

to the abundance of rats. From all points of view the immediate incineration of garbage is the only proper treatment and method of preventing the increase of rats and the breeding of flies, those unsurpassed agents in the spread of our worst infectious diseases.

HOW TO DESTROY RATS AND MICE.

Trapping.—One of the most effective methods of destroying these pests is trapping. The best traps are those of the spring or guillotine type. Such traps may be baited with any of the baits preferred by these animals, such as meat, oatmeal, cooked eggs, or fruit. It is necessary to use a large number of traps, the more the better. The wire cage traps are excellent when rats are abundant.

Poisoning.—Where there is no danger of food becoming contaminated, or of other animals eating the bait, poisoning is a speedy method of destruction. But naturally the greatest care must be exercised in the use of poison. In destroying rats and mice in houses it is inadvisable to use poison, not only on account of its danger, but the occurrence of the inaccessible corpses of these animals is likely to prove objectionable. *Barium carbonate* is a cheap, tasteless, and odourless poison. It may be mixed in a dough composed of four parts of meal or flour and one part of the poison, or a stiff dough of eight parts of oatmeal and one of poison.* The poisoned dough should be placed in the runways of the animals. *Strychnine* is a well-known and rapid poison, usually used in the form of strychnia sulphate. The dry crystals of this chemical are inserted in baits, such as meat or cheese. With oatmeal or grain, such as wheat or corn, it is used in the form of a syrup which is made by dissolving half an ounce of strychnia sulphate in a pint of boiling water; a pint of thick syrup is added, and the whole mixture is stirred thoroughly. Oatmeal should be moistened with the syrup, and grain should be soaked over night. *Arsenic* is used in most rat poisons. It may be fed in the form of powdered white arsenic, used as described above. A good bait is prepared by thoroughly mixing a pound of oatmeal, a pound of coarse brown sugar, and a spoonful of arsenic. This is placed in the runs of the animals. *Phosphorus* is a common ingredient of rat and other animal poisons, but owing to the danger involved in mixing it and in the subsequent use of the home-made or commercial preparations on account of its very great inflammability, its use as a rodent poison is not recommended.

The value of domestic and wild animals as rat destroyers.—The great value of small terriers as rat-catchers is too well known to need emphasis. They are often used in conjunction with ferrets, the latter animals being employed to drive the rats from their runways. But ferrets should always be muzzled when hunting.

While weasels are regarded as "vermin" and enemies of chickens and young game birds, there is no doubt that as rat destroyers they have few superiors. When they can secure rats they will usually leave the chickens unmolested.

Among the active natural enemies of rats and mice around farm buildings, snakes occupy an important place, and this fact should be realized. Only one species of Canadian snake—the rattlesnake—is poisonous; our other native snakes are not only harmless but are useful as destroyers of rats, mice, and other pests, and they should therefore be protected.

In country districts, farmers should protect owls, the greatest of mice destroyers; and many of the hawks are valuable as destroyers of noxious rodents. The continued destruction of these natural enemies of rats, gophers, and mice has been largely responsible for the increase in the numbers of these food-destroying rodents, and it is important that the valuable services of these birds should be recognized.

*The methods of preparing these poisoned baits are those recommended by the Biologist Survey of the United States Department of Agriculture.