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# Crop residue management: opportunities and challenges for soil fertility

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Interfaces

SUPPORTING PATHWAYS TO SUSTAINABLE LAND MANAGEMENT IN AFRICA

## Context

- Enhancing soil health demands the combined application of organic and mineral inputs to maintain soil quality and boost crop yields (Vanlauwe et al., 2010).
- Effective soil fertilization typically involves applying 4–5 t/ha of organic fertilizer (Quansah, 2010).
- Crop residues represent a valuable source of organic fertilizer.
- Understanding farmers' perceptions and their use of crop residues is key to creating effective soil fertility interventions.

## Methods

- Field observation
- Survey with 97 farmers in 3 districts of Northern Ghana (Savelugu, Tolon and Mion)

## Insights

Figure 1: Crops cultivated

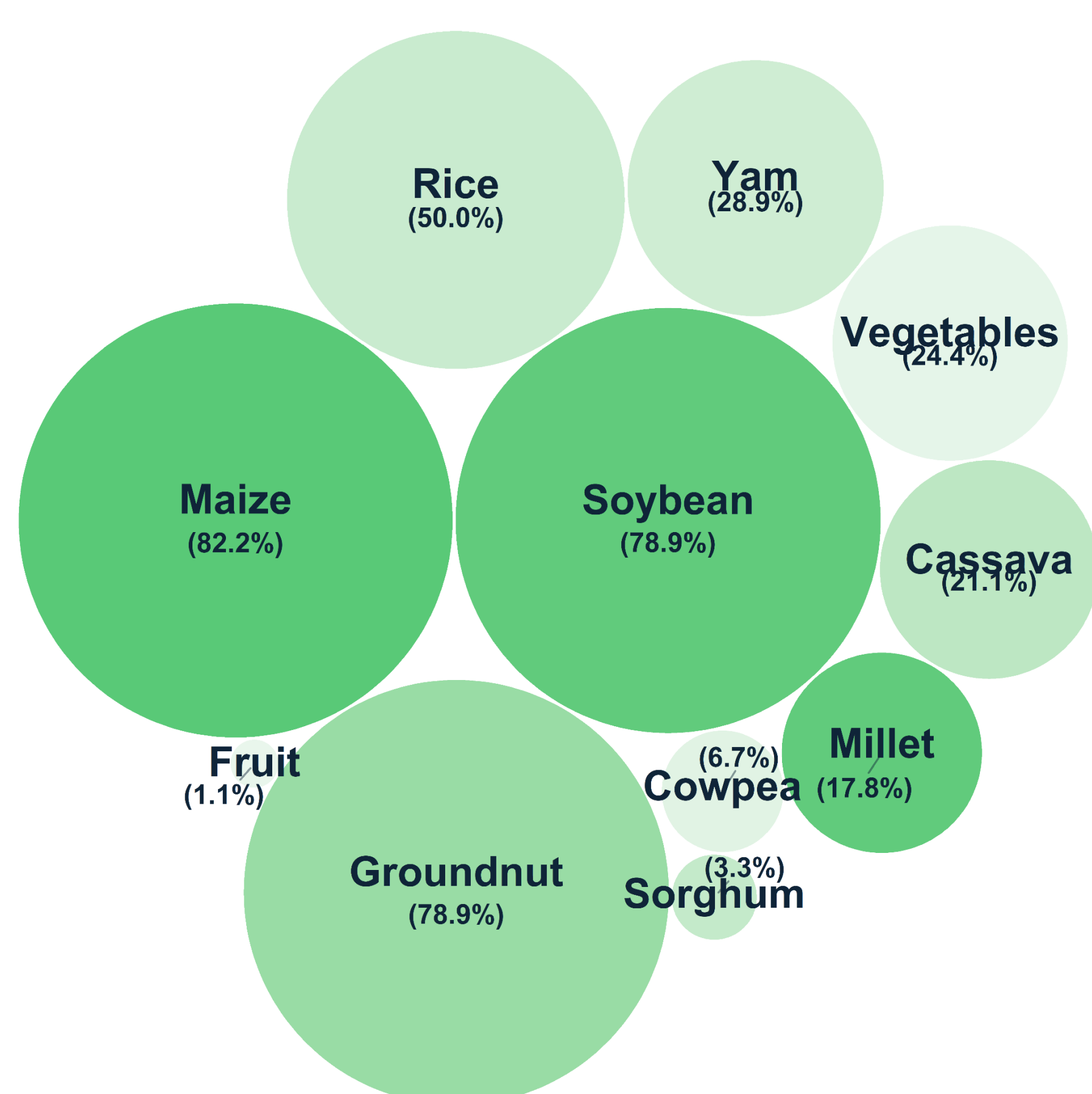


Figure 2: Crop residue management models and competing uses

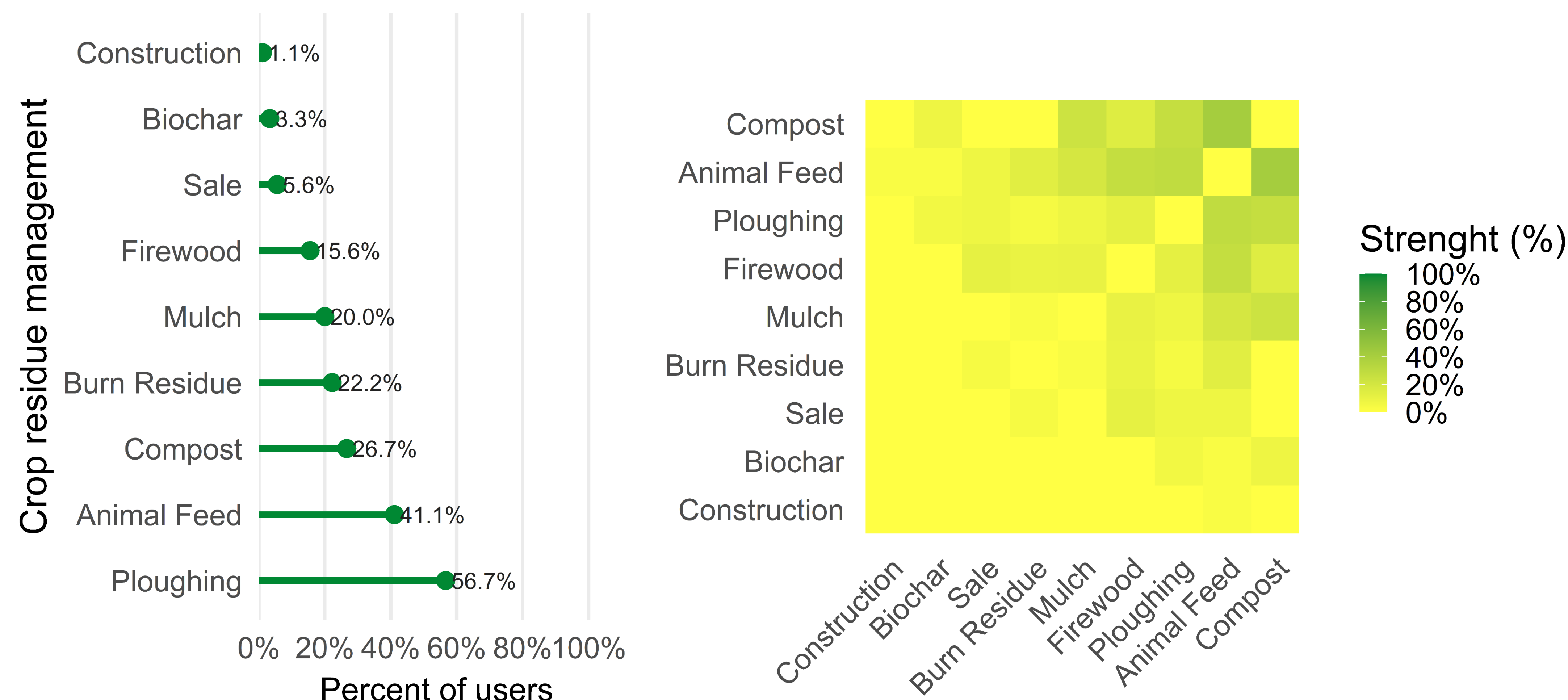
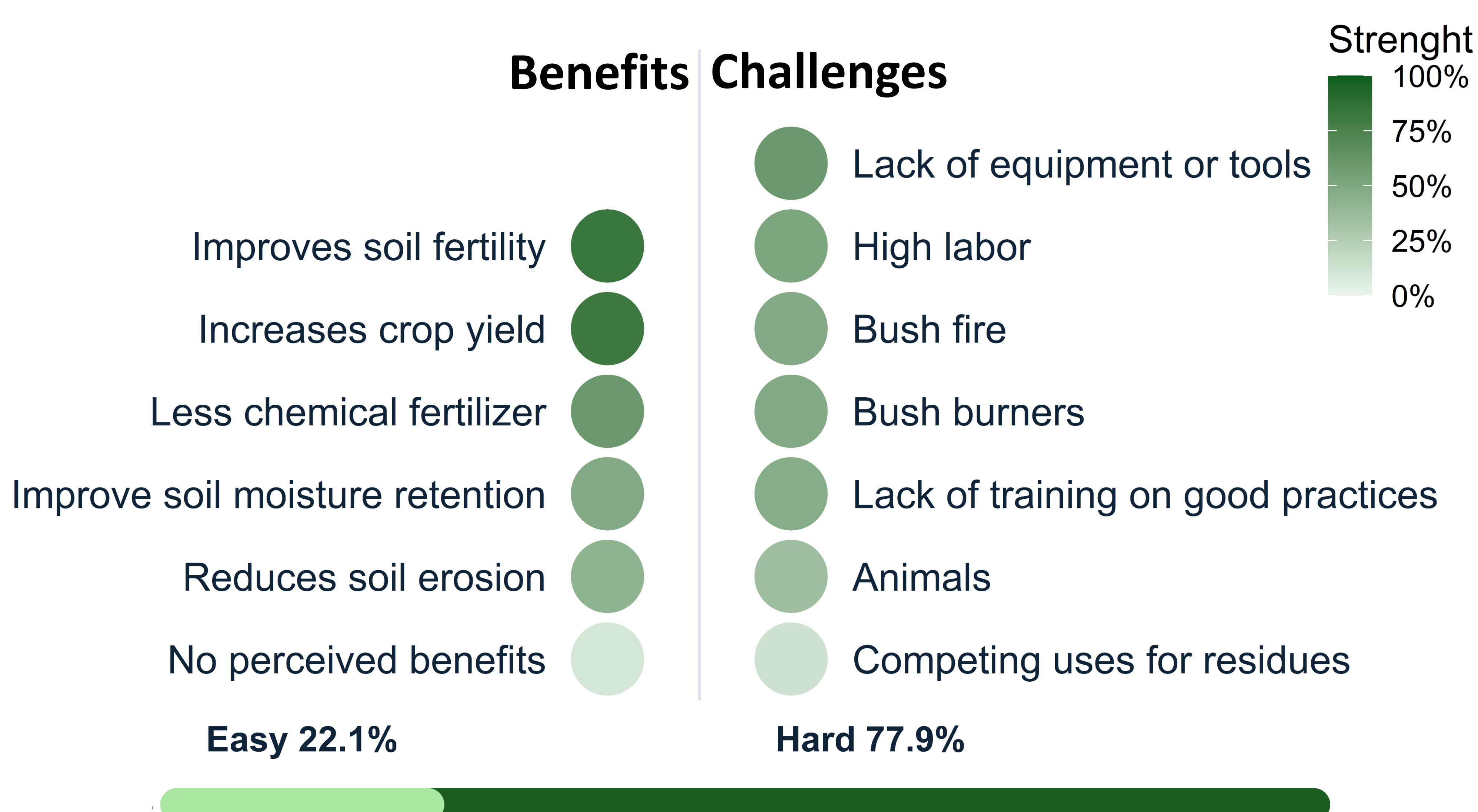


Figure 3: Farmers' perceived benefits, challenges and ease of use



## Enabling factors

- Equipment and tools
- Mechanization and transport
- Crop-livestock management
- Training on different models
- Field demonstration

### References:

- Vanlauwe, B., Bationo, A., Chianu, J., Giller, K. E., Merckx, R., Mokwunye, U., Ohiokpehai, O., Pypers, P., Tabo, R., Shepherd, K. D., Smaling, E. M. A., Woomer, P. L., & Sanginga, N. (2010). Integrated soil fertility management: Operational definition and consequences for implementation and dissemination. *Outlook on Agriculture*, 39(1), 17–24. <https://doi.org/10.5367/000000010791169998>
- Quansah, G. W. (2010). Effect of organic and inorganic fertilizers and their combinations on the growth and yield of maize in the semi-deciduous forest zone of Ghana (Doctoral dissertation, KNUST).



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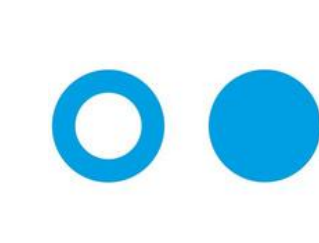
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