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Of the Week

Research Notes

Articles

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COVER: A psychologist finds possible links between left-handedness and certain psychological and behavioral traits. See p. 220

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To the Editor

Agriculture in the future

I would like to respond to the letter from Dr. Alan C. Nixon recommending the conversion of petroleum into food (SN: 8/17/74, p. 99). Dr. N. W. Pirie in his book *Food Resources Conventional and Novel* notes that "Unless yeast is grown on a carefully purified paraffin fraction, rather than being used as part of the purification process, it will be contaminated with the other components of the oil. This has caused considerable apprehension, for some components are carcinogenic. It is however easy, by solvent extraction, to remove all but 0.1 percent of the contaminants though this greatly increases the cost of production."

Because of the problems of cost and contamination and the difficulty of gaining widespread acceptance of novel foods like yeast, I believe that research and development in the field of sterilizing and recycling livestock wastes (now a major pollutant) as animal feed hold greater promise in extending the world's food supply. Ceres Ecology Corp. now operates a full scale plant at Sterling, Colo., capable of processing some 200,000 pounds of raw manure per day from over 10,000 head of beef cattle into feed and fertilizer products.

I would be remiss if I did not note that although I am very optimistic about our long-range prospects, our immediate international agricultural situation is extremely critical and it is highly unlikely that we will be able to avert major famine unless we undertake to reduce our consumption of meat as proposed by the campaign "Bread for the World" so that we may establish an international grain reserve as proposed by the Food and Agricultural Organization (FAO) of the United Nations. It is not well known that 80 percent of the American corn crop and 95 percent of our unexported soybeans are fed to animals or that over 50 percent of the world's production of dried milk is feed to animals.

Kendrick Holder
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It is sad that we plod along trying to improve conventional agriculture when farsighted research might enable us to virtually replace it by such measures as direct conversion of petroleum to food (SN: 8/17/74, p. 99).

Gene regulation is coming to be understood. Color genes inside grapefruits have been controlled by chemical applications to the outside of the fruit. Perhaps one day cotton cells will be grown in tissue culture vats then a depressor for the fibroblast gene(s) added to produce a crop of fibers, which will never see a gin, since they will not be connected to seeds.

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Lobster immunity

In his letter regarding immunity in lobsters (SN: 7/20/74, p. 35), Gray Johnson makes a very basic error in assuming that induction of immunity in invertebrates requires the production of antibodies analogous to those in vertebrates. Although invertebrates are capable of producing a variety of antibacterial factors, such as agglutinins, opsinins, etc., the major response in lobsters is cellular. Tissue culture studies of this cellular response are currently under way, both in our laboratory and in Dr. Stewart's lab in Halifax.

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Learning archaeology

I have just read the opening article in the Aug. 10 issue (p. 84) titled "Ice Age people in eastern America." As a student of archaeology who has spent ten years acquiring the necessary academic and professional skills, I was abhorred by the first sentence: "One of the best ways to learn archaeology is to do some—pick up your pick and shovel and go out and start digging." This is analogous to learning medicine by getting a knife and subject and start operating.

The decimation rate of archaeological sites, the primary resource of prehistoric Indian cultural heritage, is atrocious; your first-grade lessons in archaeological site destruction are not required.

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