

STATISTICS

# Release Smoking Statistics

➤ ABOUT HALF the men and one-fourth of the women in the United States smoke cigarettes daily. But one and one-half million have quit smoking entirely in the last year and a half.

These figures are estimates based on a representative sample of about 40,000 persons surveyed by the U. S. Bureau of the Census for the National Cancer Institute of the Public Health Service, Department of Health, Education, and Welfare.

Most of those who gave up cigarettes during the last year and a half were under age 45.

"It should be remembered," the Government statisticians pointed out, "that some of those who quit smoking recently may start again at some future date."

Further information about the smoking habits of Americans was given by the Government scientists as follows:

The 38,000,000 cigarette smokers include 25,000,000 men and 13,000,000 women.

About 4,000,000 of the men who are cigarette smokers consume less than half a pack a day. One-half million smoke more

than two packs a day. The majority smoke 10 to 20 cigarettes a day. Two million others smoke cigarettes occasionally.

Two out of every three men 25 to 64 years old in the total population smoke regularly in one form or another.

Non-farm men are heavier smokers than those who live on farms and white men smoke more than non-whites. In the South, for example, about one-fourth of the white men who are cigarette smokers use over one pack a day, whereas only about one-eighth of the non-whites smoke this much.

Two and a half million men smoke one or more cigars daily; 7,500,000 smoke them occasionally.

Three and a half million men smoke a pipe regularly; 4,500,000 occasionally.

The findings indicate that there are larger percentages of smokers among men of the 25 to 64 group than among those below or above those ages. Greater diversity in smoking practices among women was disclosed, ranging from 35% of the 25 to 34 group, to only four percent of those 65 and over.

Science News Letter, July 2, 1955

BIOCHEMISTRY

# Plants Use Molybdenum

➤ MOLYBDENUM, THE metallic element used in modern lubricants, does a kind of lubricating job for green plants, it appears from studies reported at a symposium on micronutrients held at Johns Hopkins University, Baltimore.

The green plant lubricating job done by molybdenum is lubricating in the sense that the metal helps along the mechanism by which plants use nitrate as a source of nitrogen for their nourishment and growth.

The studies reported to the symposium showed that molybdenum plays a key role in this chemical process by serving as an electron donor. The tests were made by Dr. Alvin Nason of the McCollum-Pratt Institute, Baltimore, and Dr. H. J. Evans of North Carolina State College in Raleigh.

In the metabolism of plants using nitrate as a nitrogen source, the compound must be first taken up by the cells and then ultimately reduced to ammonia. When a plant is supplied with isotopically labeled nitrate, Dr. Nason reported, the "tagged" element rapidly spreads throughout the tissues and is incorporated into all the major nitrogen fractions.

Some system in the plant, this shows, has reduced the nitrate nitrogen to a nitrogen form which the plant can utilize.

The enzyme system that can reduce the nitrite to the necessary reduction level of nitrite has recently been isolated from the tissues of higher plants as well as microorganisms. It is called nitrate reductase.

Drs. Nason and Evans have isolated a

highly purified nitrate reductase from soybean leaves. This enzyme system requires, in addition to the protein nitrate reductase, reduced coenzyme I (a niacin derivative) as a hydrogen donor, as well as a riboflavin derivative and molybdenum.

It has been shown in this system that electrons are transported from the reduced coenzyme I to the flavin and eventually to molybdenum, which can now in turn reduce the nitrate to the nitrite.

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HISTORY

# Explorer's Gift Coats Cleaned After 176 Years

➤ FEATHER CLOAKS made from rare and extinct birds, presented to Captain James Cook before he was killed in Hawaii in 1779, have been overhauled, cleaned and exhibited at the Dominion Museum, Wellington, New Zealand.

Cleaning with a mixture of detergent and water brought out for the first time the brilliant reds and yellows of the cloaks. The 20,000 feathers are individually attached to the cloak's backing.

Native hunters collected the feathers to adorn the cloaks, one of which is said to have taken a century to make. Only high-ranking noble women and tribal princesses were entrusted with sewing the rare cloaks.

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# Questions

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NEUROLOGY—What is the effect of drugs on artists' work? p. 4.

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DERMATOLOGY

# Hydrocortisone Prevents Sunburn by Screening

➤ HYDROCORTISONE, CLOSE relative of anti-arthritis cortisone, will prevent sunburn. It does this by filtering or screening out the light rays that do the sunburning.

Anti-sunburn preparations are not likely to contain it, however, because it is not as efficient in this respect as the much cheaper tannic acid.

Studies with human volunteers showing the effects of hydrocortisone and tannic acid in screening the skin from sunburning rays were reported by Dr. Norman B. Kanof of New York University Post-Graduate Medical School and University Hospital, New York, at the meeting of the Society for Investigative Dermatology in Atlantic City, N. J.

Hydrocortisone failed as a remedy for either sunburn or heat burns when applied after the burn.

Science News Letter, July 2, 1955

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