

method like that used to test hay fever patients. By this method physicians could determine which specific food or foods caused the often grave disturbance from which these hypersensitive or allergic patients suffered.

The new test Dr. Vaughan reported this morning is a blood test. A decrease in the number of white blood cells occurs in these patients after they have eaten the food to which they are sensitive, Dr. Vaughan found. Testing the blood of these patients after they have gone without food for 12 hours and then at three half-hour intervals after they have eaten the suspected food is the method used. The results agreed well with those obtained by skin tests and in some cases Dr. Vaughan found the blood test more sensitive than the skin test.

Science News Letter, May 23, 1936

CHEMISTRY

Italy To Use Surplus Wine For Motor Fuel

ITALY'S bumper "vino" crop last year is going to be used—at least the surplus—as a source of motor fuel. In its search for gasoline substitutes Italy is now looking over the large wine crop, says a report from Trade Commissioner E. Humes at Rome to the U. S. Commerce Department's Chemical Division.

From the surplus would be made alcohol which might be blended with gasoline as a motor fuel. A census of individual wine holdings is now being made, states Commissioner Hume's report, with a view to ascertaining the amount which will be available for conversion into alcohol for motor fuel.

With only 3 per cent. of its gasoline needs coming from domestic sources, Italy has used the last few years to develop intensively the manufacture of industrial alcohol for fuels. Early in 1936 a law was passed making a 20 per cent. blend of alcohol in gasoline compulsory, states the report.

Raw materials for distillers have been provided by increasing the acreage of sugar beets and a limitation has been placed on the amount of sugar beet molasses used for sugar recovery in order to increase the supply for alcohol producers.

Italy's production of absolute alcohol tells the story of the effectiveness of these and other measures. Production in 1934 was 11,000,000 gallons. In 1935 it was 13,200,00 gallons and the output is expected to reach 26,000,000 gallons of alcohol by 1938.

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BIOLOGY

Strange Hybrids Started By Male Nuclei in Female Egg

LIFE development starting with only the nucleus of the male cell introduced into a part of the egg from which the female nucleus had been taken away was reported before the meeting of the National Academy of Sciences, by Dr. Sven Hörstadius of the University of Stockholm.

Dr. Hörstadius worked with two different genera of sea urchins. With fine glass needles he cut the unfertilized eggs of one genus in two, leaving the nucleus of each egg in one of the halves. The half without a nucleus he fertilized with the sperm of the other kind of sea urchin, thus producing a hybrid containing only paternal nucleus and only maternal cytoplasm, which is the general life-stuff or protoplasm of the cell. These strange hybrids lived to be three weeks old, as larval sea urchins. They might have lived longer; but at that point Dr. Hörstadius had to leave the laboratory where he was working and return home.

The problem on which the Swedish biologist was working was the old question whether the nucleus of the cell is completely the "boss" of the cellular life-activities, or whether the rest of

the protoplasm (the cytoplasm) has any authority of its own.

In Dr. Hörstadius's hybrids, the character of the male parent was dominant, but not completely so. Some signs of the maternal characters asserted themselves also, indicating that the cytoplasm was not entirely passive in the presence of the nucleus.

However, the question was not considered closed by Dr. Hörstadius and his American colleagues who discussed the matter after his address. The cytoplasm, it was pointed out, may not possess its apparent "authority" in its own right. It may have been so deeply influenced by the female nucleus, before it was removed, that it continues to "carry out orders" even when left to itself. Also, there is the possibility that some small fragments of the nucleus may be left in the supposedly quite un-nucleated cells, for it is difficult to see a living nucleus with absolute distinctness, even under a strong microscope.

For these and other reasons, therefore, the Swedish scientist preferred to turn in a Scotch verdict, and leave the question open for further investigation.

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SILVACULTURE

Trees Now Showing Damage Due To Spring Floods

TREE damage due to floods of the early spring in New England is only now becoming fully manifest. In a recent issue of SCIENCE (May 1), Prof. Malcolm A. McKenzie of the Massachusetts Agricultural Experiment Station gives a condensed summary of his survey of the deadly effects of the flood, with suggestions for remedies.

One of the most devastating types of damage was due not to the water itself but to oil from flooded reservoirs floating on its surface. This coated the needles of evergreen trees, and has already killed many valuable ornamental specimens. Smaller evergreens, which were completely submerged when the oil came floating down, escaped. Oil damage to hardwood trees was also limited,

due to the fact that they were leafless and dormant at the time of the floods.

More easily visible are the terrible bark wounds made by the battering of floating masses of ice. Many trees were entirely girdled by this ice erosion, and others can be saved only by prompt surgical work on the ragged edges of the wounds, with protection of the bare wood while the bark grows over it again. Other trees have had unsightly and harmful masses of debris lodged in their branches, and must be cleared and pruned if they are to be saved.

Trees that were entirely uprooted by the floods joined the ice floats and themselves became battering-rams in the grip of the charging waters.

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