INDUSTRY

Ruhr Area Vital to Europe

This section is important not only to the industrial recovery of Germany but to western Europe. Conference discusses Ruhr production.

➤ THE IMPORTANCE of the Ruhr coal conference in Washington, attended by American and British officials, is centered around the question of sufficient production to permit the industrial recovery not only of Germany itself but of much of western Europe.

The Ruhr area in prewar days sent some coal to other countries but, more important, it supplied many nations in Europe with steel and steel products essential in industries. For several years before the war it was producing about 20% of the total world output of steel. One reason that this area achieved so much in steel production is due to its excellent coking coal, for steel production depends upon a supply of good coke. Another reason was that the area is easily reached by ships bringing iron from Sweden, Spain and other places.

In addition to the British and Americans meeting to plan greater output from Ruhr coal mines, the French have a great stake in this crucial area. One importance of the Ruhr coal to France is for a good coking coal for steel production from the great iron ore deposits in Lorraine, northern France. There is plenty of coal available nearby in the former Saar area of Germany, but it does not make good coke. Ruhr coke could be easily brought to the French iron district by the Rhine and its tributaries and canals.

The Ruhr valley is ideally situated for a great steel-producing business. It stretches eastward from the Rhine up the Ruhr river, which has been made navigable for many miles by dredging and the building of locks. It is this water transportation that permits foreign iron ore to reach the Ruhr furnaces, and permits the shipment outward of the steel manufactured.

Germany, in prewar days, had a second industrial area producing both coal and steel. This was in Upper Silesia, an area that now is within the boundaries of Poland, and is under Russian control. It never was such an important steel manufacturing region as the Ruhr, one reason being that it lacked the good transportation facilities. Its production now will probably go to Soviet-controlled areas.

Science News Letter, August 23, 1947

ANIMAL HUSBANDRY

Heat Is Bad for Animals

➤ "WELL, it's good for the corn, anyway!"

This grain of consolation, which Midwesterners like to roll on their tongues during dog-days, loses much of its value in the light of new researches on farm animals' reactions to heat. Hot weather may make corn grow fast, but it makes hogs and steers slow down their meat production, cuts cows' yield of milk and causes hens to lay fewer eggs.

These disconcerting facts were brought out in a talk by J. Robert McCalmont of the U. S. Department of Agriculture. Mr. McCalmont, who is in charge of research on animal housing, spoke as the guest of Watson Davis, director of Science Service, on Adventures in Science over the Columbia Broadcasting System.

The farm animals that produce our meat, milk and eggs, the speaker pointed out, are unable to keep cool through the evaporation of sweat. They get rid of some of their excess body moisture by rapid breathing or panting; pigs wallow in the mud; cows stand in water. But all these are inefficient cooling systems, and all the animals are likely to slow down their body fires by eating less—which is exactly what we don't want them to do.

Since the climate of the Corn Belt is not likely to change materially, the best thing that can be done for the animals is give them more comfortable quarters—cooler in summer and warmer in winter. Just how much cooler and how much warmer remains to be determined, for up to now the climatic conditions under which farm animals will operate most efficiently have not been thoroughly studied.

That is the program on which Mr. McCalmont is now working. As soon as he has learned, by as exact experimental methods as possible, the temperature and moisture conditions under which cows will give most milk, hens lay most eggs, and hogs and steers produce most marketable meat, he will draw up recommendations for a farm-animal housing program which he estimates will call for an annual outlay of $1,500,000,000.

Science News Letter, August 23, 1947

AERONAUTICS

High-Wing Monoplane Made Into Temporary Biplane

➤ MAKING a high-wing monoplane into a temporary biplane or sesquiplane is the solution offered by J. S. Conner of Los Angeles to the old problem of getting extra lift at takeoff and landing. An auxiliary pair of lower wings, which also carries the landing wheels, folds into recesses in the main wings during flight. The patent number is 2,425,306.

Science News Letter, August 23, 1947

CHEMISTRY

Waste Bark Has Valuable Plasticizing Material

➤ A WAXLIKE material known for a century to exist in the bark of pine trees promises to become one of the most important substances in the modern making of plastics.

Prof. H. von Euler of Sweden reported to the International Chemical Congress in London that this bark product, called phlobaphene, is a new and cheap softening agent or plasticizer.

Bark is a waste product in lumbering operations and its utilization is a problem. Manufacture of phlobaphenes from the bark will help solve this difficulty and give the plastics industry a new material. The plasticizers from bark are suitable for replacing plasticizers from castor oil and alkyd products, as well as the phthalic acid derivatives, made from coal.

Up to 30% of synthetic resins produced consists of the plasticizers. Thus the volume of the bark materials needed will be large.

The chemical nature of these phlobaphene bark substances has been determined by Prof. von Euler and they are described chemically as catechol esters of different saturated and non-saturated aliphatic acids, containing 16 to 22 carbon atoms.

Science News Letter, August 23, 1947