

to the ground. The brisk autumn chill may be pleasantly warmed by bonfires of leaves, but this mode of leaf disposal is frowned upon by firemen, health officials and good gardeners. There is a real danger of setting off forest or field fires when leaves are carelessly burned. A little smoke may give a spicy odor to the autumn air, but too often leaf-burning pollutes the atmosphere with smoke and smog. The real crime of burning leaves is that they cannot then be used in the green growth of future years.

Life Giving Humus

Trees are the reincarnations of their own dead forebears. Without the decaying leaves of yesteryear and the moldering logs and stumps of the last generation, there would not be life enough in the soil to sustain the new trunks that grow out of it.

The mass of dead but life-giving material is called humus. The enriching processes of the forest soils are actually different from those of garden and field. In open spaces bacteria largely attend to the task of returning dead things to the dust whence they came, but in the forest the work is done primarily by fungi. A large share is done by the higher fungi, the large showy plants that we call mushrooms, which are sometimes edible and sometimes poisonous.

Bacteria do play a small part, and insects, millepedes, worms and microscopic forms do their share. The dark world of the humus upon the floor of the forest is really a seething complex of life.

Getting rid of the leaves in yard and garden tempts the tidy householder to use the torch or otherwise dispose of leafy litter, but the cult of the compost heap is growing. More and more, where there is space for it, this place for the regeneration of fertile material will be found tucked away unobtrusively and frugally.

The dead leaves can be added, covered with a layer of soil, and in not many months, almost by the time a new growing season comes, the nuisance of fall can be converted into the fertile humus so much needed in spring.

Science News Letter, October 10, 1953

PLANT PATHOLOGY

Plant Hormone Checks Tumor-Like Growths

➤ A POTENT, new plant "hormone," which helps plants to grow normally, was reported to the American Institute of Biological Sciences meeting at Madison, Wis.

R. H. Roberts and Miss B. Esther Struckmeyer, University of Wisconsin horticulturists, have found that the hormone has the physiological property of regulating some tumor-like growths made by plants. The hormone is as yet only partly identified chemically.

The hormone was isolated during investigations conducted to find the growth substance which causes plants to blossom. The new hormone appears in plants at the time the blossom stage starts.

The scientists found the hormone would inhibit heavy callus growth in wounded plants with resulting smooth healing. Many chemicals or so-called growth regulators cause distortion of plant growth. An example is the weed-killer 2,4-D. The new hormone will inhibit the injurious effects of this growth substance. It actually has the effect of keeping tissues normal and preventing uncontrolled division of cells.

This may be interesting in cancer research and the possible role of the new plant hormone in animal tumor work is being investigated.

Research in the use of the hormone is being handicapped because it is not water soluble. Injections in plants to date have been in crystalline form. A search is being made for a way to convert the substance into a more soluble form.

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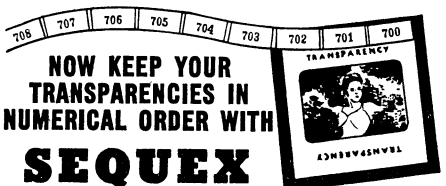
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