



FACT SHEET | RODENTICIDE RESISTANCE MANAGEMENT



RODENTICIDES | IMPORTANT TOOLS FOR PROTECTING CROPS, STORED PRODUCTS, AND HUMAN AND ANIMAL HEALTH

WHAT ARE RODENTICIDES?

Rodenticides are valuable tools used by farmers and pest management professionals to protect human and animal health from rodents, which can spread disease and destroy food crops and property.¹

CROP LOSSES BY RODENTS CAN CAUSE SIGNIFICANT ECONOMIC IMPACTS.

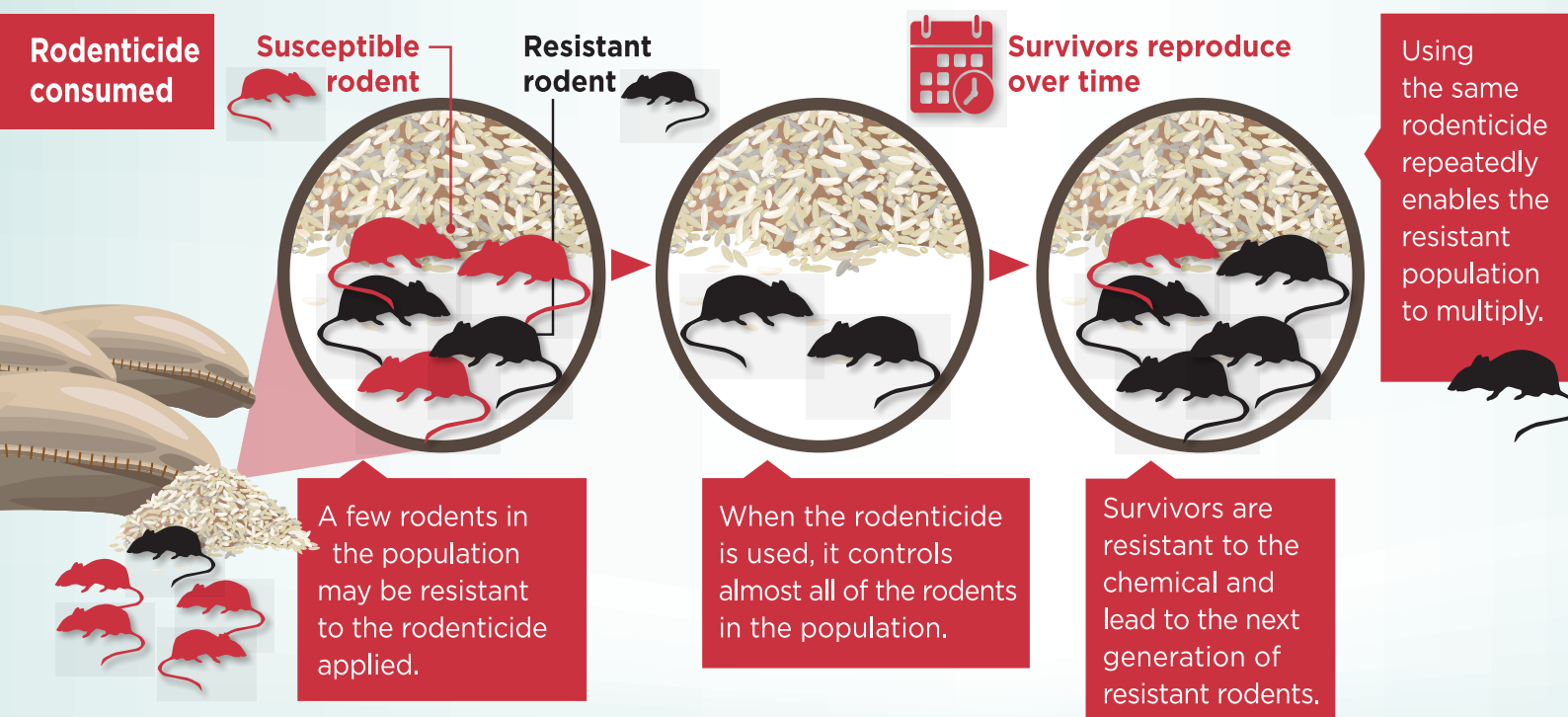
SOME PLACES, LIKE INDIA, CAN SEE AS MUCH AS 30% OF THEIR POST-HARVESTED GRAINS LOST DUE TO RODENTS.²



Fifty years of research shows that the use of anticoagulant rodenticides, which prevent blood clotting, is the most effective method for controlling rodent infestations. The continued use of the same rodenticides can lead to the development of resistance in some rodent species.¹

HOW DOES RODENTICIDE RESISTANCE EVOLVE?

Some rodents have a naturally occurring genetic mutation that protects them from certain anticoagulants. Without effective control, a mixed population will become a resistant population over time as the resistance gene is passed to its offspring.³





MANAGING RODENTICIDE RESISTANCE

The plant science industry works with pest management professionals and farmers to identify resistance issues and to provide guidance and tools that help them manage resistance.

Q & A

Q. How can the development of resistance be prevented?

A. Anticoagulant resistance can be prevented by first analyzing the status of the rodent infestation, and then, determining the best control method – chemical or physical – for managing it. Some options involved in an integrated pest management (IPM) strategy include: using physical control techniques such as traps; blocking the rodents' access to food, water or shelter by modifying environmental structures and food storage; and using anticoagulant and non-anticoagulant rodenticides according to label directions. Farmers and pest control managers are encouraged to keep records of the infestations and monitor regularly to prevent and manage resistance. In addition, industry experts conduct studies to combat anticoagulant resistance in different geographies and have developed several resources, such as a checklist for when to use rodenticides, which helps farmers prevent resistance from occurring on their farms.

Q. Are there certain environmental conditions that lead to greater resistance?

A. Yes. Some environments, including farms, may have food sources or items that could provide shelter to rodents. Farmers are encouraged to employ best practices, such as containing food items and removing objects that could act as shelters, to lessen their chances of developing a rodent infestation. In turn, this reduces the need to use anticoagulants to remove rodents, thereby reducing the probability that resistance will develop.⁴

SOURCES

¹ rrac.info

² irri.org

³ hud.ac.uk

⁴ croplife.org



The Rodenticide Resistance Action Committee (RRAC), a specialist technical group of CropLife International, provides guidance on rodenticide resistance. For more information, visit rrac.info.