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are resulting in greatly expanded exports of cereals;

3. Doubling of monthly grain exports from Argentina, supported by much larger crop yields than could normally be counted upon.

A fourth, but expected, factor is the ability of the USSR to make substantial exports of cereals. Russian agricultural authorities are also quoted as promising increased food exports if the crop season continues favorable.

The mild weather in Europe helped not only through lessening of direct food demands but through improvement of winter pasture for cattle, thereby decreasing the need for diversion of grain for feeding purposes and at the same time increasing the supply of dairy products.

While a repetition of the immense wheat crop of 1947 in the United States is not expected this year, prospects for a continuation of large supplies of wheat from the Southern Hemisphere seem good. It also seems reasonable to expect an improvement on the 1947 corn crop in this country.

Science News Letter, April 24, 1948

Do You Know?

The word *dinosaur*, loosely applied to any ancient large reptile, is correctly applicable to two orders of reptiles with scientific names, Saurischia and Ornithischia, one of which means "reptile hips" and the other "bird hips."

In the home oil-burner furnace, light-weight firebrick is said to conserve fuel; oil does not burn completely until the firebox is hot and the light-weight brick heats up more quickly than ordinary firebrick.

Collars of steel were worn by men in colonial days, it is said; they were enameled white and could be instantly cleaned with a wet rag.

A *camera* that contains a tiny furnace has been developed to take closeup pictures of hot metals.

A radar-proof container for photoflash bulbs has been developed.

An egg has been called one of nature's best packages of food value.

CHEMISTRY

Revivifying Bone Char

➤ BONE char research by the National Bureau of Standards is of particular interest to sugar refiners but the public may benefit if lower prices for this important food result. Vast quantities of bone char are used in filtering at the refineries. The principal problem is how to revivify it, that is, how to treat it so that it can be used over and over again.

Bone char, known also as animal black and animal charcoal, is obtained by the destructive distillation of organic matter at high temperature.

Although large-scale revivification of bone char by a process involving successive washing, drying, and heating has been employed in cane sugar refineries for about 50 years, improvements in revivification methods have not kept pace with modern trends in industrial operations, the Bureau states. The gradual exhaustion of adsorptive properties with use and the small loss of dust formed must be compensated for by a small and steady addition of new char.

Bone char is a granular solid adsorbent used in great quantities for the decolorization and purification of raw sugar. This is accomplished by passing the sugar liquor through a number of filters. In some refineries some of these filters are 10 feet in diameter and 20 feet deep. The char becomes exhausted after repeated use. There is a reduction in surface area of the granules.

The Bureau's studies are to obtain increased understanding of the properties of the commercial solid adsorbents, particularly bone char, and their basic behavior as related to structure. It is a long-range cooperative program of research initiated in 1939 and supported by sugar refiners and bone char manufacturers. It is under the direction of Dr. Victor R. Deitz of the Bureau staff.

The structure of bone char has been investigated by means of X-ray diffraction spectra; electron micrographs; density determinations; measurements of surface area available to known gases; chemical analysis; and studies of specific heat, heats of wetting, and heats of combustion. Complete information on the structure of the revivified char delivered to the filter and that of the exhausted char after filtration is necessary to determine the over-all efficiency of revivification.

Science News Letter, April 24, 1948