



MANEUVERABLE TANK—The M-47 mounts an embankment showing its deadly 90mm, high-velocity gun which is operated by two separate electro-hydraulic fire control systems. "Many hundreds" of these new tanks are being readied for shipment to troops.

TECHNOLOGY

New Medium Tank

► THE FIRST model of a medium-weight tank to be turned out for Army Ordnance since World War II is rolling off the assembly lines at the American Locomotive Company's plant, Schenectady, N. Y. The tank also is in production at the Army's Detroit arsenal.

Known as the M-47, the tank was ordered into production in July, 1950, even though the design had not been perfected. However, the Army knew it wanted an M-46 "Patton" tank equipped with the turret of the T-42. Army officials thought the details of that combination could be worked out while the tank was being produced.

After 10 months, the first unperfected tanks came off the assembly lines. Engineers found most of the troubles could be cured by normal automotive remedies. As cures were found, they were introduced along the assembly line and built into subsequent tanks.

The new and "bug-free" tank recently was approved by the Army's field forces for delivery to troops at home and abroad.

When ready for action, the tank weighs 48½ tons. It is 28 feet long by 11½ feet wide and 10 feet high, and will carry a five-man crew.

The Army said the M-47 is made superior by an increased probability of a first-round hit; a higher velocity gun that is more effective; a device that automatically re-aims the gun after each round is fired so that adjustments are not needed to correct for recoil effects; two separate fire-control systems, one operated by the gunner and the other by the tank commander; improved field of vision which allows targets to be spotted more easily; improved armor protection, and high maneuverability.

The tank carries a 90-mm gun, two .50 caliber machine guns, one .30 caliber machine gun, and radio transmitting and receiving equipment.

Science News Letter, April 26, 1952

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BIOCHEMISTRY

Humidity Extremes Affect Vitamin Needs

► HUMIDITY AFFECTS the vitamin needs of the body, Drs. R. A. Collins, M. Schreiber, H. Nino-Herrera and C. A. Elvehjem of the University of Wisconsin reported at the meeting of the Federation of American Societies for Experimental Biology in New York.

Their findings were made on rats and the scientists do not know yet to what extent humidity extremes may affect human need for vitamins. But many facts important for human nutrition have come from such studies on rats.

When young white rats were kept in a dry air environment, their paws became dry and scaly, whether they had a complete or a vitamin-deficient diet. The rats fed all the vitamins, however, recovered from their condition, while those deprived of vitamins did not.

In very moist environments, with relative humidity at 95%, rats on the vitamin-deficient diet developed a reddish pigment which stained the fur on the head and face so that it had a blood-caked appearance. Rats fed normal amounts of vitamins were not affected this way.

Whether or not this applies directly to humans, it should help indirectly by showing that diet or vitamin studies on rats need to be made under standard conditions of humidity.

Science News Letter, April 26, 1952

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