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ation between burrow system
nsity in deep water rice area
: distance from the high
und, Bangladesh, 1982.

.8 kg rice/ha stored by
nal loss of deep water rice
,414 t of paddy.

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ieties is planted in
land rice areas. The
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d diseases and provides
t is common to see rice
nixture of varieties at
rity. Some farmers said t
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encourages destructive
such as rice weevils.
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ore farmers like awned
ch lessen bird damage.
ima and O. sativa indica
as Rok 16 and Ngovie

ve swamps, farmers plant
eedlings per hill to
or crab damage. Plantin
gs also reduces damage
or town, farmers tend
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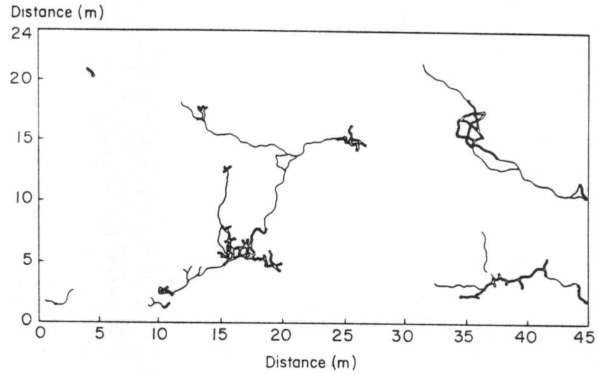
nted at more or less the
variety that matures ea
lanted nearby will have
damage.
with other tactics, these
ces could serve as a ba
pest management

Burrowing pattern of bandicoot rats in deep water rice fields

Md. S. Ahmed, Entomology Division, Bangladesh Rice Research Institute; and M.Y. Mian, M.E. Haque, and J.E. Brooks, Vertebrate Pest Section, Bangladesh Agricultural Research Institute, Joydebpur, Gazipur, Bangladesh

We studied burrowing characteristics of lesser bandicoot rats in a 24- × 45-m deep water rice field in 1982. There were seven burrow systems (see figure), most of which were connected by pathways under the plant canopy. Each system had 1 to 17 burrow openings, averaging 7. Burrow length ranged from 1.25 to 27 m and averaged 9.4 m.

Burrow length may vary by field and area because burrowing activity depends on soil conditions. The study field was a dry sandy loam, which may encourage long burrow systems. Burrow fumigation may not be efficient in such systems, and more time and energy will be necessary to plug the burrow openings for fumigation.



Map of rat burrow systems, openings, and runways in a deep water rice field in Gazaria, Bangladesh, at harvest, 1982.

Bandicoot rat damage in deep water rice fields

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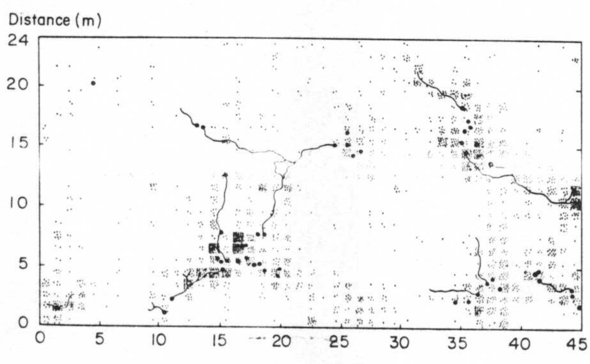
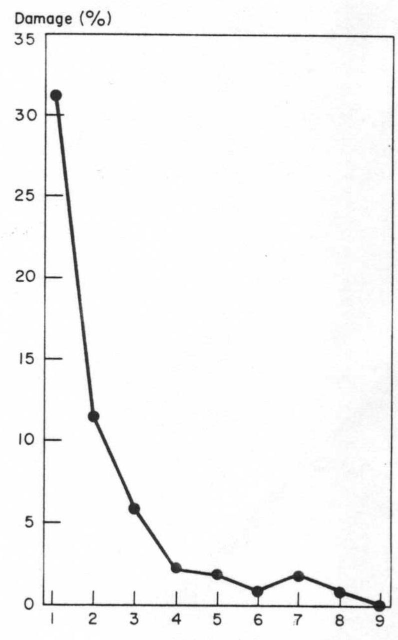
We studied bandicoot rat damage and distribution in deep water rice in 1982 in the Gazaria Upa-zilla of Dhaka district. The 24- × 45-m plot was divided in 1,080 1-m² subplots and recently cut stems were counted and recorded for each subplot. The rat burrow openings and runaways were mapped and locations of cut stems were plotted (Fig. 1).

There were 0 to 38 damaged stems/m². At harvest, rat damage was greatest near burrow openings and pathways (Fig. 1). More than 30% of the stems were cut within 1 m of burrow openings (Fig. 2). The pattern of damage indicates that field control operations may be more effective if rodenticides and traps are used near burrow openings rather than randomly placed in the field.



1. Distribution of rice stems cut by rats during ripening stage in a deep water rice field in Gazaria, Bangladesh, 1982. Each dot represents one cut stem. Burrow openings (open circles) and rat runways (connecting lines) are shown.



2. Relationship of the intensity of rat damage and the distance of burrow openings in a deep water rice field, Gazaria, Bangladesh, 1982.