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PRESS MATERIAL FOR USE IN RAT CAMPAIGNS

TO THE EDITOR: A selection of the following short news items, prepared in the Biological Survey, United States Department of Agriculture, may be used from day to day during the progress of the local campaign for the extermination of rats to aid in arousing public interest in the work.

\$200,000,000 DAMAGE BY RATS ANNUALLY

In the United States rats destroy more than \$200,000,000 worth of produce and other property each year. This is on the basis that each rat destroys \$2 worth of property annually, and that there are as many rats as people. That this basis is conservative will be realized by considering the number of rats on the average farm in comparison with the number of people on the farm. In an anti-rat campaign directed by the Biological Survey of the United States Department of Agriculture in Bell County, Texas, where the human population is less than 50,000, more than 315,000 rats were killed in six weeks, or over six rats for each person, and the campaigns fell far short of getting them all.

The magnitude of the damage caused by rats may be more clearly realized from the fact that these pests destroy every year as much as 200,000 people can produce, and that this tremendous loss more than equals the total value of all crops in the State of Louisiana.

Rat campaign material from
Press Service, U. S. Depart-
ment of Agriculture.

RATS DESTRUCTIVE TO CORN IN STORAGE

Rats feed upon all kinds of animal and vegetable matter; they are equally at home in the open field, in river banks, and in buildings of all descriptions, destroying agricultural crops when newly planted, while growing, during the harvest season, in storage, during transit, in the mill, in the shop, and in the home. They ruin by pollution many times as much as they eat.

One of the most common complaints of the farmer against rats is that they cause great losses of chicks and eggs. This kind of damage is more conspicuous than the slow, steady drain on grain and other farm products. Rats are expert climbers and often damage standing corn in the fields. Corn in the shock is liable to still greater injury, but by far the greatest loss is to corn in storage, according to the United States Department of Agriculture.

A questionnaire sent to 200 representative farmers in North Carolina disclosed that an average of 5 1/2 per cent of the stored corn in the State is destroyed each year by rats. More than half the entire corn crop of the United States is held in storage for a period of at least three months and in that time is susceptible to injury by rats. If the average damage done by them to stored corn for the entire country is only one-tenth of what it has been shown to be in North Carolina, even then we would have a loss of more than \$7,000,000 to corn in storage alone.

Rat campaign material from
Press Service, U. S. Department
of Agriculture.

FLOODS AND FIRES CAUSED BY RATS

Rats cause many conflagrations by gnawing matches and by storing them in warm chimney corners, and by gnawing the insulation of electric wires. Another fire hazard occasioned by rats is in the leaching out by rain of the phosphorous in rat paste exposed to poison the pests in fields. The phosphorous may be reduced to an inflammable concentration that destroys the growing grain, says the United States Department of Agriculture. Not even lead pipes offer a serious obstacle to thirsty rats as they are often gnawed through, resulting in damage by flooding. Tunneling of rats under the foundations of buildings causes walls to crack by settling, and thus weakens whole structures.

RATS MENACE PUBLIC HEALTH

As more is learned about the rat the more inimical to the human race is it seen to be. During the Middle Ages the "black death," or bubonic plague, which was spread through the agency of rats, killed nearly half the population of the world. Twenty-five million persons are estimated to have died in Europe during this epidemic. The plague recently gained entrance into the United States, but was stamped out by prompt rat-extermination work by the United States Public Health Service and cooperating city organizations. During an anti-rat campaign in New Orleans nearly half a million rats were examined for plague symptoms.

Rat campaign material from
Press Service, U. S. Depart-
ment of Agriculture.

RED SQUILL A POISON SPECIFIC FOR RATS

The United States Department of Agriculture not long ago completed an investigation of powdered red squill as a rat poison. This study was of great value because it provided the public with an effective means of controlling rats without unduly endangering human beings and other animal life. Most animals are protected against red squill because they find it objectionable in taste on account of the nettle-like sting produced by its calcium oxalate raphides content. Even if eaten, its emetic property is such as to cause it to be promptly vomited. Red squill therefore approaches the unique position of being a poison specific for rats and mice, since for some unknown reason they do not appear to object to its taste, nor does it affect them as an emetic.

Red squill has proved a most efficient means for destroying rats; there is one record of 578 rats killed through baits mixed with only four ounces of powdered red squill. During a recent rat campaign in Vienna, Austria, in which more than a quarter of a million baits of various kinds were exposed, squill proved to be the most effective poison used. For best results it should be mixed with a variety of baits, preferably with ground meat, fish, or bread, in the proportion of 10 or 12 parts of bait to one part of squill.

Rat campaign material from
Press Service, U. S. Department
of Agriculture.

CITY DUMP AN INCUBATOR FOR HORDES OF RATS

The rate of multiplication of rats depends on available food and shelter. City dumps provide both in abundance, and as a result are usually the centers of community rat infestation. The large numbers of rats that come from dumps to near-by residences or farms are evidenced by well-worn trails. Well-fed rats mature quickly, breed often, and have large litters. Poorly fed rats, on the contrary, breed less frequently and have smaller litters. According to the United States Department of Agriculture, the rat under normal conditions is the most prolific of all mammals, litters of more than 20 having been recorded, while close to 10 is the average for the Temperate Zone. Rats breed normally six to ten times a year, the period of gestation being only 21 days, and females breed when only three or four months old. At this rate the progeny from one pair of rats, all breeding uninterruptedly and without losses, would, at the end of three years, be increased to 259,709,482 individuals.

BARIUM CARBONATE RECOMMENDED FOR DESTROYING RATS

Poisoning with barium carbonate is one of the most successful means of destroying rats known to the Department of Agriculture. This compound has the rare combination of being both cheap and effective.

One part of powdered barium carbonate is mixed with four parts of bait, and enough water is added to make it moist. A variety of three or more kinds of bait used separately is advisable, because these not only give the rats a choice of food, but also tend to allay their suspicions. Baits put out in small paper bags or wrapped in small squares of paper and scattered promiscuously about rat-infested premises will facilitate finding and picking up uneaten baits the following morning.

Rat campaign material from
Press Service, U. S. Department
of Agriculture.

GASSING RATS IN BURROWS EFFECTIVE

One of the surest methods of destroying rats in their burrows in the ground and under tight floors is by fumigation. Calcium-cyanide dust forced into the burrows by means of a dust pump is the most effective fumigant for this purpose known to the United States Department of Agriculture. A few strokes of the pump will fill the burrow with the dust, which quickly generates hydrocyanic-acid gas, in which no animal life can survive more than a few moments. The exhaust of an automobile also may be used effectively by directing it through a garden hose into the rat burrow and allowing the engine to run at a moderate speed for ten minutes or more. Although gas is very valuable as an aid in rat control on farms, it can not reach the rats in all situations and, on account of its great danger to human life, should not be used inside buildings.

Rat campaign material from
Press Service, U. S. Depart-
ment of Agriculture.

TRAPPING RATS EFFECTIVE BUT SLOWER THAN POISONING

Trapping rats, while effective, is slower and more laborious than poisoning, according to experts of the United States Department of Agriculture. The essential requisites of successful trapping are the use of plenty of traps, a variety of baits, and persistent effort until all rats have been destroyed.

The common snap trap is the most successful kind for general use, although No. 0 or No. 1 steel traps are efficient. Traps should always be set so that the rat will pass directly over the trigger in following its natural course close to walls and behind objects. If boards are leaned against the wall they will form a natural runway for rats and a good setting place for traps. Baits that may be readily fastened to the trigger should be used, such as bread, fish, nut meats, or fresh vegetables. These may be made more attractive by the addition of rolled oats or corn meal sprinkled lightly over the trap.

Although large catches are sometimes made in the cage type of trap in a single night, the average catch by this means is far below that of the snap trap. Neither this nor any other more complicated trap is recommended for general use.

Rat campaign material from
Press Service, U. S. Department
of Agriculture.

RATS HAVE MANY ANIMAL ENEMIES

Rats are more abundant within the shelter of buildings than in the open field, because man is generally less of a menace to them than are their enemies in the wild, says the United States Department of Agriculture. If the relation of hawks and owls to rat infestation on the farm were better understood, the killing of such birds of prey would be limited to those actually caught destroying poultry, and the remainder would thus be left to their regular work of reducing the number of injurious rodents. Twenty rat skulls have been found in pellets taken from the nesting site of a single pair of barn owls.

Cats that are of real value as ratters are rare. Ferrets are valuable only when handled by experienced men aided by good dogs. The use of dogs in killing rats is recommended where practicable--small terriers, particularly when taught to hunt by themselves, are most useful and sometimes will keep a farm entirely free from rats.

RAT PROOFING THE SUREST WAY TO RAT RIDDANCE

Poisoning rats, trapping them, and carefully applying other extermination methods will give temporary relief, but there is always the danger of reinfestation so long as there are rats in a neighborhood and they find it possible to get inside a building. The only sure remedy for the rat nuisance within buildings is rat-proof construction. Without it rats will get in by gnawing if necessary, to enjoy the shelter and the easily obtained food. Most modern buildings and many older ones are so constructed as to be proof against the ingress of rats or could be made so at a relatively small cost. Rat-proofing of buildings, wherever it can be accomplished at reasonable expenditure, is recommended by the United States Department of Agriculture as the best and most permanent means of rat riddance. Wire screening of 1/4-inch mesh is well adapted for closing basement windows and other openings. It may also be wedged into openings around pipes where they enter buildings. Buildings may often be made rat-proof by means of concrete retaining walls.

Rat campaign material from
Press Service, U. S. Department
of Agriculture.

TRASH ACCUMULATION A PROLIFIC SOURCE OF RATS

Suitable city ordinances and competent inspection should make impossible the accumulation of trash that furnishes breeding places for rats. It has been remarked that rubbish and rats both begin with "r" but that this is not the only relation between the two. The United States Department of Agriculture points out that rats may be expected wherever rubbish is to be found, and any continuous accumulation of filth is sure to attract them. A great deal of miscellaneous material is commonly stored and carried along for months in yards, cellars, and basements, and this should be disposed of. Given a safe home in basements, under chicken houses, or in other such protected places, nature will see to it that there is no lack of rats.

OPEN GARBAGE CANS SUPPORT RATS

One of the most common sources of rat food about the average city home is the garbage can. No food supply offers a greater attraction to the rat. This omnivorous pest craves a variety of food and a balanced ration, and both are found in the refuse from the table of the average family. Frequently, also the garbage can provides the only available source of food for rats around the well-appointed modern home, so that attention to this one particular is sometimes all that is required to deal effectually with the pests. The United States Department of Agriculture emphasizes the fact that exposed garbage, whether in open cans, in cans with loosely fitting lids, or not in cans at all, encourages rat infestation of the premises, of the neighborhood, and of the city or county. Many cities and towns have passed ordinances requiring that garbage cans have tight-fitting tops, and in some of the more progressive of these the ordinances are being enforced with good effect.

Rat campaign material from
Press Service, U. S. Department
of Agriculture.

RATS THE MOST DESTRUCTIVE ANIMALS IN THE WORLD

No agricultural pest in existence affects a greater number of people than the rat, says the United States Department of Agriculture, and no other pest is so closely associated with both the business and domestic sides of farm life. Yet losses by rats have been sustained for so long that commonly they have been taken as much for granted as the forces of nature. But in the present day of rigid accounting and efficiency, even losses from the elements are insured against, and the time is rapidly approaching when the constant drain through rat depredations will no longer be tolerated.

The uncanny elusiveness of rats necessitates a matching of wits if one is to be successful in destroying them. In the war on rats one is not confronted with a stupid insect that requires only the employment of a routine control procedure for wholesale destruction, but with a wary animal that has instincts closely akin to human intelligence.

To be rid of rats would be worth a thousand times what it might cost. It is to the interest of every home, high and low, rich and poor, to cooperate earnestly in furthering a sentiment of intolerance against this filthy and destructive pest.

Rat campaign material from
Press Service, U. S. Depart-
ment of Agriculture

COOPERATIVE EFFORT URGED AGAINST RATS

The best way to prevent loss of property and menace to health by rats is through organized campaigns for rat destruction. Success in such efforts is not so hopeless as might appear at first. An intensive campaign, scientifically directed and whole-heartedly entered into, would in a few weeks materially reduce rat infestation, according to the United States Department of Agriculture.

Although the control of rats is primarily a problem of the individual farmer or householder, rat infestation is also a responsibility of the community at large. The elimination of rats from a whole community can be accomplished only by organized effort. A cooperative campaign, therefore, is highly desirable. Organized anti-rat campaigns are increasing in popularity and are coming to be part of the regular program in many counties and municipalities. Such campaigns are proving of great value from economic, educational, and sanitary standpoints.

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ment of Agriculture

FEDERAL DEPARTMENT HELPS IN WAR ON RATS

The Biological Survey of the United States Department of Agriculture is making a thorough investigation of methods of rat control. A large number of poisoned baits, viruses, fumigants, and other preparations as well as numerous traps, contrivances, and devices to destroy rats are being collected and subjected to comparative tests to determine their relative efficiency. It has been found that there is no "sure cure" for the rat nuisance other than rat-proof construction, but that certain methods of attack are more practical and will give far more consistent results than others. It has also been found that still other methods, for which extravagant claims have been made, are worthless. The information that is being obtained by the department and disseminated as rapidly as possible is proving of inestimable value to farmers and town and city dwellers. It is especially beneficial not only in preventing useless expenditure of money, time, and effort in inefficient control methods, but also in stimulating efforts with a view to reducing the number of rats through following the effective methods recommended.