

Rodents: Existence Based on Human Behaviour

Priyanka Rana¹, Antul kumar²

¹ Research Scholar, Department of Zoology, Punjab Agricultural University, Ludhiana

² Research Scholar, Department of Botany, Punjab Agricultural University, Ludhiana

ARTICLE ID: 042

Introduction

Rodents have become the major problems for researchers, farmers, businessmen, organizations and home owners. Modern culture has given the title to rat's as 'bed rep' and it is quite understandable because in 1960s the rat's swarms in north eastern India uprising the political issue by devour the 80 tons of seed from bamboo forest and devastate the local agriculture. These little crafty creatures not only create problems to farmers, but also affected the urban communities. Except Antarctica, rodents become the most successful populating mammals with about 2227 species diversity belonging to order Rodentia with traits like small size, short breeding cycle and ability to eat anything on the earth after *Homo sapiens*. Two urbanities species, *Rattus rattus* and *Rattus norvegicus* are pretty much live where human do i.e., New York city estimates about 2 million rats reported in 2014. Among, all rodents are considered pests and many of species are important part of the food chains and play important carrier for spreading of spores and seeds ecologically.

The impact of COVID-19 on rodents

The rats can take advantage of human failure and survive very cleverly i.e., Trains, planes, automobiles, sewer lines, electrical lines, any crack or crevice (½ in height and width) are usually utilized by rodents for shelter and food. 'To gnaw' is the real mean of rodents and it creates the major problem by gnawing the wire or an airplane or a wire on a subway or the wire of home. Rats survival in human dwelling areas is totally depend on human behaviour i.e., the amount of solid waste human generates every year steadily rising for decades. During the shutdown period there is decrease in food available to rodent's s leading to their unusual behaviour due to COVID-19. Dr. Bobby Corrigan says that rats have lost a central source of food after corona virus outbreak led to the closure of restaurants across the country and now the wild rodents may become unusually violent as they fight for survival. He further added

that there is going to war with each other and struggling within their community for the meal they can discover. But probably there is no difference found in the rats that live and eat in residential blocks during this COVID-19. Facing starvation; some rats have been turned to eating their own young. According to centre for disease control and prevention, as these rats move to new areas in search of food, they also can bring with them fleas and rodent borne disease. Their urine can also worsen allergies and asthma, particularly in children.

Can we get permanent rid of rodent's population?

Rats have thrived for centuries as a major pest because of human behaviour. Human in response often blamed the rodents and spend lots of money in developing different techniques to control rat's population, for example, the use of rodenticides, repellents, reproductive inhibitors, hunting and biological control. Human usually failed by using these common approaches to managing rats. The researchers from worldwide realized that rats behaviour contribute less to infestation than do humans. To address the problem of rodents effectively, we must know firstly the wild rodent's ecology. With the availability of better sources of food, they successfully adopted in human area and reproduce remarkably i.e., *Rattus norvegicus* can give the birth up to 12 pups in a litter and each pup contribute in population rise within 6 weeks. Rodentologist always point the people need to change their behaviour for rat control. However, roots of rats are deep in our society, the researchers and people together need to examine and understand how human daily habits can helpful in balancing the rodent population ecologically. We need to aware the society about this toughest issue and find out the best favorable ways to manage rodent problems effectively and humanely.

Should the whole world needs to adopt Alberta model to solve the rodent problems?

Less than 10 % rodent species act as pest worldwide and causes annual harvest losses as 17%. The governments of affected countries are spending average cost for rodent control is \$331-1200billion each year. New York decided to spend \$32 m to battle against rats in 2017 and Mumbai the busiest city of India faces the most vehicle fire issue by rats. While the whole world suffering with rodent's problem there is well known country that with the help of their citizens got the success in the outbreak of rodent's population. But for the world it is

remain a question. How did they achieve a feat unparalleled anywhere in the world? Was it Alberta's good luck or was the result of strategic genius? Or by keeping rats out what the Albertans gained? Rats were declared as a pest in Alberta during 1950's. By making rat control mandatory, rodenticides were used to kill rats and sanitized the buildings that might shelter them in along with the eastern border. There was establishment of rat control zones by government of Alberta and PCOs (Pest control officers) teams were appointed. Not only this, the government also decided to begin public education to encourage their contribution towards their nation. Many of the Albertans had never seen the Norway rats so government started a campaign and thousands of posters were released to distinguish them from native rodents. Many slogans were used like 'Kill Rats at Sight' and 'He's A Menace to Health, Home, Industry' cast the rats as invaders and leaned heavily on war-time rhetoric and good farmer, who kept a tidy homestead, versus bad farmer, who was sloppy and endangered his neighbors. With began of year 1950s, there were 500 reported rat's infestation in each control zone but with the efforts of government and people, the Alberta had successfully got dropped the number significantly within a decade. There were reported about 50 rats every year and in 1990s there were only 10-20 rats left in selected zonal area and reached to zero infestation in 2003. \ With this the governments solve the problems and what he gained from keeping out the rats, it is well answered by Alberta to the world by utilize save currency from rodent control program to their people's development.

Conclusion

Any organism becomes pest because of human activities. So firstly we should change our behaviour. We should utilize the COVID-19 period for the management of rodents said by Famous rodentologist Dr Bobby Corrigan in the 85th annual Purdue Pest Management Conference, 2020 held at Indiana, US. As rats considered the biggest issue, they are also exhibit contrition and empathy like characters. We don't need to get rid them from earth permanently and they can live with human being happily without expensive loss.