

TECHNOLOGY

Promises Due for 1960's

Synthetic foods, new building materials, remote-controlled highways and automatic mailing expected in the 60's. Weed-killers injected into soil instead of sprayed on plants.

PLASTIC HOUSES, picture-on-the-wall TV, high-speed cooking and foods made of chemicals are only a few of the triumphs expected to come during the 1960's.

A survey of scientific sources indicates vigorous, startling changes are in store for Americans. Some are already on the way.

During the 1960's, housewives will be able to buy more dehydrated foods requiring no refrigeration, such as powdered tomato juice. Also expected are laboratory-made foods, consisting only of common chemicals, which will be palatable and have nutritional value. Such synthetic foods will be used widely to relieve the serious world shortage of food.

Coming also will be new and improved fabrics for clothes, including men's winter business suits made of wool that can be washed at home. Significant strides already have been made in creasing wool permanently and giving it resistance to moths and rot. Perfection of a treatment to make cot-

ton fibers repel grit and dirt particles means expanded use of cotton, especially in wash-at-home rugs.

The promise of plastics as a house-building material will be developed, and houses of the late 1960's may have new and interesting shapes. Gabled roofs will begin to give way to domes made of plastics or thin-shell concrete. The box-like design of today's typical house may be replaced by sweeping geometric curves designed to "squeeze the most living" out of floor space.

In house design, greater attention will be devoted to colors, textures and acoustics. Today's slick, cold, formal plaster wall will yield to "cozier" surfaces having the feel and appearance of rich fabrics. Whole ceilings or walls will glow with electroluminescent light to replace inefficient, dirt-catching chandeliers.

Central air-conditioning will be common in new houses, and house heating using the sun's rays will be making inroads on con-

ventional systems. Kitchens will have infrared or high-frequency electronic ovens to cook heavy roasts in minutes.

Radical construction techniques will be used to meet the skyrocketing demand for houses. Strong epoxy resins that can glue steel to glass will replace nails in many cases, giving faster construction and tighter joints with fewer materials. Aluminum will be used structurally as well as decoratively. Lumber will be glued together in laminations for less warpage. Whole panels of prefabricated brick wall will be available for quick erection.

Other prefab walls will be made of plastic having a colorfast, weather-resistant outside, a decorative finish on the inside and good insulation stuffed in between.

Picture-on-the-wall TV will be achieved, along with world-wide television broadcasting, perhaps using earth-circling satellites to relay programs from one continent to another. Broadcasting in stereo, using FM to carry both sound channels on one frequency, will be achieved.

More Frequencies Needed

Some presently unknown technique—a real breakthrough—is expected that will effectively make more radio frequencies available for commercial, amateur and scientific purposes.

To handle the volume of mail, the U. S. Post Office will become completely automatic. Letters will be opened by machine, transmitted in the handwriting of the writer to the destinations by radio and folded and sealed by machine into an envelope for delivery. Secrecy of the mails thus will be preserved.

On farms, electrically operated materials-handling equipment will come into wide use. Automatic harvesting is near, with machines promising to relieve the farmer of heavy manual labor in barn-cleaning and handling feeds on dairy, poultry and livestock farms.

Emphasis on insect control will turn from the chemical bug-killers of cranberry fame to biological controls—like the milky spore disease that kills Japanese beetles. Other chemicals, injected into the soil, will be taken up by plants to make them insect-resistant.

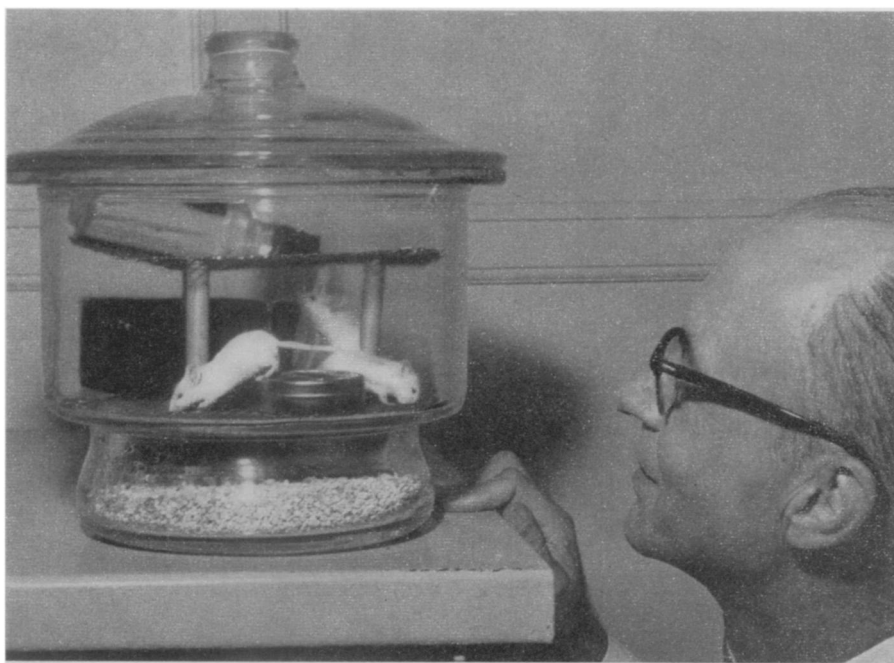
Industry will intensively exploit automation. Computers will design other computers. Machines will translate at 2½ cents a word from a foreign language into English. Others will do a literature look-up job in five seconds that would take a man three months.

Salt water of the oceans will be converted to fresh and pumped through long pipelines to where needed, perhaps with nuclear energy driving the huge pumps. Metals will be custom designed to fit any job by adding impurities or controlling dislocations in the molecular lattice structures.

Also the 1960's will see the beginnings of remote-controlled traffic highways. Doctors will use electronic machines more extensively for precise diagnoses.

These are but a few of the major advances expected in the exciting ten new years now on the way.

Science News Letter, January 16, 1960



MOUSETRONAUTS—Two tiny white mice live in a sealed-off glass and plastic world to aid space medicine. Connected to the mouse jar by a system of pumps is a fluorescent-lighted plastic tank which holds about four quarts of algae and water. This mixture provides oxygen for the mice while the mice supply carbon dioxide for the plants. This closed system has previously been tested up to 292 hours with one of the mice. So far the mice have been fed laboratory food in pellet form, but later they will be fed algae from the tank. Dr. Russel O. Bowman, research scientist in biochemistry in Vought's Research Division, believes that algae offer the greatest potential as an all-round food for man in space. Algae can be grown on the trip to the moon or Mars and can be treated to taste like steak, roast beef, fish, coffee, tea, desserts, and dried they make green cornflakes.