



Pampered, But Not Pets

► GRASSHOPPERS live on a luxury diet compounded of dried brewers' yeast, skim milk powder and alfalfa meal, in cages in the laboratory of Dr. Mykola H. Haydak at the University Farm of the University of Minnesota. Their food is served up in appropriate little dishes, made by prying the cork liners out of crimped caps from soft drink bottles. Water is supplied in little vials with cotton plugs, at which the little 'hoppers suck.

All this doesn't mean that Dr. Haydak is so fond of grasshoppers that he keeps them for pets. Far from it: they are the destined victims of tests of the relative deadliness of various kinds of insect poisons. He finds it easier and cheaper to rear his insect "guinea pigs" from eggs found in the soil than to go out and capture them in the wild.

Some of the grasshoppers were permitted to live out their full life span unmolested in the cages. Under constant indoor conditions, with electric light as their "sun" a large part of the time, the first deaths of adults occurred 45 days after hatching, and 43 days later half of the adults were dead. The last insect, a male, died on October 26 at the approximate age of 152 days.

Science News Letter, April 17, 1943

Each potato seed piece should contain at least one vigorous eye and weigh over an ounce.

Hatcheries reported the number of chicks on order March 1 to be 77% greater than last year.

Most textile fabrics can be made fire-resistant by rinsing in a gallon of water and one pound of ammonium sulfamate.

NUTRITION

Gluten Makes Bread

It is the gluten in wheat flour that makes it better for bread than any other cereal. Glutens hold ingredients together.

► THANK the gluten in wheat for the quality of our daily bread, Dr. John C. Baker, chief chemist of Wallace & Tierman Co., Newark, N. J., told the American Association of Cereal Chemists.

"Gluten gives wheat flour the remarkable property of bread making shown by no other cereal. The properties of the gluten control the characteristics of the bread," he said.

Gluten separated from wheat flour "is a material that is like unvulcanized rubber, particularly like heated unvulcanized rubber, which when stretched and released does not spring back to its original position."

Dr. Baker reported on extensive laboratory studies made under his direction on the effect of oxidizing agents upon the baking properties of flour.

The glutens hold the ingredients together in the dough. They must possess strength.

"One can take a gluten and increase its strength by thorough washing or by fermentation with yeast or by manipulation in an oxidizing agent, the effects in all cases reaching the same maximum," the speaker continued. "This indicates that the materials which are responsible for the change in gluten properties by washing and fermentation or oxidation are to be found in the water soluble portion of the flour extract and point to it as a profitable problem of research."

The greatest perfection in the bread making art, Dr. Baker pointed out, is to obtain a loaf in which the crumb or soft inner part contains "the maximum number of cells arranged in the most uniform bubble structure. The object of bread making . . . is to produce the maximum number of small bubbles in the dough and to retain them or renew them throughout the bread making process."

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RESOURCES

Few Women Training

► QUALIFIED women are failing to take advantage of the free scientific training now being offered throughout the country. This charge was made by George W. Bailey, of the Office of Scientific Research and Development, at a conference in Washington held by the Institute of Women's Professional Relations.

Scientifically trained women, particularly physicists, are urgently needed to replace men leaving for the armed forces. Women already adequately trained are known to be scarce, but women are not enrolling in sufficient numbers in the tuition-free courses to meet the present demand, Mr. Bailey asserted. Today only 22%, or 118,000 out of 900,000 of those taking the engineering, science, management war training courses, are women.

Too few women seem aware of the widespread opportunities for scientific training and they appear reluctant to tackle technical subjects, he continued.

A number of fields are being opened

to women for the first time. The U. S. Weather Bureau is offering training courses in meteorology. The Civil Aero-

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