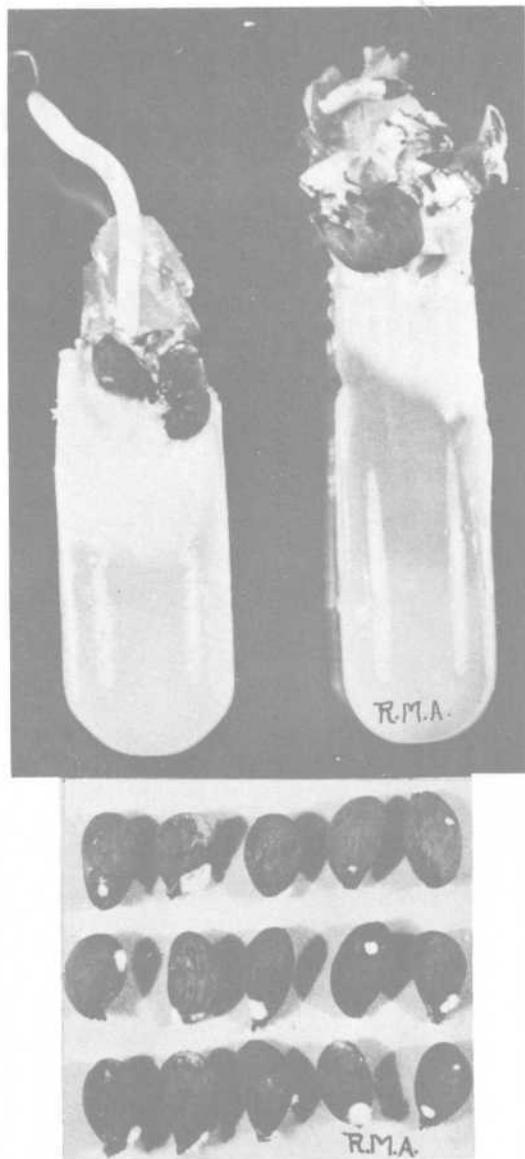
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# Cotton Seeds Can Carry Verticillium-Wilt Fungus

*Circular 182*

Agricultural Extension Service  
University of Arizona, Tucson



The *Verticillium* wilt fungus can live in cotton seeds up to 8 months.

Lower photo shows its white masses growing out of SXP cotton seeds kept in a dish without water for 8 months after inoculation.

Upper photo shows that cotton seeds carrying *Verticillium* fungus can germinate. Note white mass of fungus threads around seedlings grown from inoculated seeds.

# **Cotton Seeds Can Carry Verticillium-Wilt Fungus**

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Verticillium wilt has become even more widely spread than Texas root rot in Arizona. Although the fungus can attack numerous kinds of plants, it was never found here until cotton-growing started. Outbreaks of the wilt in areas free from infestation with that soil-dwelling fungus prior to cotton growing, even in the first crop of cotton on desert land, has naturally caused farmers (and some pathologists) to suspect seed transmission of the wilt fungus.

The first question raised by the suspicion is whether the fungus can live in cotton seeds or not. Obviously the way to answer the question is to put the fungus in the cotton seeds and find out what happens.

Seeds of the cotton varieties 1517 RB, S X P, Pima 32, and Paula C were inoculated with pure cultures of the Verticillium-wilt fungus. The inoculated seeds were then placed in flasks stoppered with sterile cotton wool. In this condition the seeds approximated conditions of storage for future planting.

The stored, inoculated seeds not only harbored the wilt fungus in a living condition up to eight months (longer than the time between harvesting cotton seed and planting the new crop), but also gave a good growth of the fungus on the seeds and in cultures. (See the pictures at left.)

Cotton seeds of the varieties tested, and probably other kinds of cotton seeds, can carry the Verticillium-wilt fungus in an active condition, from one season to the next, if it reaches them. Farmers probably are taking a chance of starting the wilt in their fields if they plant cotton seed that comes from a wilt-infested crop.

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College of Agriculture, Agricultural Extension Service  
Chas U Pickrell Director  
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