

## AGRICULTURE

# Wood Chip Diet for Corn

► WOOD chips will be worked into a Connecticut corn field this summer, plus heavy doses of a nitrogen-giving fertilizer. The question the corn will have to answer is whether it likes the new diet.

If it does, a five-year project just begun by the Connecticut Agricultural Experiment Station may pay off with a double-barreled boon to U.S. foresters and farmers.

On the farm, it may open a whole new field of bolstering the organic content and hence the quality of the soil by use of waste cellulose materials such as wood chips and bark.

To the forester or woodlot owner, it could provide a market for more complete utilization of each tree cut. Normally about 60% of a tree cut for saw lumber is left behind as sawdust, trimmings, shavings, bark, branches and twigs.

If such materials could be used to bolster soil, a farmer in soil-poor regions conceivably could use a sawmill's waste to upgrade his land and, eventually, its yield.

The hitch is that when cellulose material such as wood chips is added to soil, it competes with crops growing there for the

available nitrogen. Micro-organisms in the earth rob the plants of nitrogen while decomposing the wood waste. The plants temporarily take on a nitrogen-poor yellowness.

The Connecticut scientists, headed by Dr. H. A. Lunt, are experimenting with giving the land a booster shot of nitrogen fertilizer at the same time the wood chips are added.

Ammonium nitrate is being used in greenhouse pots where beets and spinach are growing in soil mixed with wood chips. This summer, corn will be used as a guinea-pig crop in the field.

In Connecticut, combinations of oak and hickory, aspen and gray birch, and red and white pine chips are being used in the present tests.

In Columbus, Ohio, similar experiments are being carried on with bark at Battelle Memorial Institute, a leading industrial and agricultural research laboratory. Scientists there are seeking ways to fortify bark with nitrogen to overcome its toxic effect on plants.

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## ENGINEERING

# Sewage Water Reclaimed

► THE reclamation of water from sewage, and its reuse after purification, was advocated in Los Angeles at the meeting of the American Society of Civil Engineers by A. M. Rawn of Los Angeles County Sanitation District.

Reclamation of water from sewage is not a new idea, he stated. The reuse of sewage or sewage effluent is well established for agriculture, industry and, after some natural purification process, for domestic purposes. The plan is proposed for urban areas facing a water shortage.

Water reclamation from sewage depends, he emphasized, upon the application of sound, established engineering principles applied with two basic concepts in mind. First, it is essential that the process of reclaiming water from sewage be based on the water requirement and not on the need for treating the sewage. Second, public acceptance of unrestricted reuse of sewage waters depends upon the inclusion of a natural purification process such as blending the reclaimed water with a lake, a stream or with underground water.

The problem of future Los Angeles was in the mind of Mr. Rawn in advocating water reclamation from sewage. About one-third of the water for this fast growing city comes from the Owens and the Colorado rivers. Two-thirds of the total water used in the metropolitan area is still from ground sources, the meeting was told by Harold E.

Hedger of the Los Angeles County Flood Control District.

Population growth and industrial expansion have resulted in both overdraft and declining yields from underground basins, he declared. This necessitates a program of progressive well deepening. Pumping from wells along the coast, from Long Beach to Hermosa Beach, has lowered the water table as much as 70 feet. The encroachment of salt water has caused the abandonment of important wells closer than a mile from the shore line.

General plans for water reclamation plants to be established adjacent to sewage treatment plants were discussed by him. From them the reclaimed water would be pumped to spreading grounds to enter the soil and add to the groundwater, or into recharge wells.

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## MEDICINE

## Advances Against Polio Listed as Cases Mount

► AS infantile paralysis cases begin their seasonal increase, the National Foundation for Infantile Paralysis in New York issued a list of three promising advances in the fight against the crippling disease.

The three advances are: 1. Growth for the first time of the polio virus in non-

nervous tissue in test tubes. Great quantities of the virus would be needed should a vaccine be developed.

2. Classification by National Foundation grantees of three distinct types of polio virus. The search for all types, under way since Jan. 1, 1949, is expected to be completed by the end of 1951.

3. Improved techniques of rehabilitation and of mechanical devices that can reduce to "an absolute minimum the number of patients who suffer permanent disability."

The year 1949, which saw the nation's worst polio epidemic, is termed the "likely turning point in the history of the disease."

"We may be able to halt the rising tide of polio in the not too distant future," Basil O'Connor, National Foundation president, declared.

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## AGRICULTURE

## Kansas Wins 1949 Wheat Championship

► THREE states supplied a third of the overall U.S. wheat crop in 1949, the Department of Agriculture reported.

Kansas won the wheat championship with 164,000,000 bushels. North Dakota was runner-up with 111,000,000 bushels. Texas grew 103,000,000 bushels.

The seven other states in the "Big Ten," which supplied 70% of U.S. wheat last year, were Oklahoma with 89,000,000 bushels, Montana with 64,000,000, Ohio with 60,000,000, Washington with 57,000,000, Nebraska with 54,000,000, Colorado with 50,000,000, and Illinois with 49,000,000 bushels.

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## METEOROLOGY

## Weather Pattern Warns Of Forest Fire Conditions

► FASTER prediction of when and in what general areas in the Great Lakes region dangerous forest fires are apt to occur is now possible.

Advance warning of conditions that might lead to large-scale burning of forest lands would help to save much of the timber that now disappears as smoke each year. It might also help to save or limit fire-damage to towns, such as Rimouski, Quebec.

The advance information on likely periods of high burning comes from weather maps. Mark J. Schroeder of the U. S. Weather Bureau, Chicago, has found that a certain weather pattern usually accompanies the spring fire season in the Great Lakes area.

A high pressure area in the Hudson Bay region will give the Great Lakes states fire trouble. Blue skies and few clouds, those usually high, normally accompany a high pressure area.

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