

excused for his belief that cannonading caused rainfall, but the author feels that the true story of the rainfall on the Western Front during the World War should be published so that man will not continue to believe in the fallacy. Climatological data reveal absolutely no correlation between rainfall during the World War and the detonation of high explosives.

MOLASSES-AGAR: A USEFUL MEDIUM FOR THE CULTIVATION OF THE GENUS MONILIA

Hardy A. Kemp and Sol Haberman

Species of the genus *Monilia* are easily cultivated between the temperatures of 22°C and 38°C on solid media of slightly acid reaction. After cultivating stock strains of *Monilia albicans* and *Monilia psilosis* on Sabouraud's medium, honey agar, and molasses agar, it was found that molasses agar afforded the best means for cultivating these *Oosporaceae*. This medium is simple in preparation, efficient, cheap, and practical. It consists of nutrient broth or nutrient agar and "sorghum" molasses. The results obtained by the use of this medium were very gratifying. In cultivating and isolating several species of *Monilia*, we used various percentages of molasses, (one, two, four, and eight per cent) in the substrate. Of these, the eight per cent molasses agar gave the best results, in that the high acidity hindered the growth of other organisms and permitted growth of the *Monilia*. The acid content of the various percentages of media ran as follows: The one per cent molasses agar 6.6 pH at 40°C., the two per cent molasses agar 6.52 pH at 40°C., the four per cent molasses agar 6.35 pH at 40°C., and the eight per cent molasses agar 6.085 pH at 40°C. The pH estimations were done with a Youden Hydrogen-ion Concentration Apparatus made by the Welch Company.

Testing the growth of *Monilia* disclosed the fact that the acidity of the various percentage agars affected the mycelial production of these organisms. On one per cent molasses agar the *Monilia* cells were very elongated with large numbers of mycelial forms present. On two per cent molasses agar the cells were not so elongated, but there were many more rods. On the four per cent molasses agar the cells were oval and only few mycelia were observed, while on the eight per cent molasses agar the *Monilia* had returned to typical yeast-like cells with very few mycelia present.

The presence of large numbers of mycelia in smears taken from surface growths suggests that optimum growth conditions were obtained in one and two per cent molasses agar. That reproduction in these types of *Monilia* is accomplished to a large extent by mycelial formations seems to be well borne out by the observation that more growth occurred in one and two per cent molasses agar than in the other samples where the growth was relatively scanty and mycelia fewer. Eight per cent agar did furnish an adequate medium, but the most growth (macroscopic) occurred on the one and two per cent samples. For the isolation of *Monilia* from contaminated sources, eight per cent molasses agar served the purpose best, in that the high acidity of this medium inhibited the growth of bacteria, but did not hinder, to any great extent, the growth of the *Monilia*.

We have also observed that molasses agar is an excellent medium for the cultivation of the common molds, and that it is of especial value in the cultivation of the molds affecting fruit and grain. We have also had highly satisfactory results with this medium in the isolation and cultivation of molds belonging to the epidermophyton and trichophyton groups. Our experience has been that development of these organisms on molasses agar (8 per cent) is much more rapid than that observed on Sabouraud's medium, a standard substrate for the pathogenic fungi.