

Knowledge, Attitudes and Practices (KAP) survey on rodents in rural areas of the delta of River Senegal: a step forward in the prevention and management of agricultural risks, in fields and in storage conditions



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UNITÉ DE FORMATION ET DE RECHERCHE
SCIENCES AGRONOMIQUES, AQUACULTURE
ET TECHNOLOGIES ALIMENTAIRES



Projet R2P-RPM

Riz, Rongeurs & Parasites : Représentations et pratiques sociales, Pesticides et Mobilités dans des écosystèmes sahéliens anthropisés

Master PGRISA UGB



Ecologically-Based Rodent Management - EBRM

- ✓ Good knowledge of rodent biology (science-based solutions)
- ✓ Management of the environment to make it unsuitable for rodents
- ✓ Community involvement



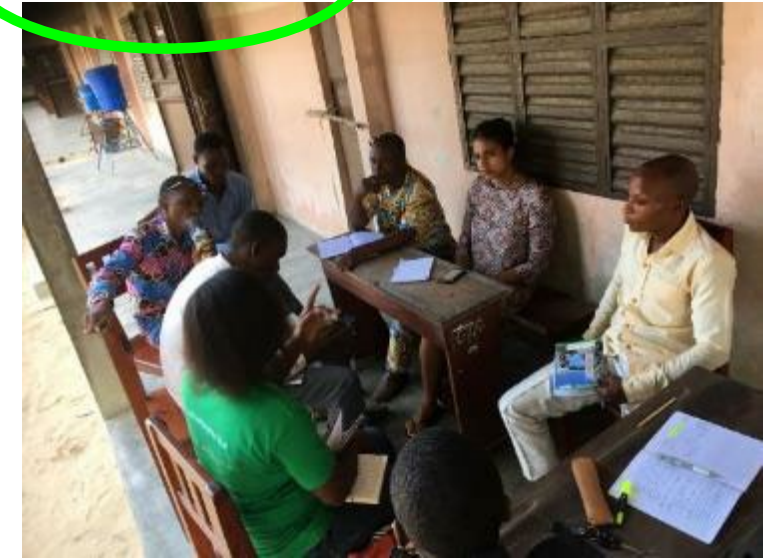
EBRM in urban, peri-urban and rural habitats



Overview of rodents and pathogens



Knowledge, Attitudes and Practices (KAP) survey



Establishment of working groups



Information, awareness raising

Development of locally adapted EBRM strategies

Establishment of biological and sociological indicators (e.g. appropriation) to determine the objectives and evaluate the effects of EBRM

Methods: Focus group discussions based on the rural « *Questionnaire Rodent Pest Problems and Management* » shared by Luwieke Bosma (MetaMeta), translated into French and adapted to the West-African context

=> Standard

Questionnaire Problèmes et gestion des rongeurs.

stance:

Consortium Green Rodent Control en Afrique sub-saharienne (IRD, UGB, MetaMeta, Univ. Mekelle, etc.)

Explication et objectifs

Objectif de l'enquête : Ce projet vise à aider les agriculteurs et construire avec eux des solutions pour la gestion durable des rongeurs. À cette fin, nous devons obtenir une bonne compréhension des connaissances, attitudes et pratiques des agriculteurs à l'égard des rongeurs et de leur contrôle, en particulier dans la production des cultures et dans le stockage des aliments. Nous aimerions vous demander un peu de temps pour partager avec nous vos réflexions, vos expériences et vos pratiques actuelles concernant la gestion des rongeurs.

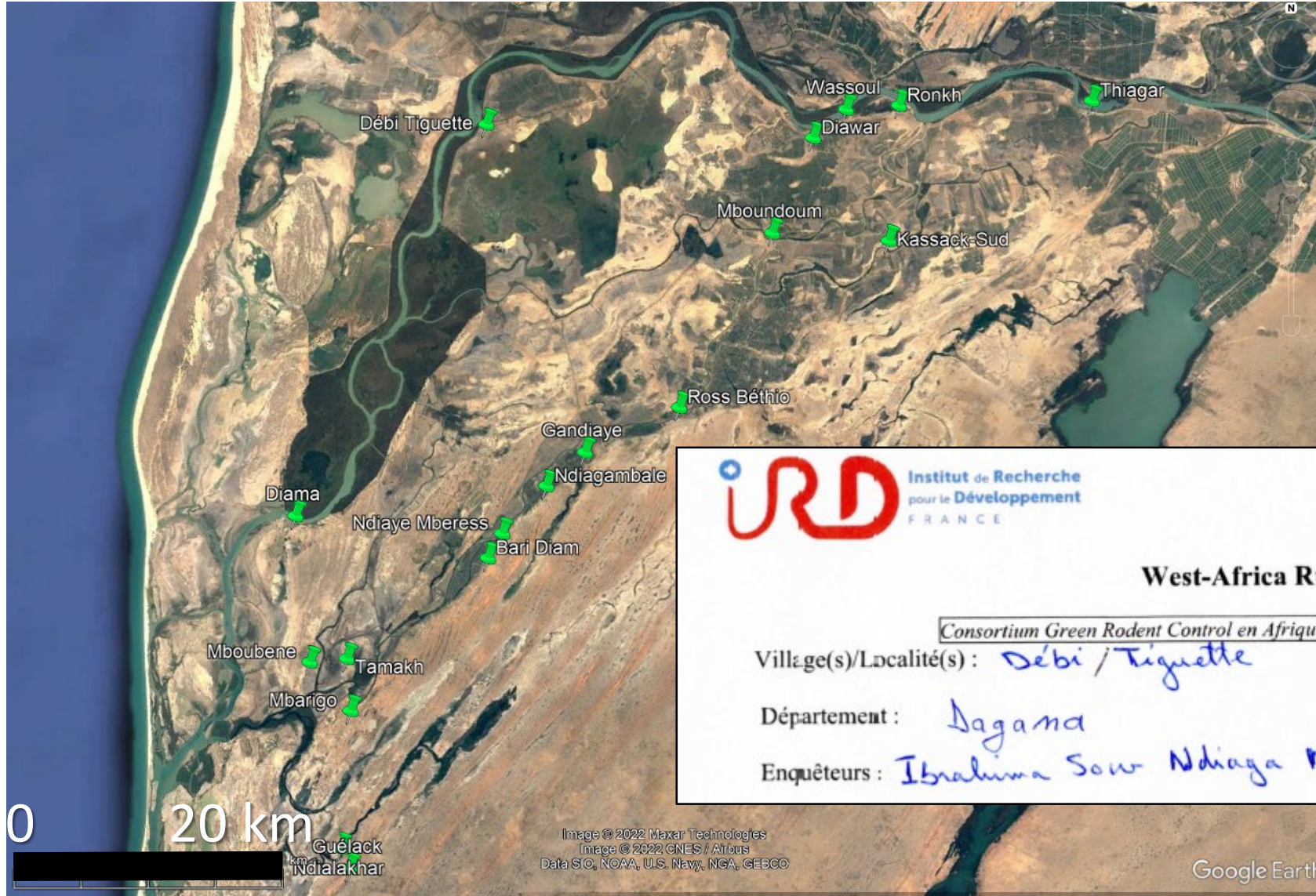
Similar methods and indicators in a set of sub-saharan countries




Comparative assessment on rodent impacts and cultural perceptions of ecologically based rodent management in 3 Afro-Malagasy farming regions *Integrative Zoology* 2020; 15: 578–594



Study sites in the delta of the River Senegal



Nov.-Dec. 2021
Focus Group
Discussions
18 villages
x 10 pers. (5-14 pers.)
/village

 Institut de Recherche
pour le Développement
FRANCE

West-Africa Rural EBRM Questionnaire

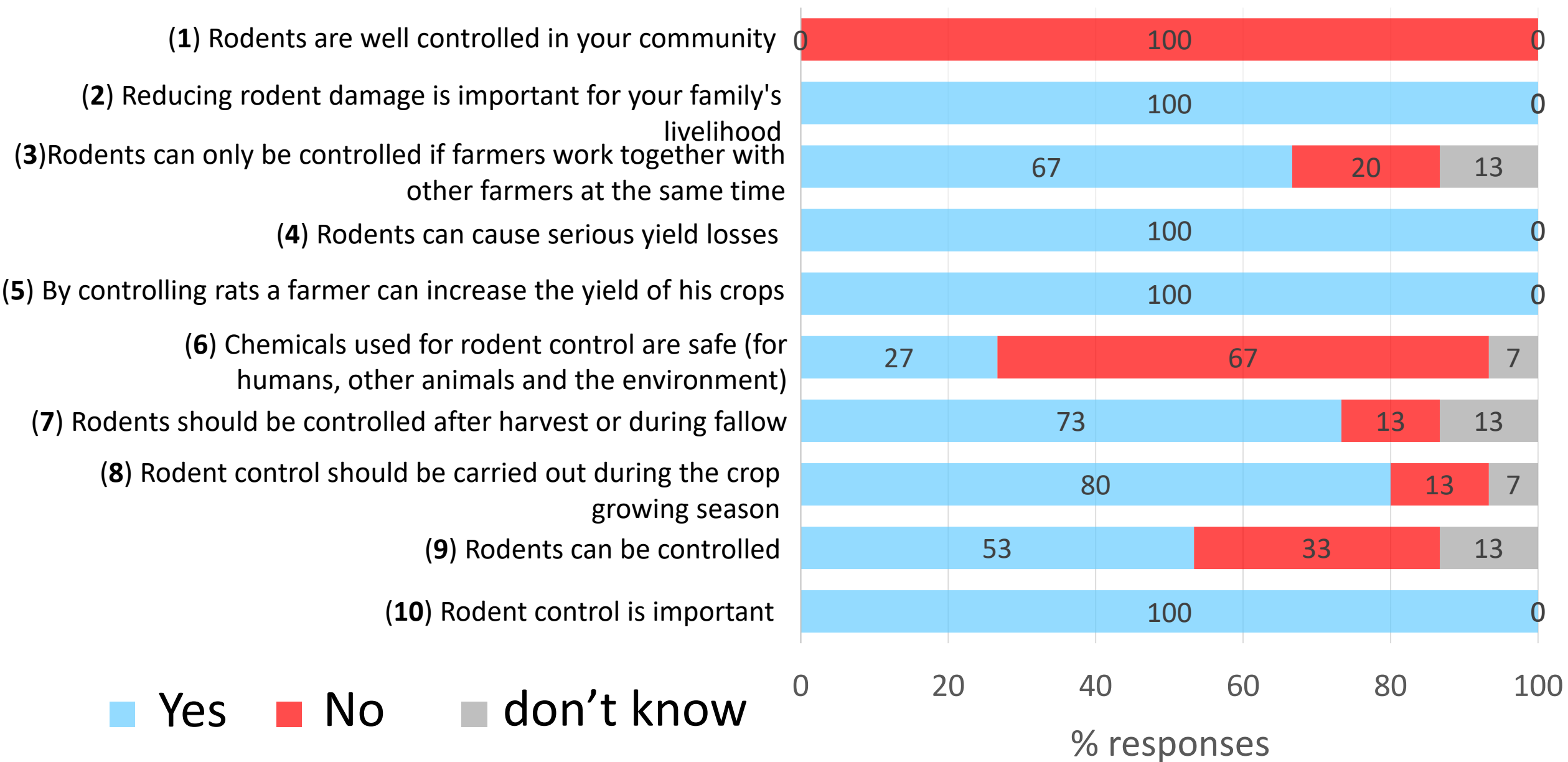
Consortium Green Rodent Control en Afrique sub-saharienne (IRD, UGB, MetaMeta, Univ. Mekelle, etc.)

Village(s)/Localité(s): *Débi / Tiguette* *30/12/2021*

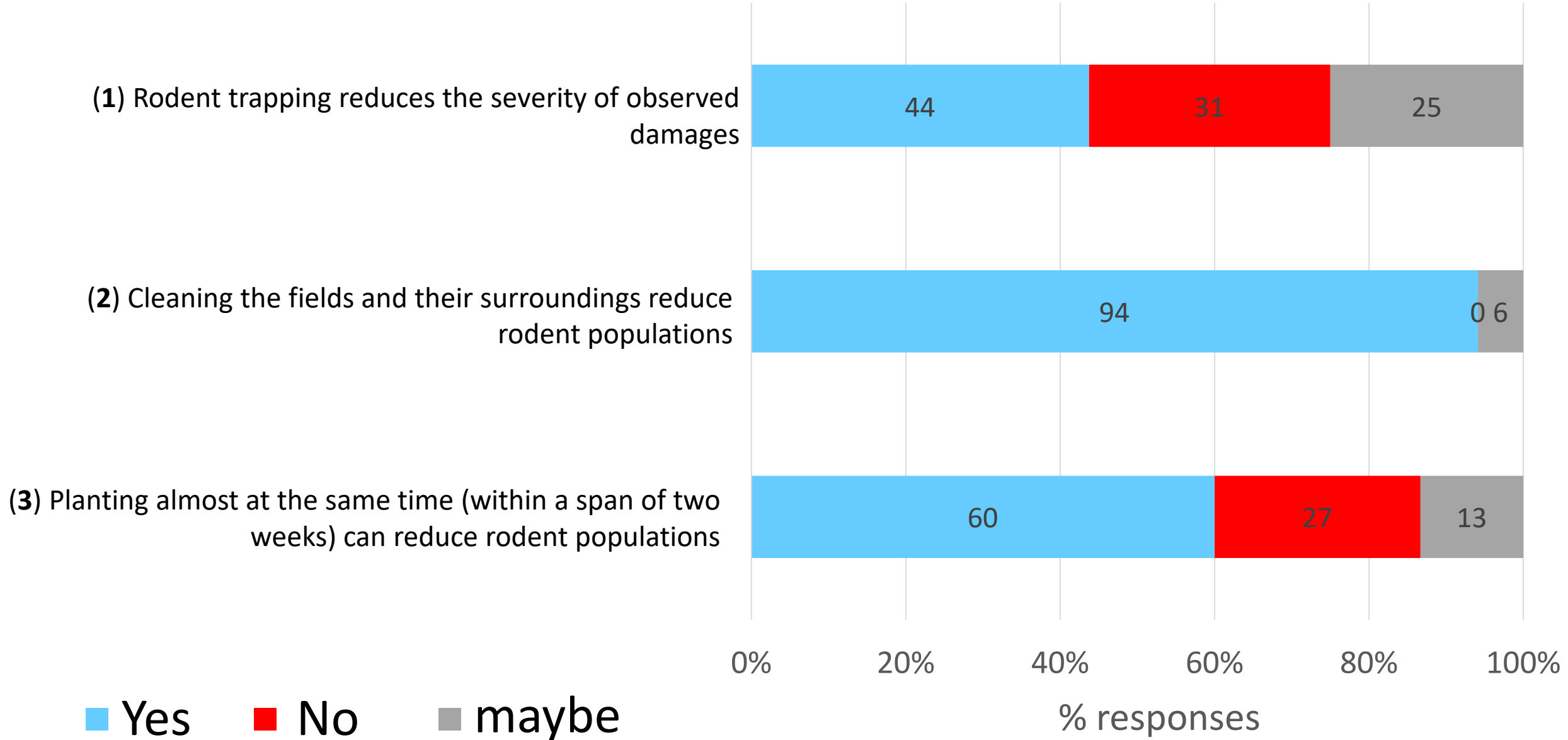
Département: *Dagana*

Enquêteurs: *Ibrahima Sow Ndiaga Niang Serigne Niang*

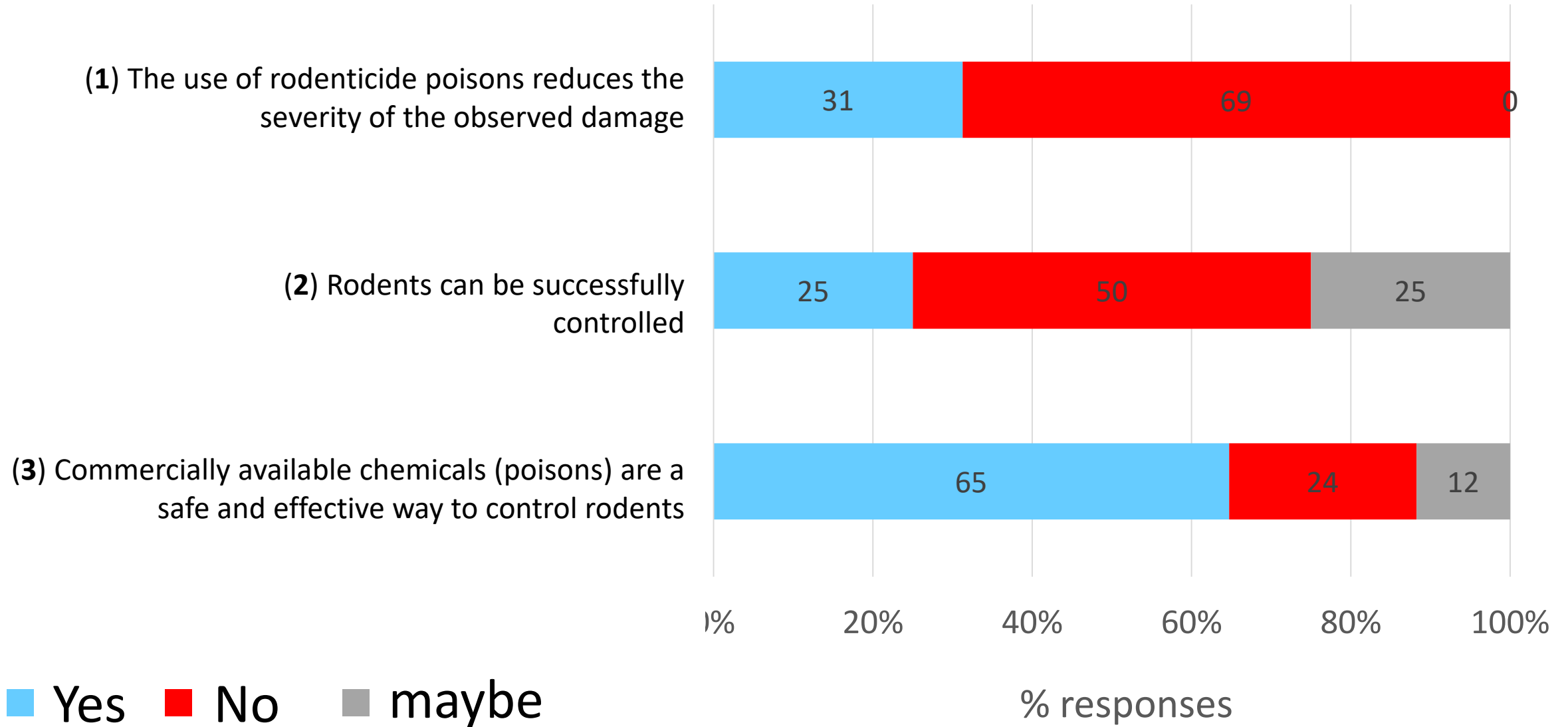
Knowledge and attitudes of farmers in the delta of the River Senegal on rodent management



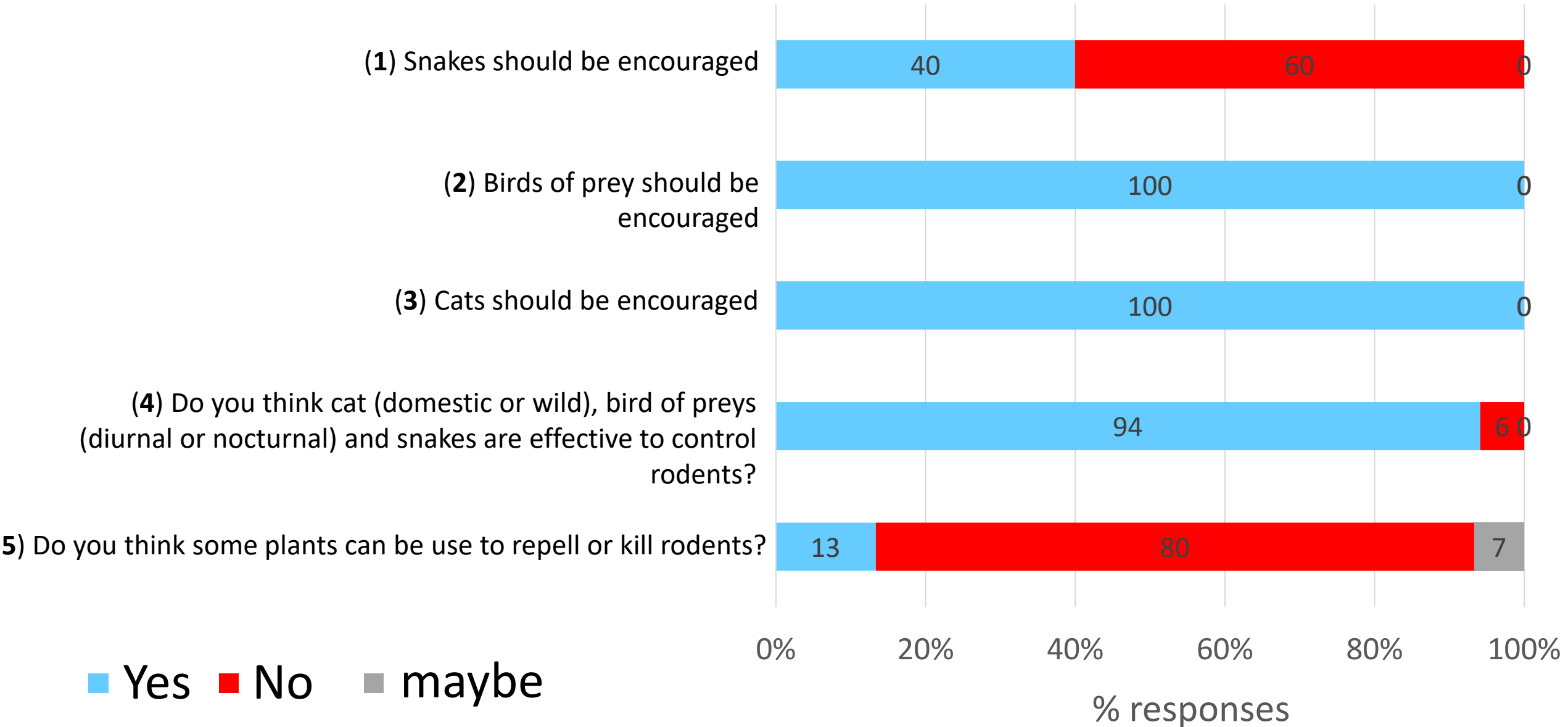
Current knowledge on rodent management in the delta of the River Senegal



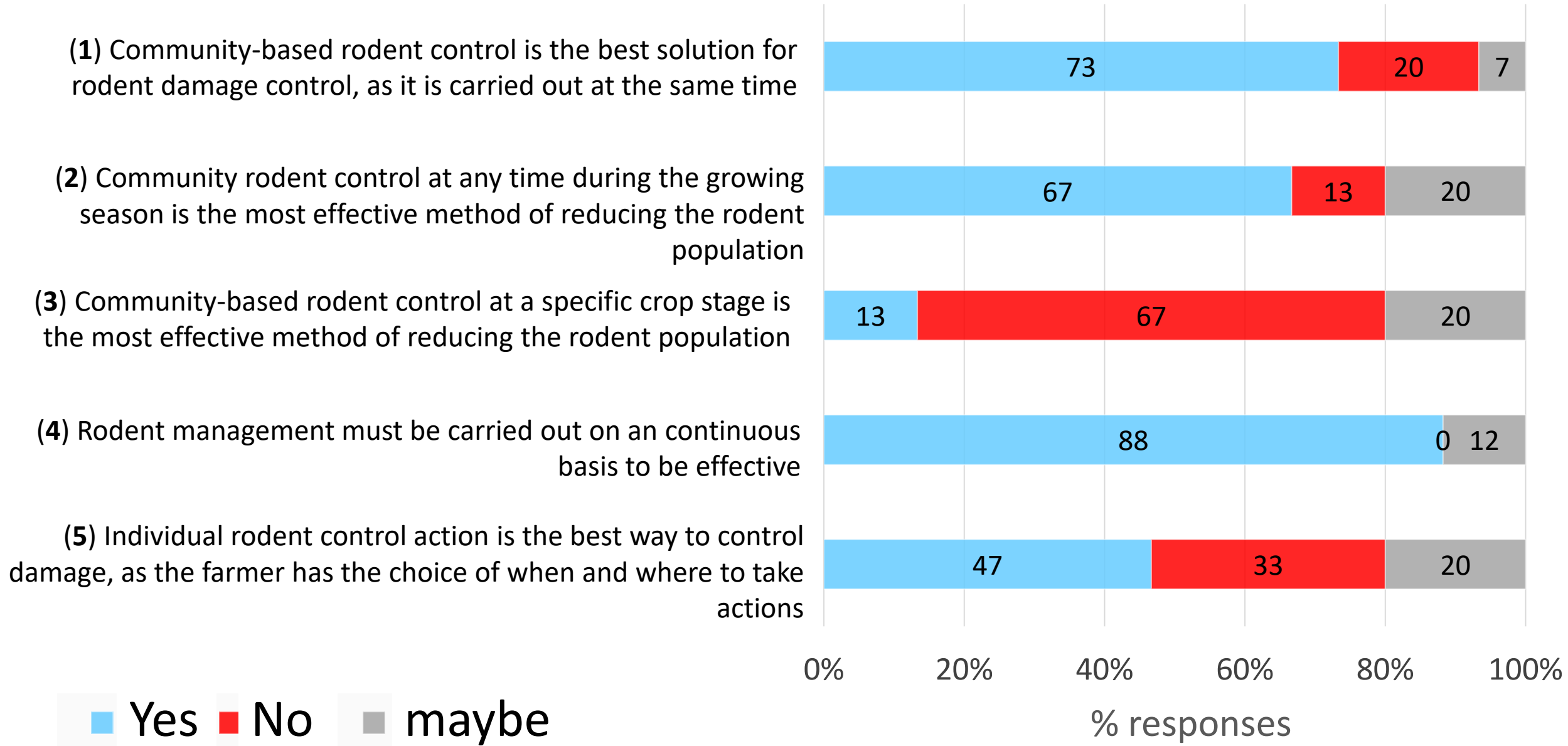
Perception of farmers in the delta of the River Senegal on control methods using chemical rodenticides



Perception of farmers in the delta of the River Senegal on rodent ecological or biological control methods

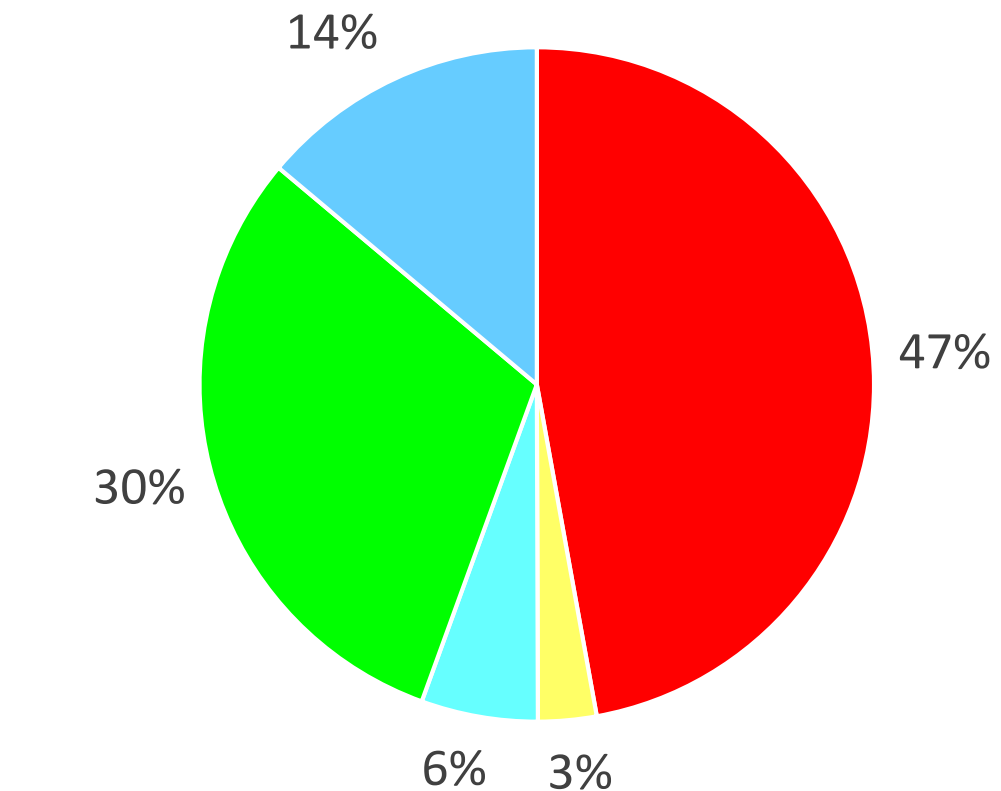


Attitudes of farmers in the delta of the River Senegal on individual / community rodent management



Current and future rodent management practices of farmers in the delta of the River Senegal

Declared current management methods



■ Rodenticide

■ Flooding burrows with hot water

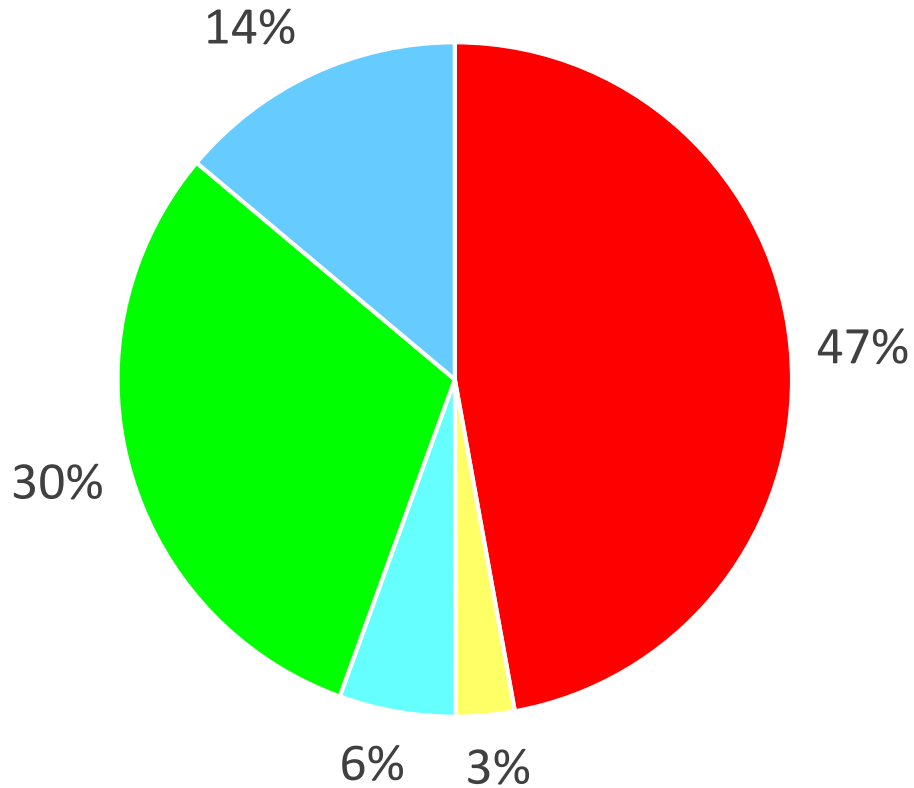
■ Using nets

■ Cleaning

■ Trapping

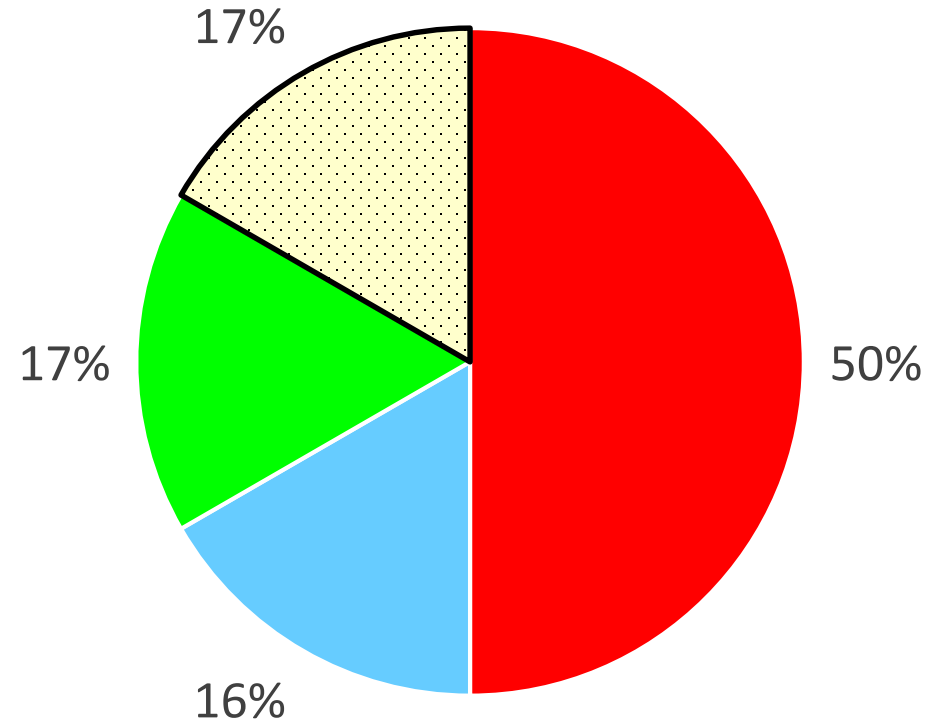
Current and future rodent management practices of farmers in the delta of the River Senegal

Declared current management methods



- Rodenticide
- Using nets
- Trapping
- Flooding burrows with hot water
- Cleaning

What methods will you use in the future?



- Rodenticide
- Trapping
- Cleaning
- Any method that may worth it!

Responses to rodent pests

- **Abandonment** of agricultural fields after major crop damage;
- Widespread and intensive use of **chemicals to control rodents**, now and in the near future, although they have not been perceived as safe or effective in reducing the severity of the observed damage;
- In practice rodent control was applied at the **individual level**, although there is awareness of applying rodent control at the community level;
- Rodent control should preferably be implemented on an **continuous** basis rather than at specific crop stages.

**IMPACTS /
RISKS**

The pillars of food security



Access

Use

Availability

Stability

IMPACTS / RISKS



Consequences on:

- Physical availability of food
- Household access to food
- Health and environmental security

Prevention and management measures

- Establish a monitoring system to develop early warning actions necessary for sustainable management adapted to the local context;
- Assess the impact of rodents in the field and in storage conditions;
- Identify the socio-environmental factors that influence their damage;
- Set up participatory working groups (May-June 2023), in connection with the *"integrated management framework for rodents in the valley of the River Senegal"* (Ministry of Agriculture and Rural Equipment, DPV, SAED, DRDR, farmers' organisations) set up in Feb. 2022;
- Test management methods according to the EBRM approach with a pilot village community (Feb. - June 2023).

Prevention and management measures



Test at local level:

- Trap Barrier System
- Improved storage bags
- Bio-rodenticides

+ Integrate management measures on technical sheets



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ATTENTION**