Woolly apple aphid management: Farmers' perceptions and practices in Bajura, Nepal

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Introduction

Woolly apple aphid (WAA), a worldwide serious pest of apple orchards, has been reported as a major economic pest in many districts in Nepal. Aphid infestation leads to the development of hypertrophic galls in roots and crown of the tree. This results in loss of tree vigour, lowering of fruit yield and quality, and in extreme cases, tree death.

Research questions

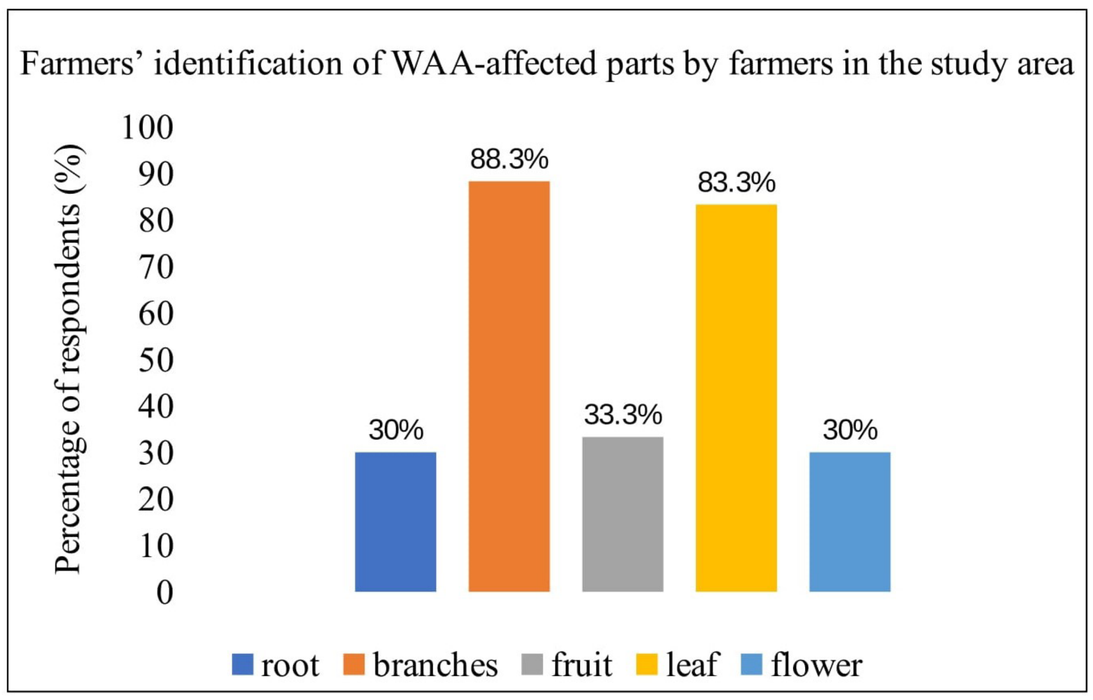
- What management practices do apple farmers adopt against woolly apple aphid in Bajura?
- What are the perceptions and knowledge of apple farmers regarding woolly apple aphid in Bajura?

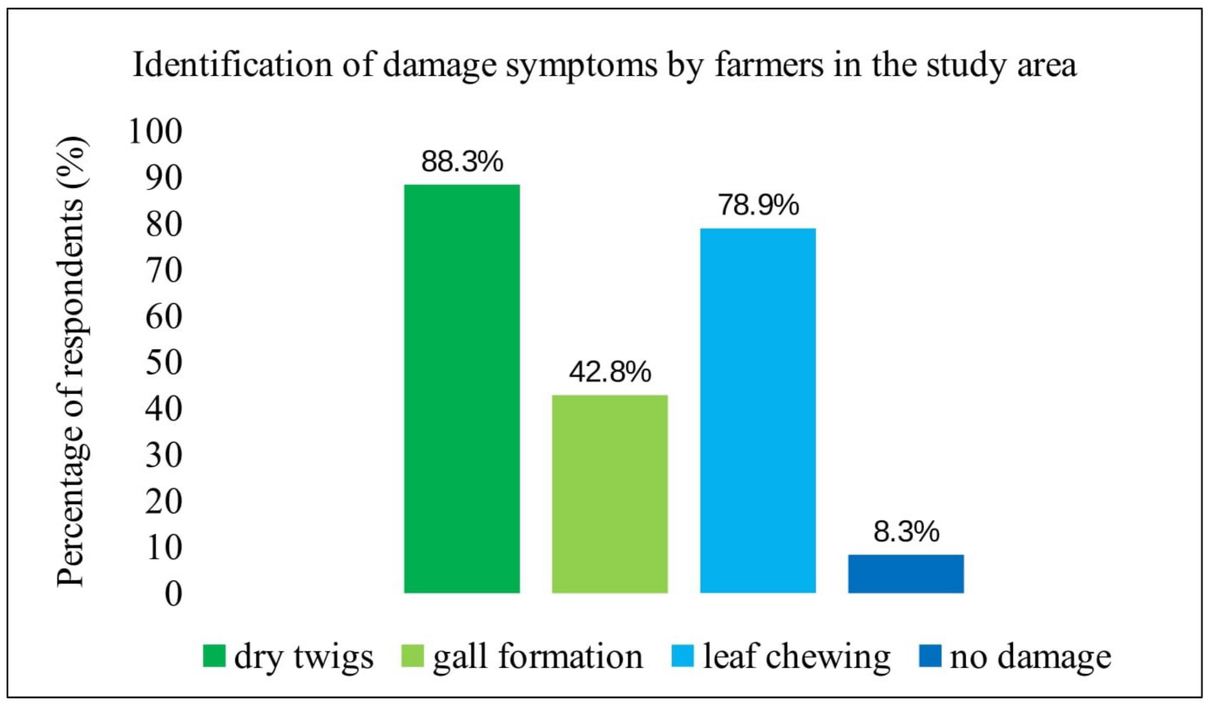
Methodology

A total of 180 apple farmers from three major apple-producing local bodies of Bajura, namely Budhinanda Municipality, Himali Rural Municipality, and Swamikartik-Khapar Rural Municipality, were surveyed for this research. Proportionate stratified sampling was employed to determine the appropriate sample size for each local body under study and simple random sampling was used to select the respondents for a face-to-face meeting. Key informant interviews and focus group discussions were conducted.

Key findings

- Farmers ranked WAA as the primary pest.
- 44% of the farmers followed no measures against WAA and 47.2% relied on mechanical measures (killing by hand, use of wet clothes, use of plastics and sticks)
- Only 6.7% used neem-based pesticide and 1.1% applied botanical measures such as cattle urine and jholmol along with mechanical measures.





Conclusion

Farmers lack sufficient knowledge for the effective management of WAA. Local stakeholders should consider direct interventions which include establishing and distributing pest-free saplings, promoting WAA-resistant rootstocks, and training farmers on integrated pest management for sustainable apple production.