

AERONAUTICS

American Plants Can Produce 6,000 Warplanes a Year

Army Air Corps Chief Says Our Failure To Keep Abreast Due to Lack of Emphasis on Research Not Craftsmanship

THE American air industry can produce 6,000 warplanes a year or 500 a month of the type required by the Army and Navy, it is estimated by Maj. Gen. H. H. Arnold, chief of the Army Air Corps, in a current magazine article.

Though two years ago the Air Corps' planes were equal or superior to the best in Europe, today many are behind the best foreign models now in production, the commanding officer of America's air defenses asserts in *Army Ordnance* (March-April).

Additional laboratory facilities and technical personnel are urgently needed at the Air Corps' matériel division at Wright Field in order to carry out the President's air program, he declares. The magazine prints for the first time the text of a study made by Gen. Arnold.

"Our aircraft industry," he maintains, "possesses today engineering talent and skilled craftsmanship which are the equal of those to be found anywhere in the world. Our failure to keep abreast with development abroad is due, therefore, to our failure to give our program of research and development the emphasis which has been accorded those items abroad."

Besides the expanded equipment now under construction and in the process of being installed—such as a 400-mile-an-hour wind tunnel and test stands for engines up to 3,000 horsepower—Wright Field needs a competent technical staff.

"We must offer high salaries and reasonable chances of advancement" in

order to attract and retain high grade specialists, engineers and laboratory technicians, the Air Corps chief continues.

The Air Corps has already decided how many planes of each of the different types—within the broad limits of Congress' authorization to build up the Air Force—are to be purchased, Gen. Arnold reveals.

To protect the Army against losses such as that of the experimental Douglas bomber which crashed near Los Angeles a few weeks ago, more than one model of each prototype plane should be built, he feels.

Science News Letter, March 11, 1939

POPULATION

Wars Are Bred By Crowding, But War Is No Solution

IN ONE little fraction of the earth's land area—a mere five per cent—live more than half of all the people of the world.

In such figures as these, says Prof. Raymond Pearl, student of population and biologist of the Johns Hopkins University, wars are bred.

Not that war will solve the problem. It will not, emphatically declares Prof. Pearl, writing in a new book, *The Natural History of Population* (Oxford).

"If crowded country A goes to war with Empire B," he says, "beats her into submission and takes away her rich and sparsely populated colonies, obviously country A will thereupon find herself an

empire and otherwise in much the position that B was in before the trouble began, and vice versa. Pot A and kettle B will merely have changed places."

Men have a strong disinclination to go far from the place of their birth.

"Germany and Japan are loudly demanding more land so that their people may spread out, Prof. Pearl said. "But their nationals, by and large, refuse to leave the homeland in any considerable numbers to settle in the fair but sparsely populated regions available to them.

"Italy, for example, had succeeded up to the time of the World War in placing only about 8,000 of her people in all her African colonies together. Again, the colonial empire that was Germany's on July 1, 1914, had, all told, but a meager 24,000 or so German inhabitants.

Distribution of the world's goods and their transportation from their origin to their place of use is a vital problem.

"Somebody," says Prof. Pearl, "must haul to these city-dwelling near-termites with only two legs, much too large heads, and no exoskeleton, all that they eat, all that they wear, and everything that protects their soft bodies from the rigours of the physical environment.

"Furthermore, this transport must never cease. If it stops for even a short time Death stalks in and starts his reaping, discriminatingly mowing first the lush meadows where the lower castes grow, but very quickly getting on to the uplands, where the growth is sparser but more choicely flavored, provided the freight trains do not soon start moving again."

Science News Letter, March 11, 1939

BIOLOGY

Shawmut Sally Queen Is First "Test Tube" Calf

AMERICA'S first "test tube" calf is Shawmut Sally Queen, born recently on the farm of Richard S. Schomp near Stanton, N. J. Her father and mother were never within 15 miles of each other. Insemination was accomplished artificially, under a cooperative arrangement for the improvement of dairy cattle by these means, set up under the auspices of the New Jersey Agricultural Experiment station.

Arrival of "test tube" calves is expected to be almost a daily occurrence from now on. A second has already been born, at the Pittstown farm of Clifford Snyder. About 2,600 cows are now enrolled in the new breeding unit.

Science News Letter, March 11, 1939

SCIENCE NEWS

LETTER SUBSCRIPTION COUPON

To Science News Letter, 2101 Constitution Avenue, Washington, D. C.

Start my subscription to SCIENCE NEWS LETTER for 1 year, \$5
 Renew 2 years, \$7

Name _____

Street Address _____

City and State _____

(No extra postage to anywhere in the world)