

Private Pesticide Applicator Survey Indicates Farmer Weed Management Practices and Challenges

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INTRODUCTION

Attendees at Private Pesticide Applicator Recertification (PAR) workshops are surveyed each year to determine the pest management challenges they face and strategies being used to address issues. Weed control in soybean has been an increasingly significant challenge, corresponding to the prevalence of herbicide-resistant weed populations. Identifying which management practices farmers are willing to adopt is useful in the development of educational programming around herbicide-resistant weed management and more robust weed management systems. This information is also useful in identifying and prioritizing research and educational needs.

OBJECTIVES

- Survey farmers at PAR workshops to determine the prevalence of weed control issues and practices being used in weed management
- Identify weed management tactics farmers are willing to employ as well as those not being widely used
- Utilize this information in educational and research efforts to aid in the development of relevant, robust, and effective weed management systems

MATERIALS AND METHODS

- Attendees were handed a Turning Technologies ResponseCard at the start of each workshop
- Questions were asked throughout the program
- Participation was voluntary and anonymous
- Responses were combined across locations each year (29 to 43 locations per year)
- PAR is conducted annually but certification is valid for three years (so each year = one of three cohorts)
- Response percentages were calculated based on the number of respondents to a particular question

CONCLUSIONS

- Weed control, particularly in soybean, and herbicide-resistant weeds continue to be significant production challenges for farmers
- Farmers are utilizing a number of non-chemical weed control tactics and shifting away from glyphosate-only herbicide-technology traits
- Continued research and education around herbicide-resistance management is critical to help farmers deal with long-term weed control challenges

RESULTS AND DISCUSSION

Figure 1: Weed control was the top production issue the previous year in soybean (not counting weather or price) each year. Respondents could select up to 2 (2017-2018) or 3 (2019-2020) issues. Year (n) = 2020 (114), 2019 (946), 2018 (1,507), 2017 (922).

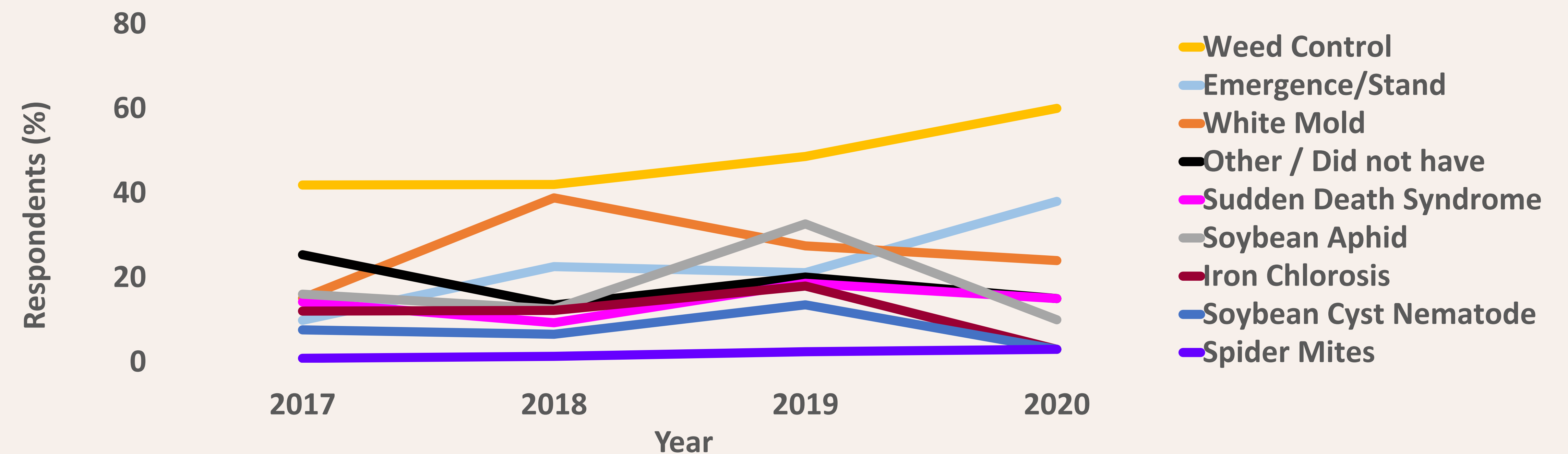


Figure 2: Farmers (73 to 82% each year) used non-chemical tactics to manage weeds the previous year, with hand-pulling weeds and altering their planned crop rotation being the most common. Respondents could select up to 2 (2017-2018) or 3 (2019-2020) tactics. Year (n) = 2020 (114), 2019 (946), 2018 (1,507), 2017 (922).

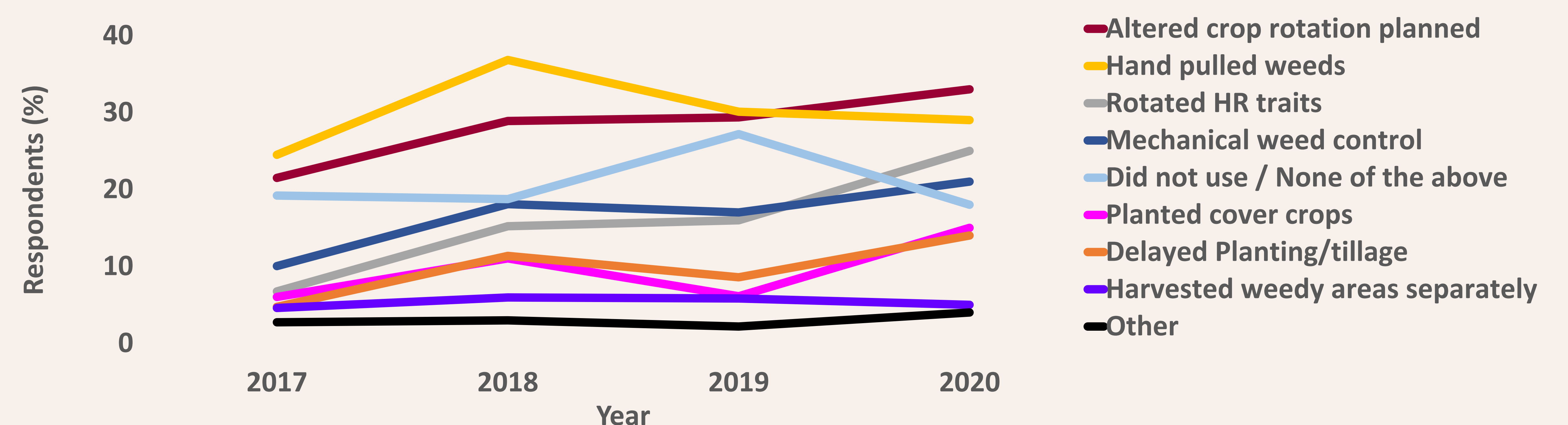


Figure 3: Each year 80 to 83% of farmers reported they had resistant weeds (glyphosate-resistance was the most prevalent), when asked if they had resistant weeds on land they farmed. Year (n) = 2020 (1,007), 2019 (711), 2018 (1,138), 2017 (848).

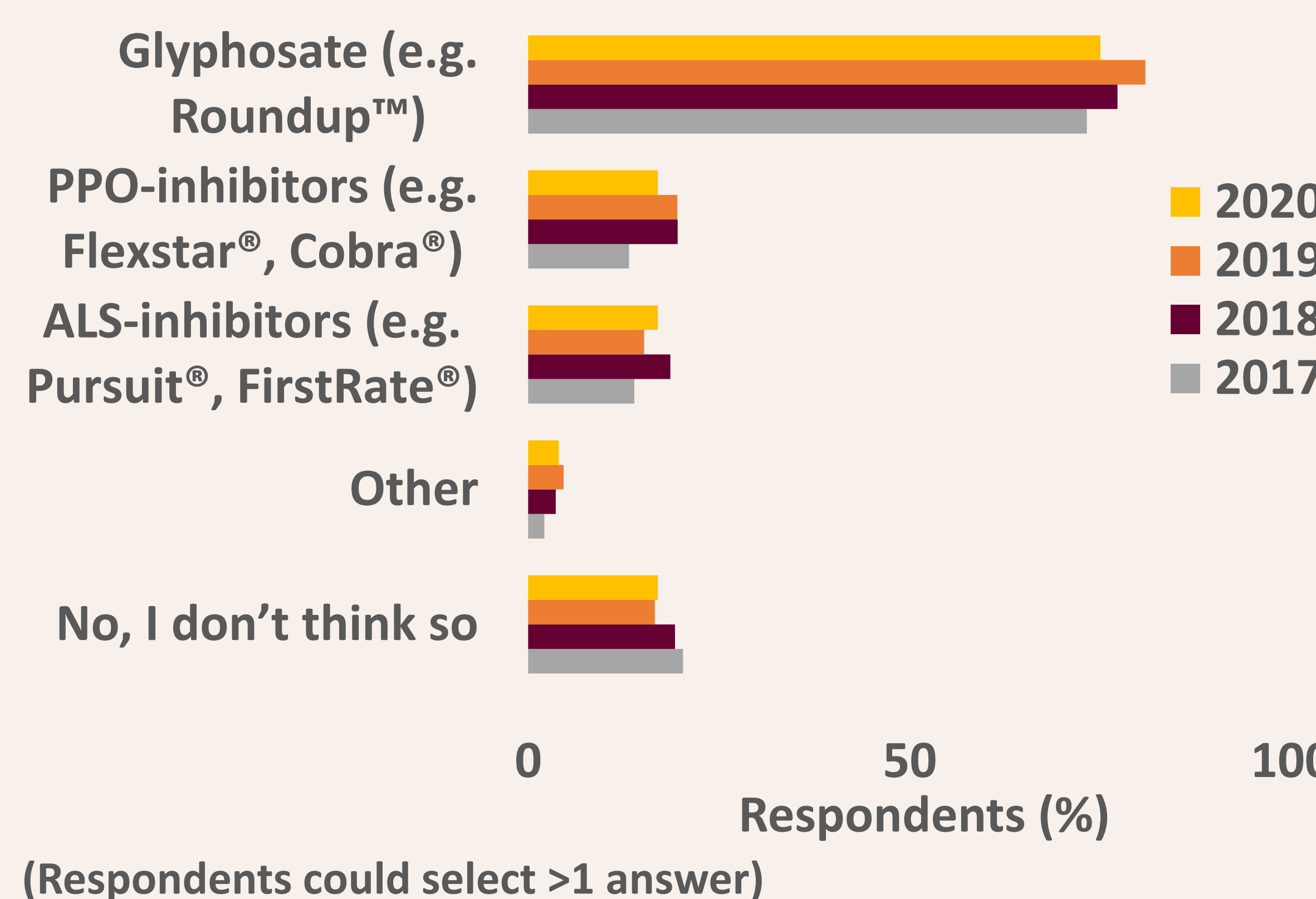


Figure 4: Farmers planned to use less glyphosate-only but more Enlist and LibertyLink/LL-GT27 technology soybeans from 2018 to 2020 when asked what traits they planned to use next season. Year (n) = 2020 (742), 2019 (193), 2018 (520).

