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films OF THE WEEK

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PHOTOSYNTHESIS. 16mm, color, sound, 24 min. Demonstrates how the application of the scientific method has revealed the mechanism by which green plants transform light energy into food. Audience: high school. Purchase \$296 from Encyclopedia Britannica Educational Corp., 425 N. Michigan Ave., Chicago, Ill. 60611.

PROBLEMS OF CONSERVATION: AIR. 16mm, color or b&w, sound, 15 min. Studies the adverse effects of air pollution on health and property, and discusses steps being taken to reduce wasters in the air through technological and legislative controls. Audience: high school, adult. Purchase color \$167.50 or b&w \$86 from Encyclopedia Britannica Educational Corp., 425 N. Michigan Ave., Chicago, Ill. 60611.

RADIO ASTRONOMY EXPLORER. HQa-168. 16mm, color, sound, 30 min. Against a background of research currently performed by optical and ground-based radio astronomy, describes the design and function of the new Radio Astronomy Explorer, a spacecraft with a 1,500-foot-antenna which will detect and relay various types of radio waves emitted by the sun, earth and the planet Jupiter. Audience: college, professional, general. Free loan from NASA field libraries or National Aeronautics and Space Administration, Code FAD-2, Washington, D.C. 20546.

RUSSIA BENEATH THE SPUTNIKS. 16mm, b&w, sound, 40 min. Theme of film is the work being done by scientists in the U.S.S.R. to improve the life and living conditions of their people. Shown is work being done in the production of artificial foods (artificial caviar has already been perfected), construction of an automated subway, erection of a concrete TV tower which will be the tallest concrete building in the world, habitation planned for the Arctic Circle which is rich in mineral deposits, computers being used to guide the hands of surgeons in complicated operations, and experimentation to bring about greater prowess in athletes. Audience: general. Purchase \$300 or rental \$30 from Peter M. Roebeck and Co., 230 Park Ave., New York, N.Y. 10017. (A BBC-TV Production.)

SCIENCE AND FORESIGHT. 16mm, b&w, sound, 25 min. Examines the problem of how to cope with the advances of modern science and technology in a time when advances can bring heaven or hell on earth. Uses such examples as the sprays which destroy pests and plant diseases, bringing increased crops, but at the same time, destroying useful insects and harming animals and humans. After this and other examples, concludes that we must foresee the consequences, good and bad, of new discoveries, for only by doing this can we minimize the possible harmful effects. Audience: general. Purchase \$200 or rental \$20 from Peter M. Roebeck and Co., 230 Park Ave., New York, N.Y. 10017. (A BBC-TV Production.)

SPIDERS: BACKYARD SCIENCE. 16mm, color, sound, 11½ min. Spiders are common inhabitants of our backyards. Film shows the various parts of the spider's body and explains how these parts function. Illustrates how the spider traps insects and other small animals on which it feeds. Because the spider eats these harmful insects, it is helpful to man. Shows life cycle of spider beginning with the creation of the egg sac. Audience: primary. Purchase \$130 from Film Associates, 11559 Santa Monica Blvd., Los Angeles, Calif. 90025.

LETTERS

to the editor

Food and population

Robert V. Kline in his letter (SN: 12/7, p. 566) questions "whether the food production capacity of the world" is what I suggested (SN: 11/9, p. 460).

If man used the earth's resources properly, he would produce enough food, fiber, fuel and other items people need for their happiness so that more than 20 billion would be satisfied.

Actually, I was very conservative; since the publication of this estimate made by diverse investigators, at least ten years full of scientific discoveries have passed. Assuredly, those who take the double trouble to read and then to study SCIENCE NEWS regularly know very well that:

- During this past decade researchers, by using their God-given intelligence, have unearthed completely new, presently immeasurable sources of food and other articles, events and intangible realities which make people happy.

- That ingenious men have invented a fantastic array of devices and modern techniques for exploiting these sources more efficiently, for preserving the resulting products, transporting and distributing them suitably.

- That astronauts, having a planetary view of the earth as did the trio in Apollo, will be able to observe significant aspects of the weather, the climate, other atmospheric conditions, various crops, other forms of life on land, in the water or in the air.

- That already even unmanned craft while traveling within the cislunar space have detected things, related to the topic under discussion, which are worth millions of dollars and a ton of fun.

For example, some of our probes while in circumterrestrial orbits found that, contrary to previous calculations, all understatements, the earth holds out

(See p. 158)

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Letters from p. 156

at least 10 billion acres of arable land.

At various times in the period 1960-63 it was reported to the United Nations and to other interested groups that an average acre of land could hardly support one person comfortably. However in 1965 a group of various Japanese experts, after an investigation which was more scientific, asserted that an average acre of land can support seven average human beings, even if not all the best techniques are used. Hence, assuming that these scientists were not significantly in error, the arable land alone four years ago had the capacity to support about 70 billion humans.

Furthermore, thanks to recently invented machines, devices and modern methods, millions of acres of land formerly uncultivated are under cultivation, and millions more could easily be brought into tillage. Moreover, land is only one out of the several rich resources from which man today, technological advancements considered, can derive food, fuel and all the other things which make him happy, healthy and able to develop physically, intellectually, socially and religiously.

However, as long as those controlling the production and the availability of food with the other vital needs do not practice the natural virtues of justice, charity and the like, people will continue to suffer as a consequence no matter how small the population.

Rev. Guy J. Cyr, S.M.
Bedford, N.H.

Contagious depression

I refer to your report (which I have just seen) of Dr. Nathan Kline's work on a possible genetic link in mental illness (SN: 11/9, p. 465).

Consider the possibility that depression in a family may not be inherent but contagious. A child exposed to a parent given to frequent periods of gloom and apathy doesn't have much occasion for celebration. Entrance into a cheerful optimistic surrounding is cheering—which might indicate an area where a cure may be found. Note that a family raised on welfare will not easily remove itself from the welfare roles. A child in a family plagued by serious illness might be disposed to hypochondria. Both cannot readily be related to genetic causes.

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