

Rodent Pest management in Pomegranate: Budiwara experience

The Budiwara village is located in the Pachpadra teshil of district Barmer represented by a typical sandy undulated terrain formed by dunes and hummocks. The farmers of the area initiated the pomegranate cultivation in recent past through drip irrigation and now it's become main occupation of villagers. During January 2017 the farmers of the area requested the Director, CAZRI, Jodhpur for solution of problem of rodent infestation in pomegranate. Rodent infestation aggravated due to number of reasons, 1. Sandy soil, provide ideal condition for burrowing to gerbils, 2. Drip irrigation, which provide round the clock moisture near root system of pomegranate plant and 3. Nearby fallow with is an ideal place of rodents for refuge during disturbance due to anthropogenic disturbances. A team of scientists and technical's surveyed the area thoroughly coupled with trapping to know the species composition. The main culprit was *Meriones hurrianae* (70%) a diurnal rodent, *Funambulus pennant* an arboreal species and other species encountered were *Tatera indica* and *Millardia meltada* of minor significance. The damage observed was mainly nibbling of young plants, gnawing and nibbling of the roots of saplings and young trees and direct damage to fruits by arboreal and ground-dwelling rodents. We observed 15 to 20% damage to fruit to varying extent.

On the basis of survey and species composition, a management plan was chalked out. Initially farmers were advised to remove all the leftover pruned material and then the all the burrows available in field were crushed, as one *M. hurrianae* made several burrows and at the same time it is not feasible/advisable to treat all the burrows. The farmers were advised to reduce the size of the bunds around the fields as they provide ideal refuge to rodents in lean period. Next morning, acute rodenticide (zinc phosphide 2%) in cereal bait was administered in freshly open burrows. Follow up with anticoagulants (bromadiolone 0.005%) in baits were made after 3 days. The farmers were advised to also treat the burrows present in surrounding fallow land and continue the process in every crop season. In this way, by integration of cultural, mechanical, and chemical method of control a success of around 77-83% was achieved.

The demonstration of rodent management technology at one and two field latter spread over whole village and now it become a regular practice to manage the rodent through integration of various rodent management methods as per need.

Name of Farmer: Sh Andaram Patel

Village: Budiwara, Pachpadara, Barmer

Mobile: 9950440258



Damage in pomegranate (1. Damaged fruit carried to burrow, 2. Damage to fruit by squirrel, 3. Burrows, 4. Burrows near roots of plant)



Management (1. Imparting knowledge by technology, 2. Demonstration Bait preparation technique, 3. Destroying the Burrows, 4. Bait administration in burrow)