

BACTERIOLOGY

Soil's Invisible Life Makes National Wealth

BACTERIA and other microorganisms, swarming in innumerable billions in the soil, make or mar national existence, Dr. Charles Thom of the U. S. Department of Agriculture said in an address under the auspices of Science Service.

More is known about the invisible life of the soil than formerly but it is still only a fraction of what is needed to be known if the nation is to get the best out of its fields and forests, or even to pre-

vent absolute disaster through wasting of fertility resources or the actual vanishing of the soil itself through water erosion and dust storms, he declared.

"Decay" is a word carrying disagreeable connotations, but, Dr. Thom pointed out, this breaking-down process, which in the end brings to the same level the proudest emperor and the sweepings from the poorest peasant's stable, is an absolute necessity if new life is to be

born into the world and prosper in its appointed cycle. Dead and discarded things must go back to the soil from whence they came, if new growth is to spring from that soil.

Bacterial and fungal appetites, omnivorous and thriving on things that are rank poison to mankind, prove useful in clearing the soil of what might otherwise be very harmful substances, the speaker pointed out. An estimated quantity of 80 million pounds of arsenic is used in this country, mostly to kill insects. Much of this is wasted—falls to the ground, where it might make trouble, but for the fact that a whole series of molds change it from insoluble to soluble and volatile forms, in which it can do no more harm. The same is true of poisonous selenium salts, also used in insecticide sprays.

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