



Agricultural Water Users' Preferences for Water Conservation Programs in the Middle Rio Grande Basin

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Acknowledgments

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- ❑ MRGCD Staff
- ❑ Reviewer: Sarah Stith



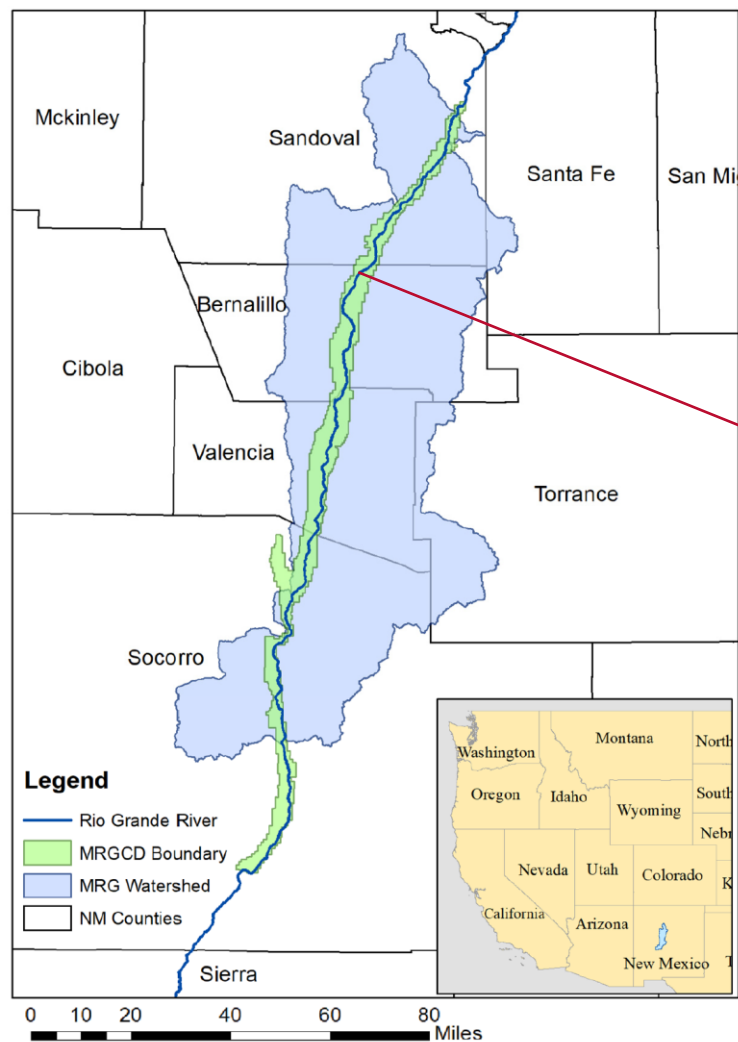


Figure 1. A map of the Middle Rio Grande (MRG) watershed and Middle Rio Grande Conservancy District (MRGCD) jurisdictional boundary in Sandoval, Bernalillo, Valencia, and Socorro counties in central New Mexico (NM).



Photo by Jingjing Wang, July 8, 2026

Objective

- ❑ Use Middle Rio Grande Conservation District (MRGCD) as a case study to understand agricultural water users' preferences for alternative water conservation programs
- ❑ Objectives
 - Understand general preferences for alternative water conservation programs
 - Explore the heterogeneity of the preferences among different types of agricultural water users
 - Identify key factors that influence the agricultural water users' preferences (*Student Poster #17*)

Method

- ❑ A multi-prong approach
 - 2 focus groups in agricultural communities: North Valley, Socorro
 - 4 one-on-one interviews
 - A pre-survey of 50 randomly sampled agricultural water users as an administrative test
 - A main survey of all 4,773 active agricultural water users in 2024



HELP SHAPE THE FUTURE OF WATER & FARMING

We're bringing farmers together to talk honestly about water challenges and the future of agriculture in the Middle Rio Grande Basin. This project is brought to you by the UNM Research Team.

Questions? Contact Professor Wang (505)456-0638

WHAT'S IN IT FOR YOU	WHAT TO EXPECT	WHO:
• \$50 Amazon gift card for participating • Coffee & donuts • Direct line to folks shaping programs & policy • Connect with other local farmers & share what's working (and what's not)	• One 90-min, small group discussion with fellow farmers • Share feedback on a draft survey for MRGCD farmers • No prep required	Farmers/irrigators in the Middle Rio Grande Conservancy District (MRGCD), 18 yrs. +
		WHEN: Wed, Oct. 22 (10am-11:30am) at Raymond G. Sanchez Community Center: 9800 4 th St NW, ABQ, NNM Wed, Oct. 29 (2pm-3:30pm) at NM Tech Campus: 801 Leroy Pl, Socorro, NM

SPACE IS LIMITED!

FOR QUESTIONS OR TO RESERVE YOUR SPOT CONTACT (CALL OR TEXT): PROFESSOR WANG (UNM PROJECT LEAD) (505)456-0638

Your water. Your fields. Your say.

Join our Middle Valley Farmers Discussion Group!

Middle Rio Grande Conservancy District Agricultural Water Users Survey

Your Voice. Your Water. Your Future.



🔥 Why This Survey Matters

- **Water is on the line:** The Rio Grande Basin is dryer than it's been in decades, and NM is falling behind on its Compact obligations
- **You feel it first:** Less water means harder choices for crops, livestock, and livelihoods
- **Resources are limited:** Agencies can't fund everything—your input helps direct support where it matters most
- **Your voice counts:** What you share today helps protect farming tomorrow

💡 What Your Input Can Do

- **Guide lawmakers:** Tell decision-makers what agricultural water users in the Middle Rio Grande really need
- **Secure funding:** Help steer state dollars toward the water and agriculture projects that will keep farming strong
- **Bring resources home:** Make the case for more support to flow into our region
- **Shape the future:** Influence best practices so agriculture thrives for generations to come

We Need Your Input!

Please complete the survey - your perspective is essential

Survey Summary

- ❑ Individual agricultural water users
 - How many acres they own, lease from other landowners, and lease to others
 - Whether or not their primary income is from farming
 - Crop types & acreages
 - Water sources
 - Irrigation methods
 - Degrees of water delivery issues
 - Preferences for alternative water conservation programs
 - Environmental Water Leasing Program
 - How important to continue farming
 - If they support water markets
 - Which entities they would trust
 - If they vote in MRGCD elections
 - Race/ethnicity, gender, age, household income

Team Work



Survey Response Summary

Table 1: Geographic distribution of surveys mailed and received across counties

County	Surveys mailed	Share of mailed surveys	Completed surveys	Response rate
Valencia	2085	43.68%	828	39.71%
Bernalillo	1469	30.78%	679	46.22%
Socorro	670	14.04%	277	41.34%
Sandoval	530	11.10%	276	52.08%
Unknown county*	19	0.40%	7	36.84%
Total	4,773		2,067	43.31%

Notes: Share of mailed surveys calculated relative to all surveys mailed across counties. Response rate calculated relative to surveys mailed within each county.

**These properties could not be matched to a county based on the raw data.*

Characteristics of Irrigator Respondents

Figure 3: Distribution of irrigator respondents by size of farm operations

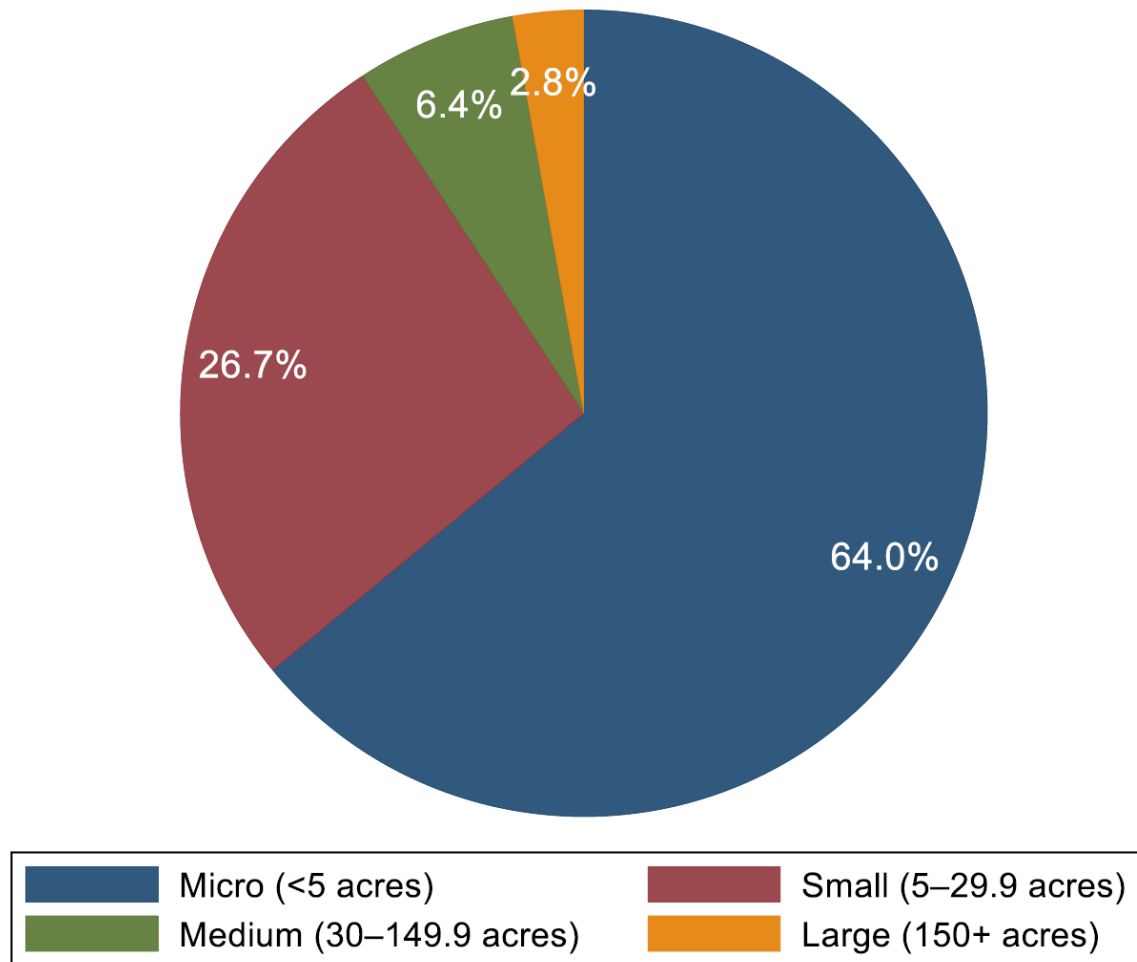


Figure 4: Whether farming is primary household income source

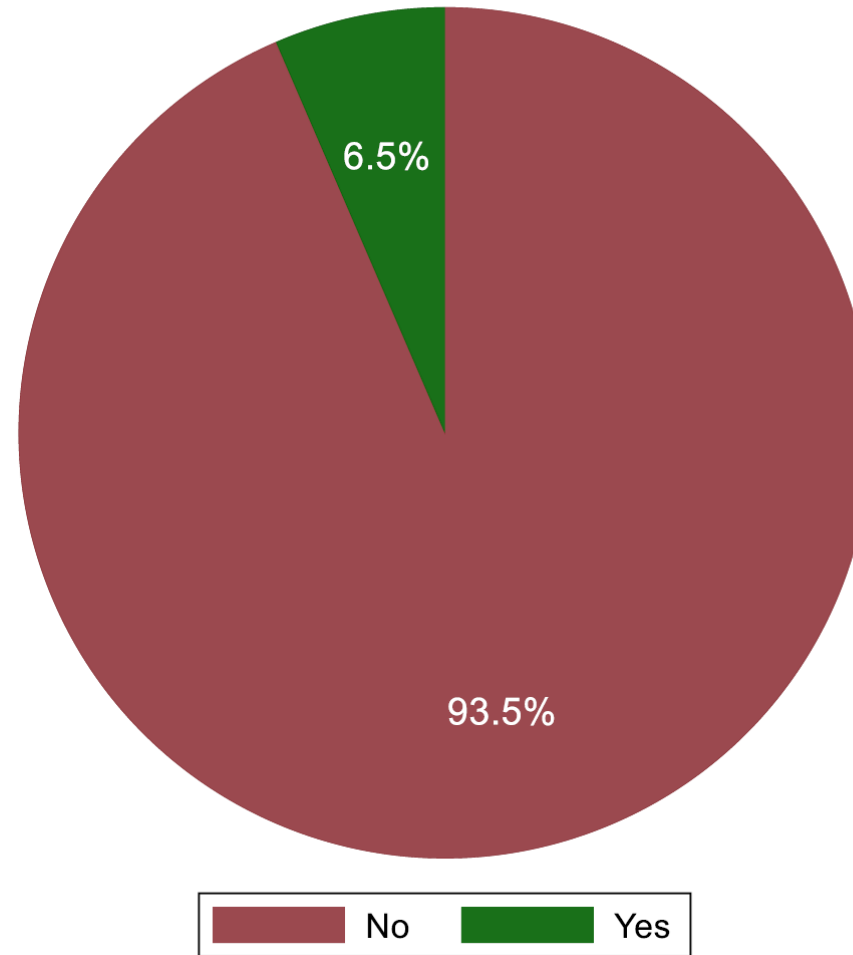


Figure 6: Types of agricultural activities on land operated for agriculture

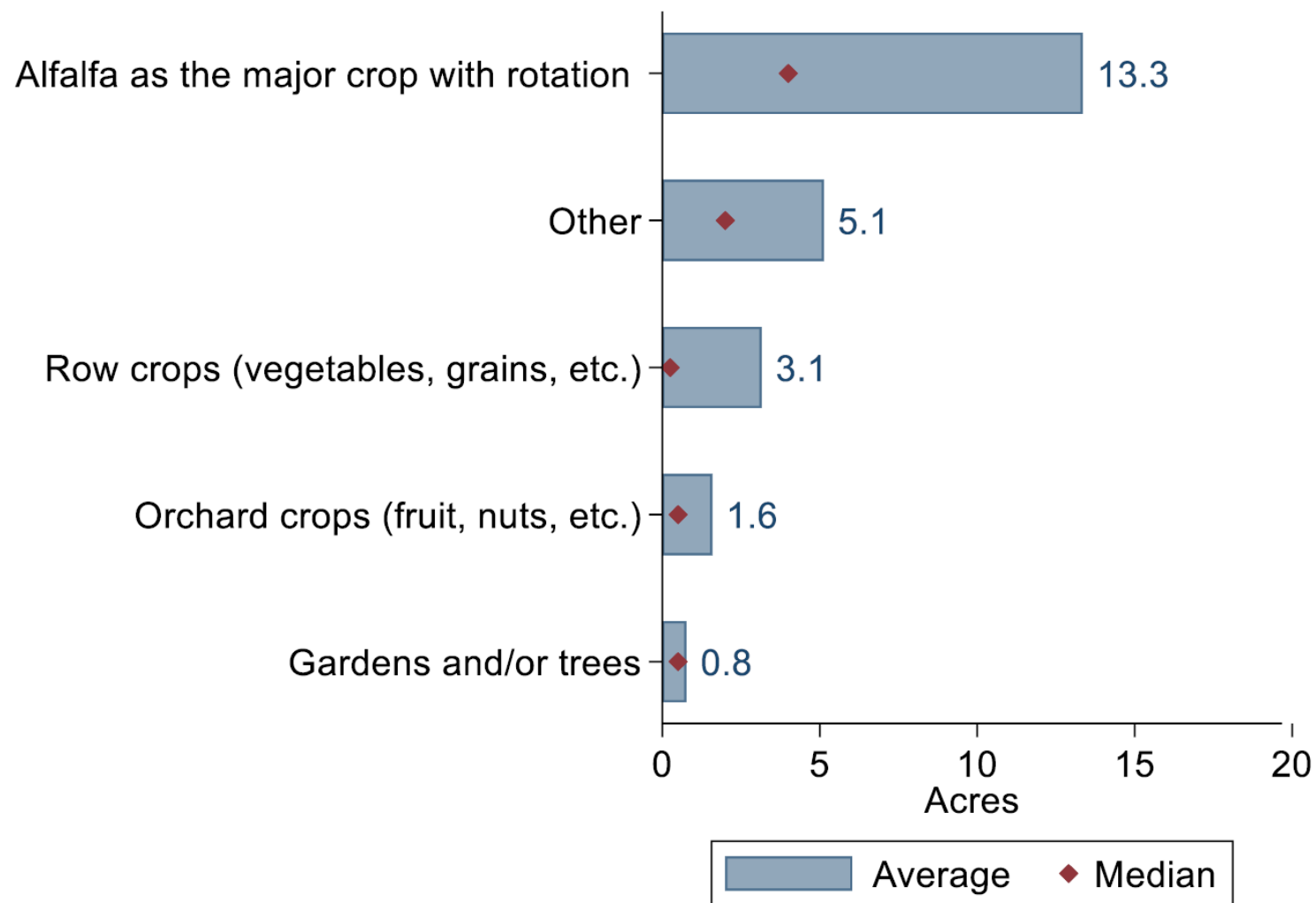


Figure 7: Average share of irrigation water from each water source

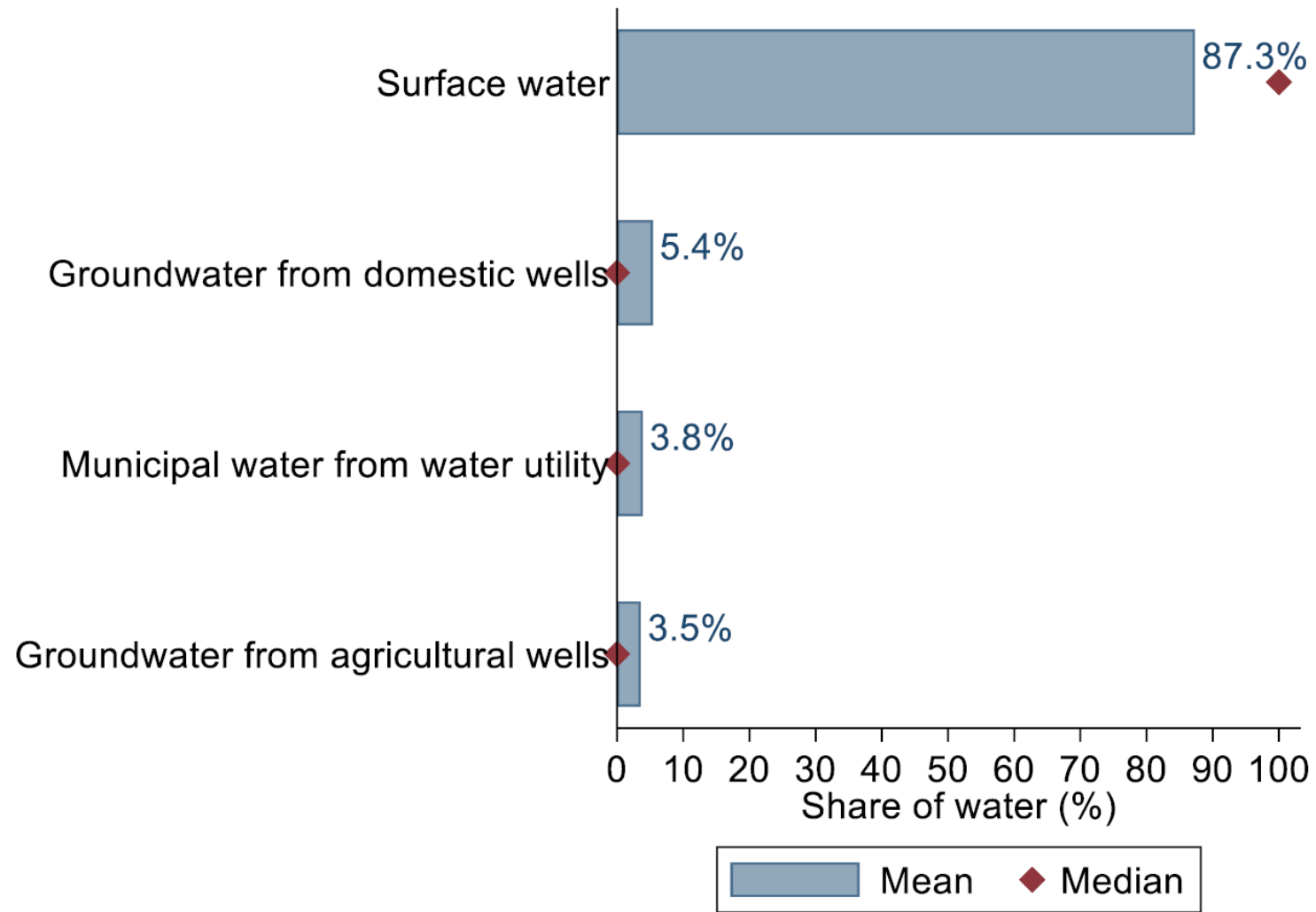
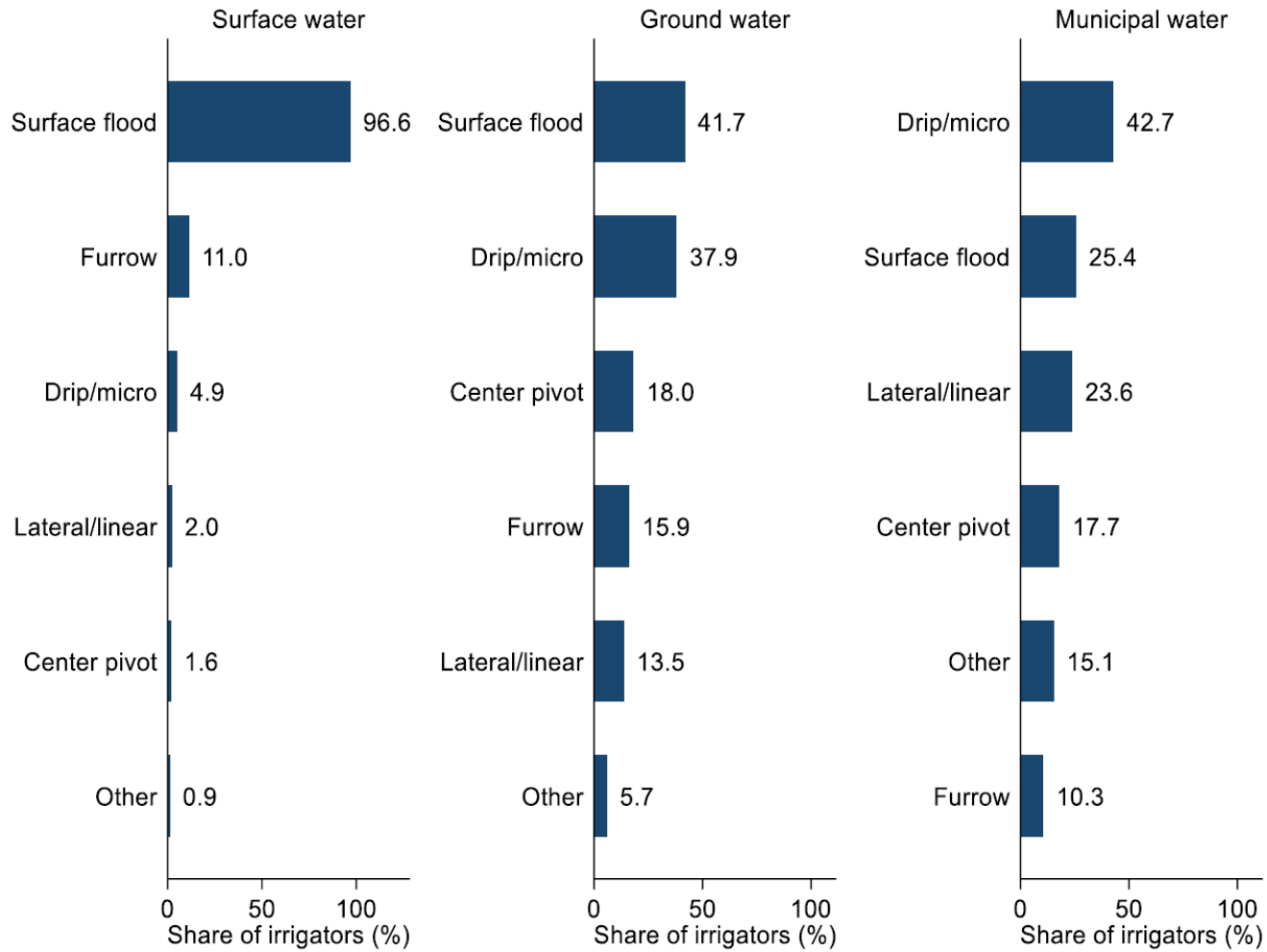
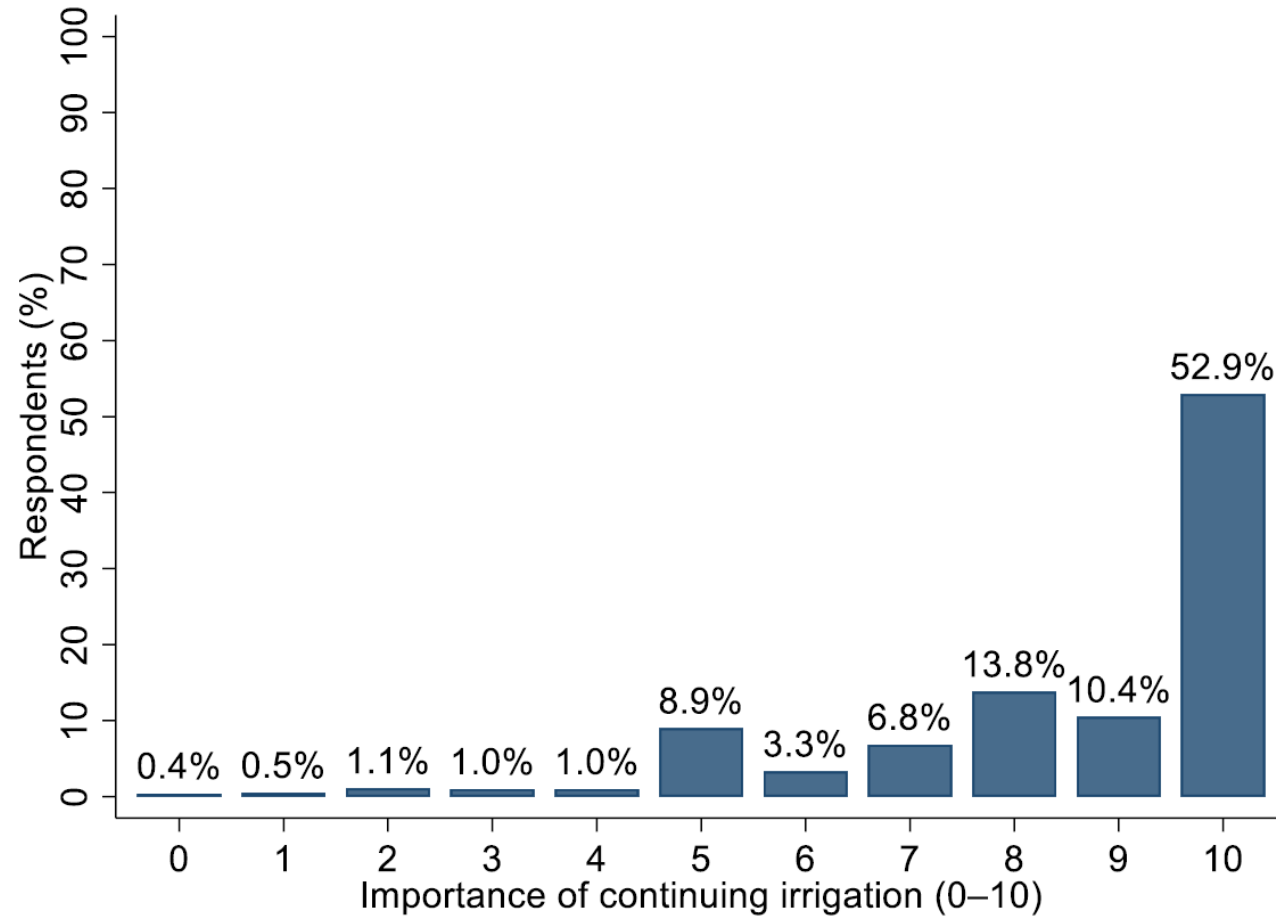


Figure 8: Irrigation methods by water source



Notes: Bars show the share of irrigators using each irrigation method within each water source. Respondents could select multiple irrigation methods, so percentages do not sum to 100%.

Figure 9: Reported importance of continuing growing crops and irrigating fields



Note: Responses to the question: How important is it to continue growing crops and irrigating your fields, given today's water challenges?

Results: Water Management and Delivery Issues

Table 6: Degree to which local issues have caused disruption to surface water delivery

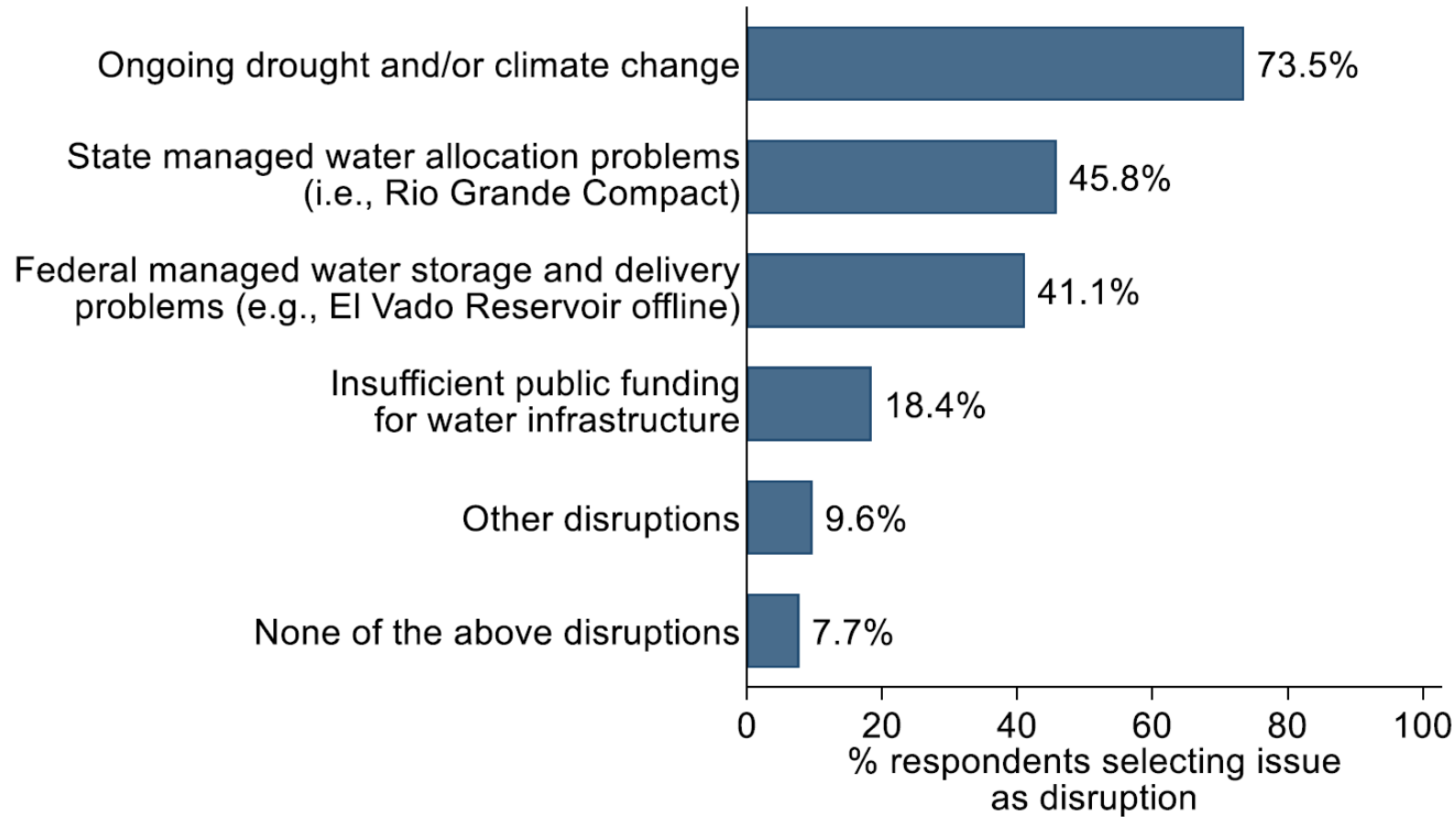
Issue	Average degree (1-5)	Share of respondents rating it as serious or very serious (≥ 4)
Not receiving enough surface water to maintain my desired operations	3.25	45.75%
Not being able to know when it might be my turn for water delivery	3.07	41.35%
Being unable to schedule my deliveries for when I need water	3.06	40.57%
The amount of water delivered was too little to flood my fields	2.95	35.98%
Feeling that others are receiving more than their share of water, leaving not enough for me	2.67	32.02%
MRGCD infrastructure problems (e.g. clogged ditches, malfunctioning turnout, pumps not working)	2.33	22.56%

Notes: For the percentages, the denominator is the number of respondents who indicated an answer for a particular issue. For the average rating, 1 is not a problem at all, 5 is a very serious problem.

Table 7: Local issues causing disruption to surface water delivery by county

Panel A: Average degree rating (1-5)				
Issue	Bernalillo	Sandoval	Socorro	Valencia
Not receiving enough surface water to maintain my desired operations	3.46	3.68	2.89	3.06
Not being able to know when it might be my turn for water delivery	3.27	2.98	2.56	3.10
Being unable to schedule my deliveries for when I need water	3.21	3.28	2.62	3.02
The amount of water delivered was too little to flood my fields	3.10	3.43	2.69	2.77
Feeling that others are receiving more than their share of water, leaving not enough for me	2.77	2.67	2.33	2.71
MRGCD infrastructure problems (e.g. clogged ditches, malfunctioning turnout, pumps not working)	2.14	3.21	2.18	2.24

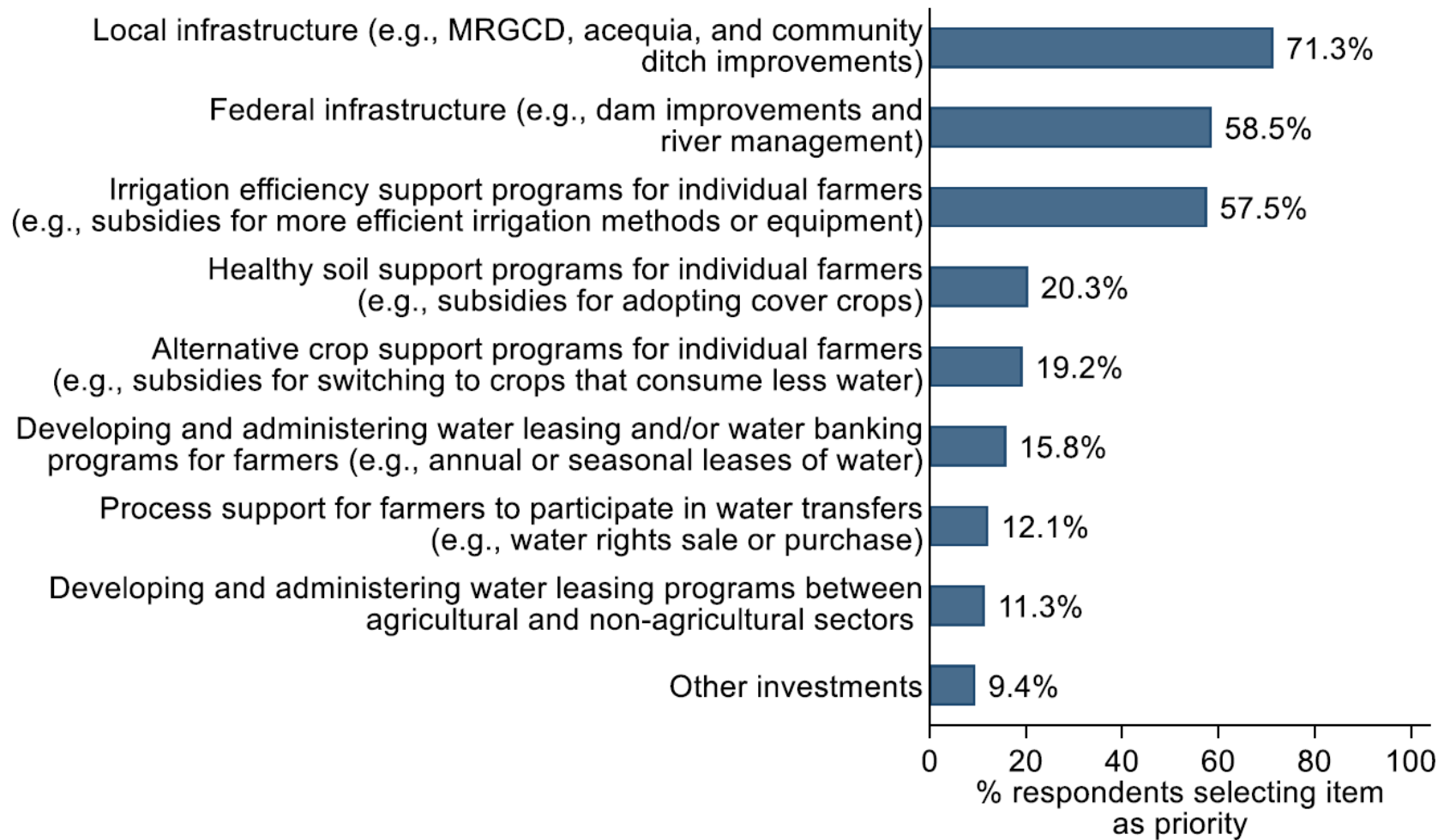
Figure 12: Non-local issues causing significant disruption of water delivery



Notes: Percentages represent the share of respondents who answered the question and selected each issue as a disruption. Respondents could select multiple issues; therefore, percentages may sum to more than 100%.

Results: Priorities for Investments

Figure 13: Priorities for how investment dollars would be best spent



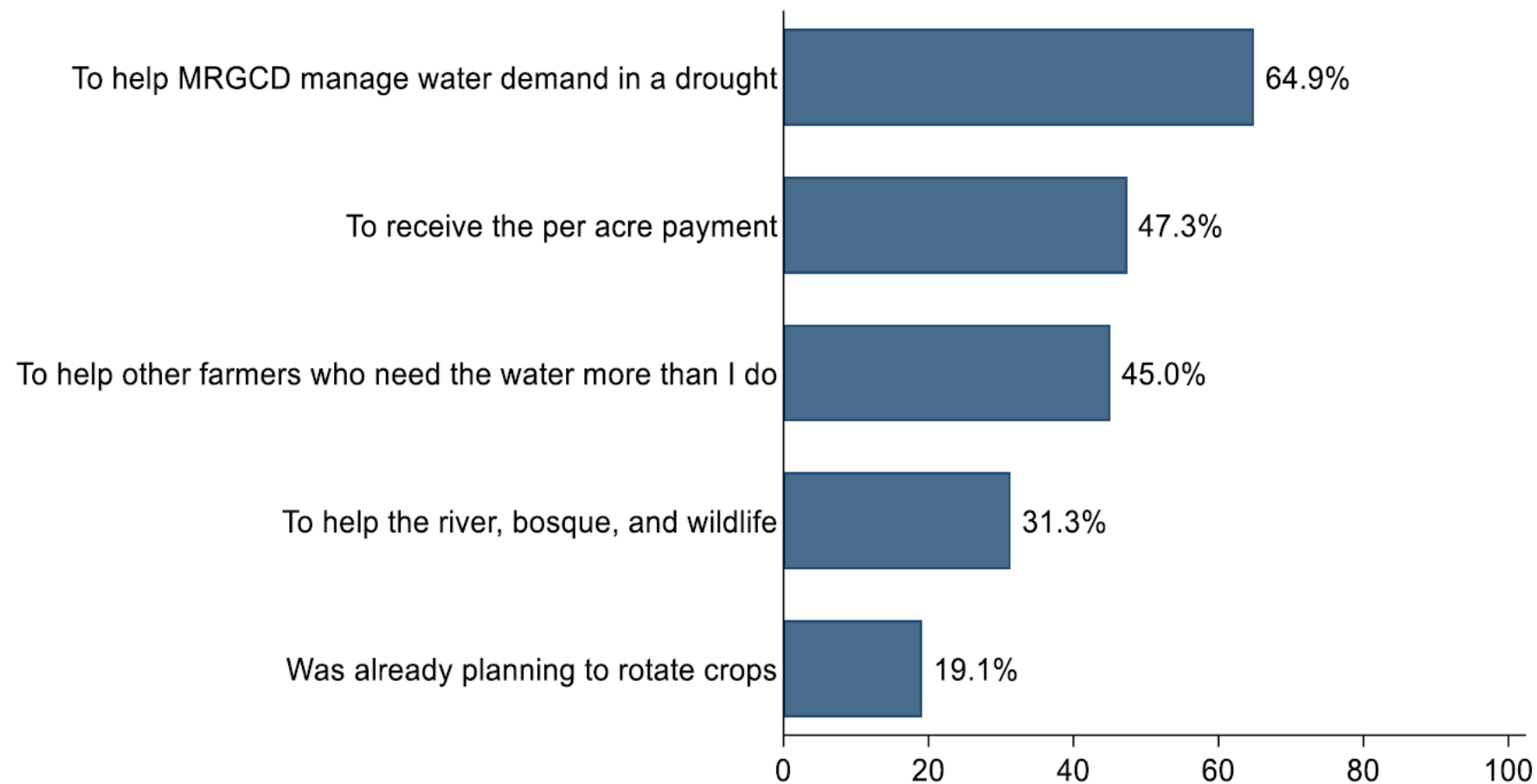
Notes: Percentages represent the share of respondents who answered the question and selected each item as one of their top priorities. Respondents could select top three priorities; therefore, percentages may sum to more than 100%.

Results: Environmental Water Leasing Program

Table 8: Previous participation in the Environmental Water Leasing Program

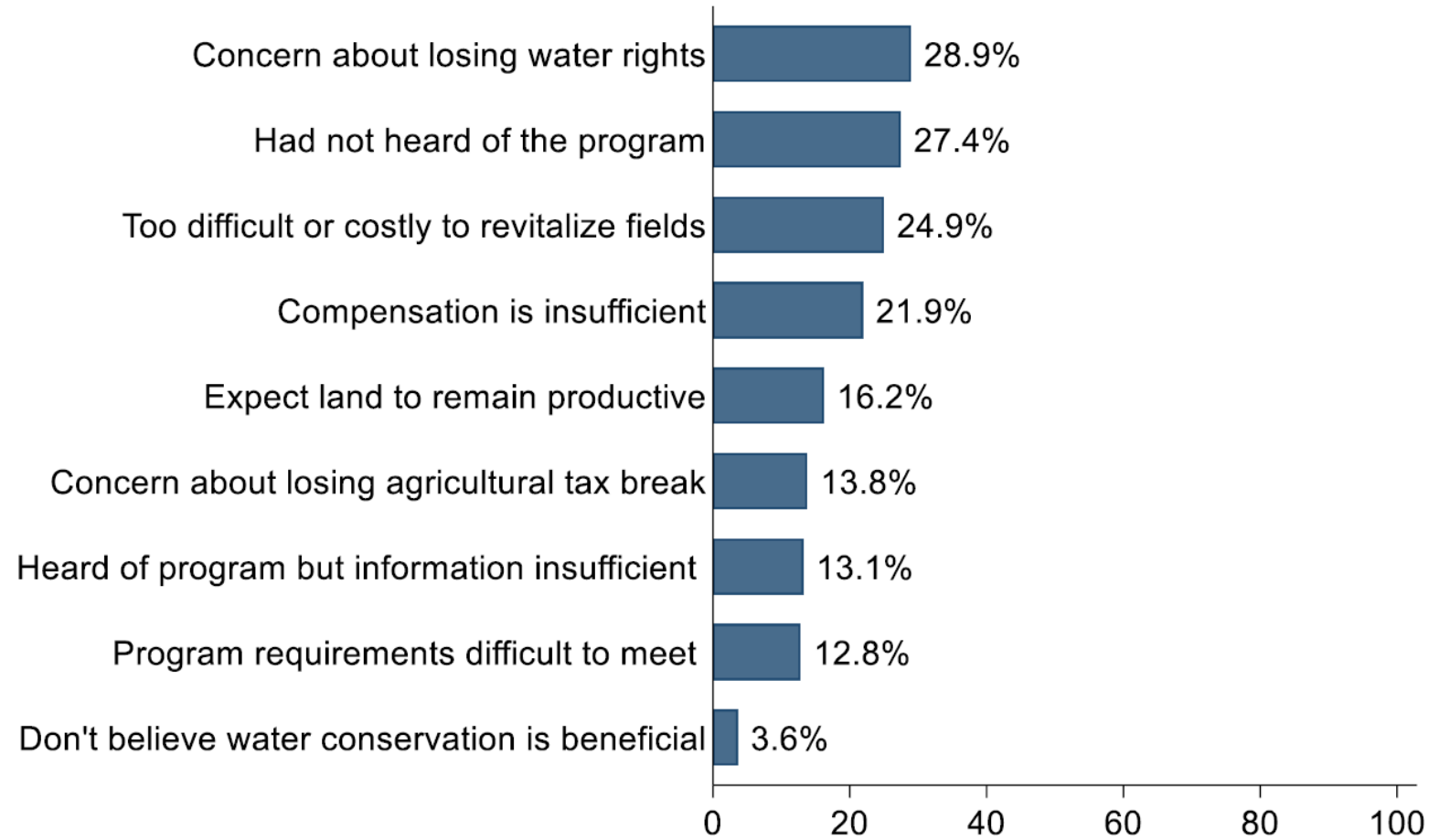
Participation	Number of respondents	Share of respondents
Yes	131	6.8%
No	1789	93.2%

Figure 14: Reasons for participating in the Environmental Water Leasing Program



Notes: Percentages represent the share of respondents who had participated in the EWLP before and selected each reason. Respondents could select multiple reasons for participation; therefore, percentages may sum to more than 100%.

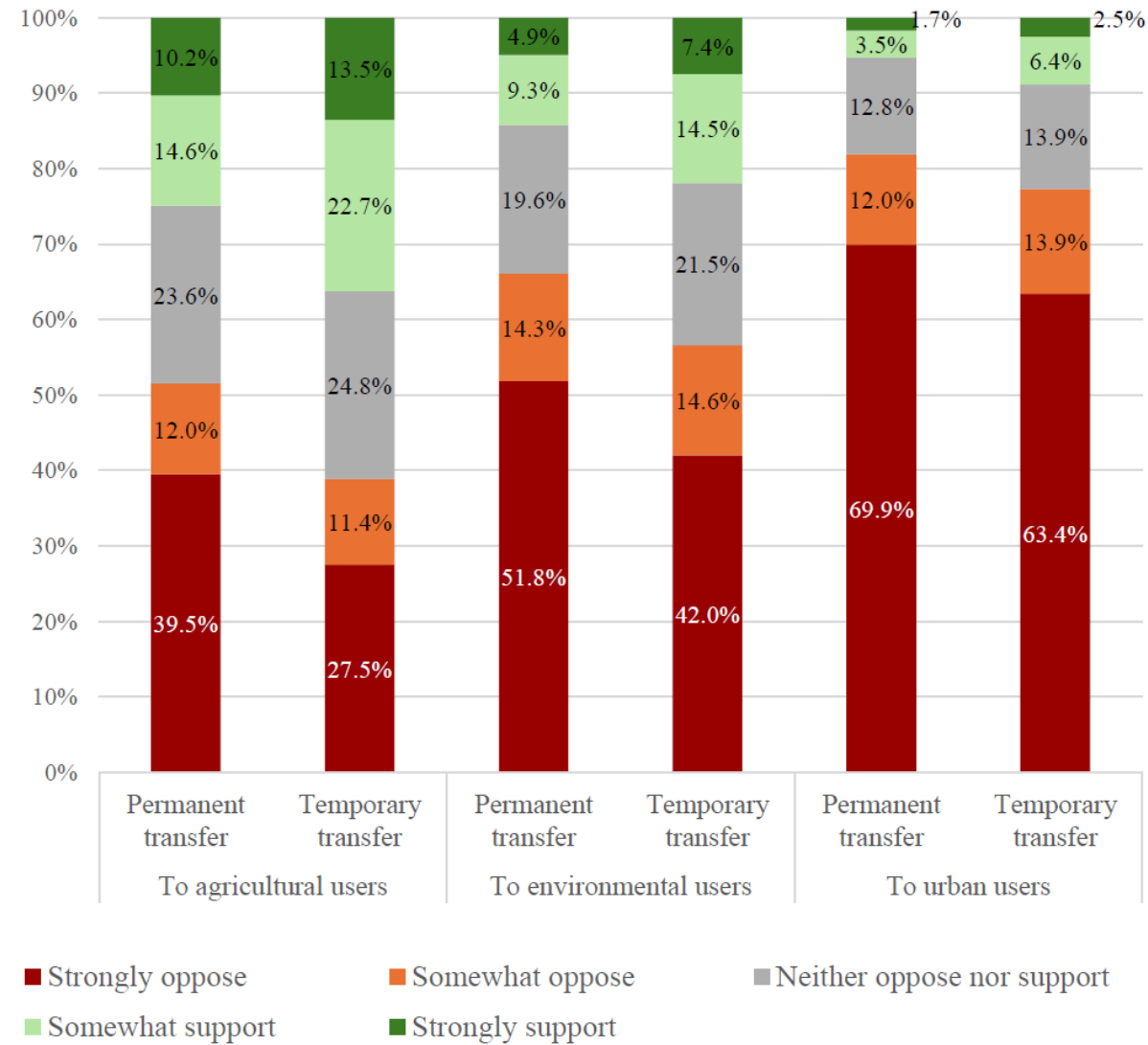
Figure 15: Reasons for not participating in Environmental Water Leasing Program



Notes: Percentages represent the share of respondents who had not participated and selected each reason for choosing not to participate. Respondents could select multiple reasons; therefore, percentages may sum to more than 100%.

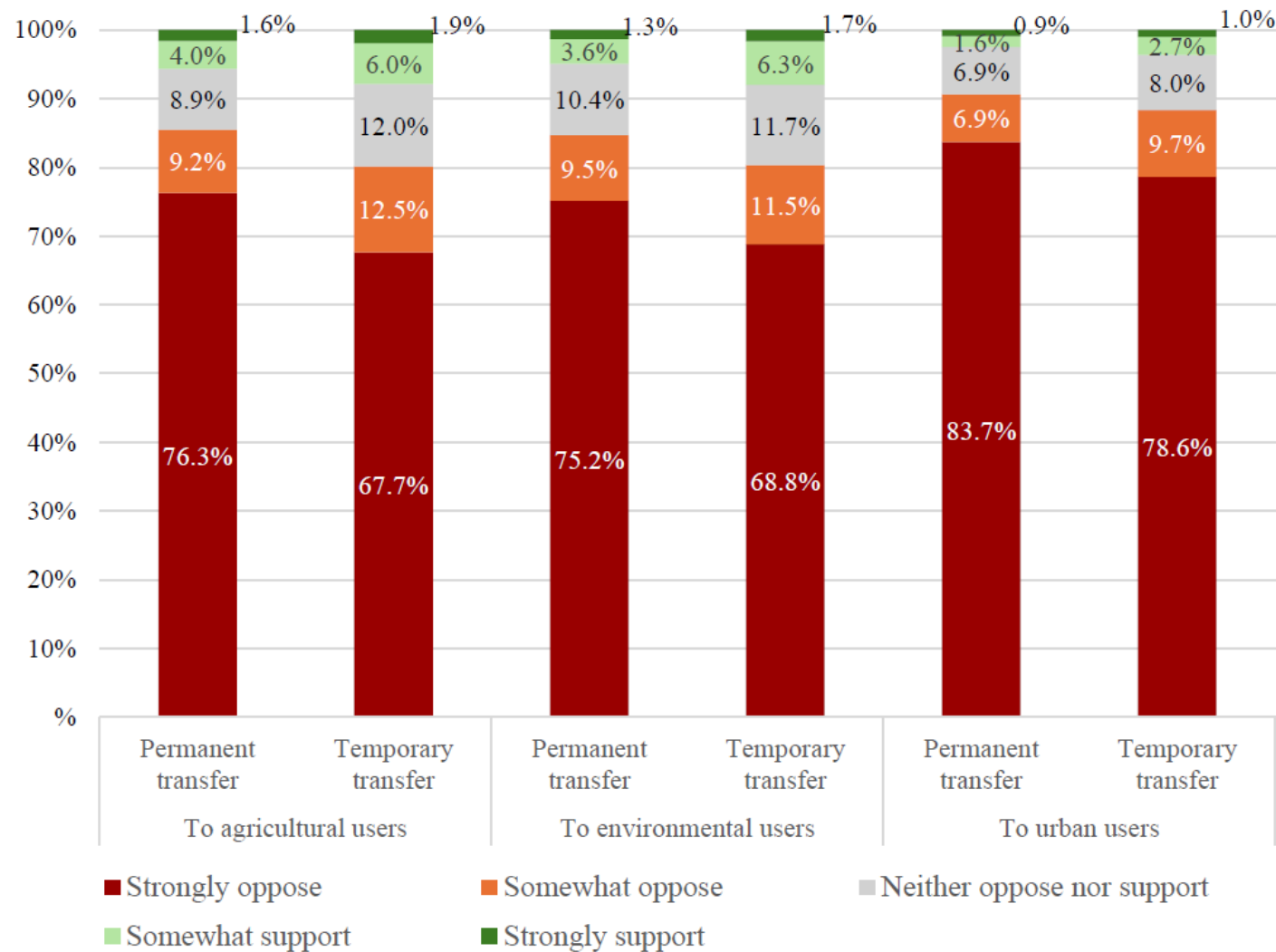
Results: Support for Water Markets and Water Rights Transfers

Figure 16: Levels of support for transferring agricultural water rights within the MRGCD



Note: Percentages calculated from respondents for each transfer option

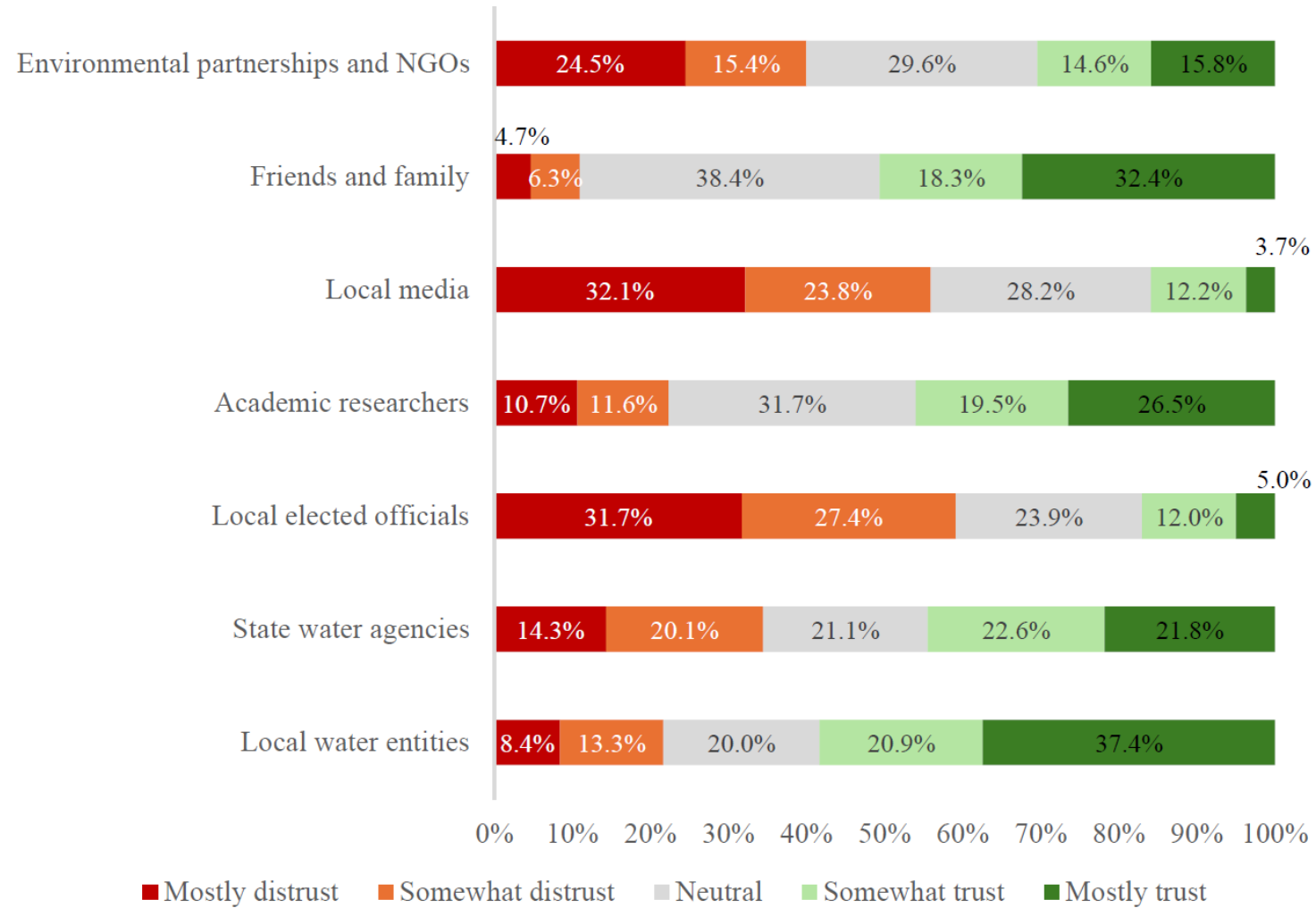
Figure 17: Levels of support for transferring agricultural water rights out of the MRGCD



Note: Percentages calculated from respondents for each transfer option

Results: Local Governance and Trust

Figure 18: Levels of trust in different entities



Note: Percentages calculated from number of respondents for each entity

Implications for Policy & Water Management

- ❑ Support for conservation depends heavily on program design and implementation
 - Need for programs that protect agricultural water rights, maintain agricultural viability, and provide clear assurances about participation risks
- ❑ Water management strategies should aim to address both physical water shortages and institutional coordination challenges
 - Improving infrastructure, delivery reliability, effective communication, and institutional responsiveness may be as important as creating new conservation incentives

Next Steps

- ❑ Follow-up studies
- ❑ Outreach and engagement activities: a stakeholder workshop on September 22, 2026
 - Intended to bring together representatives from federal and state agencies, local water entities, conservation organizations, community organizations, and agricultural stakeholders
 - Focus on discussing survey findings, identifying opportunities to improve water management strategies, and developing priorities for future action

Disclaimer

The survey was designed to provide broad geographic coverage of agricultural water users within the Middle Rio Grande Conservancy District (MRGCD), excluding Pueblo lands. Pueblo communities were not included because data sovereignty considerations and project resource constraints limited the scope of data collection. As a result, the findings presented in this report do not reflect the perspectives of Pueblo agricultural water users or Pueblo governments.

Thanks!
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Appendix

□ Survey Design & Implementation

- A final draft of the “MRGCD Agricultural Water Users Survey”: mid-October 2025
- 2 focus groups (North Valley, 17 participants; Socorro 7 participants): late-October 2025
- 4 one-on-one interviews: early-November 2025
- A pre-survey of 50 randomly sampled agricultural water users as an administrative test: launched 11/21/2025
- A survey of representative agricultural water users (surveying all 4,858 active irrigators in 2024 – out of ~9,000 irrigators – out of ~14,000 constituents): launched 1/12/2026

Stage	Activity	Day
Contact 1	Pre-notice letter from MRGCD	Sent Day 0
Contact 2	Initial survey packet (to all participants)	Sent 7 days after C1
	Cover letter	
	Questionnaire	
	\$2 bill	
	Return envelope (business reply)	
Contact 3	Thank you and reminder postcard (to all participants)	Sent 7 days after C2
Contact 4	Replacement survey packet (to non-respondents)	Sent 14 days after C3
	Cover letter (slightly revised cover letter acknowledging the earlier contact, “We’re following up since we haven’t yet received your response...”)	
	Questionnaire	
	Return envelope (business reply)	
Contact 5	Final survey packet (to non-respondents)	Sent 14 days after C4
	Cover letter (slightly revised cover letter acknowledging the earlier contact, “We’ll be closing the survey soon; we’d love to include your views.”)	
	Questionnaire	
	Return envelope (business reply)	
	Give irrigators another 2 weeks to respond and mail it back	wait another 14 Days
Contact 6	Close the mail survey & text the Qualtrics link	a cycle of 8 weeks for mail
	Close the Qualtrics survey	

Figure 2: Total land operated the past 5 years by ownership and leasing category

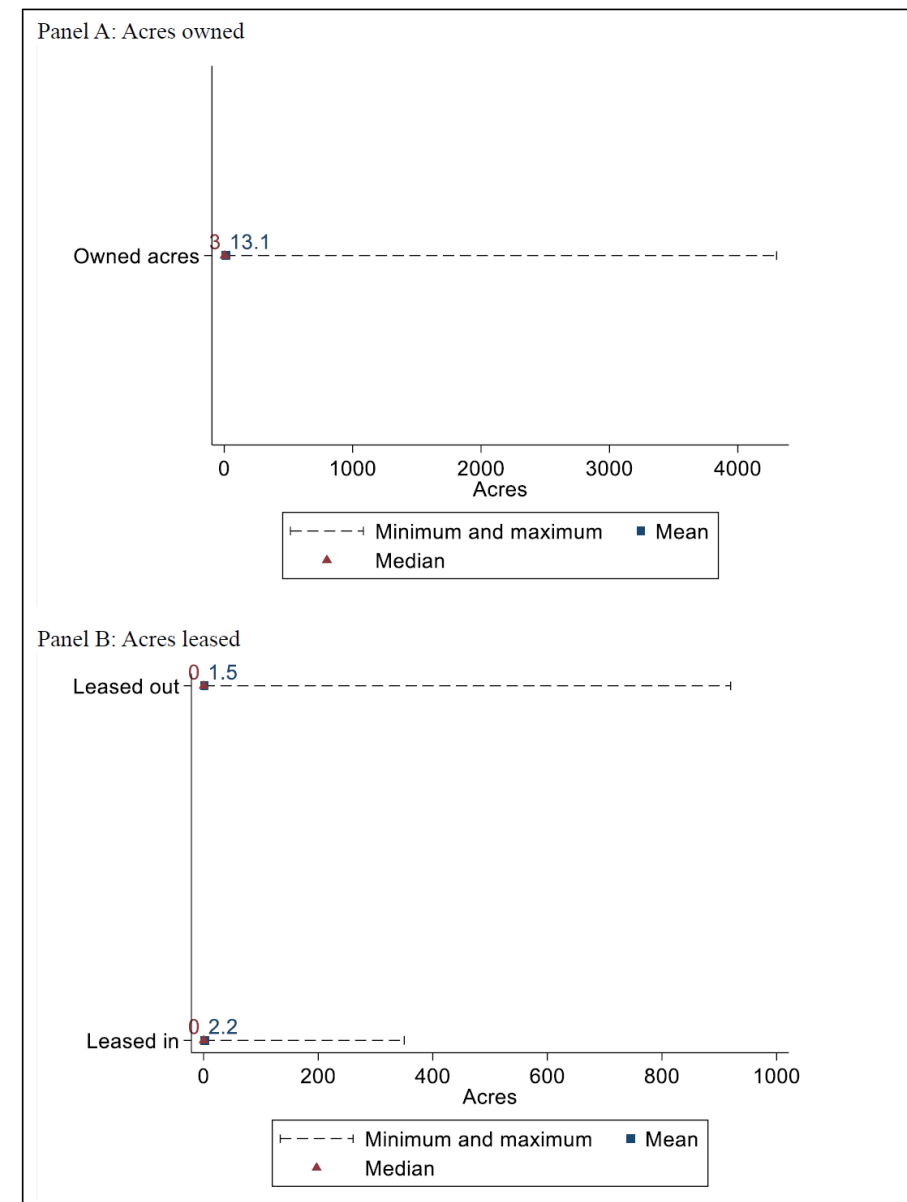


Table 2: Whether farming is primary household income source by farm size

		Micro farm	Small farm	Medium farm	Large farm
Farming is primary income	Number of respondents	49	37	26	15
	Share of respondents	3.86%	7.02%	20.31%	57.69%
Farming is not primary income	Number of respondents	1,221	490	102	11
	Share of respondents	96.14%	92.98%	79.69%	42.31%
Total	Number of respondents	1,270	527	128	26

Note: Farm size categories are defined as micro farms (<5 acres), small farms (5-29.9 acres), medium farms (30-149.9 acres), and large farms (150 acres or more).

Table 5: Demographics: race and gender

Characteristic	Category	Share of respondents (%)
Race	White/Caucasian	45.5
	Latino/Hispanic	34.8
	Mixed race	8.9
	Prefer not to say	7.4
	Other	2.1
	Native American / Indigenous	0.6
	Asian	0.5
	Black/African American	0.2
Gender	Male	65.4
	Female	29.8
	Other/unspecified	4.7

Figure 10: Distribution of respondents by age

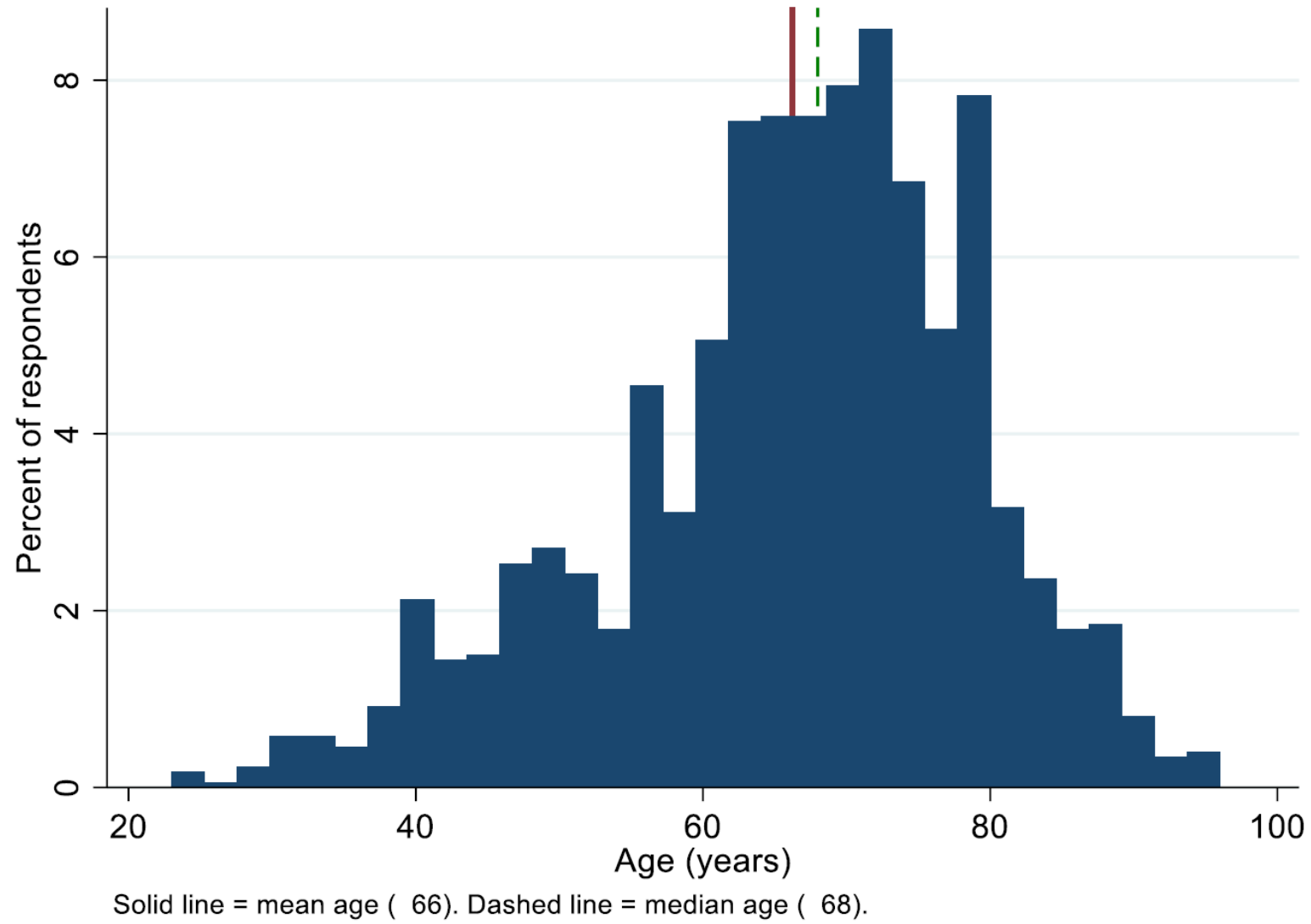


Figure 11: Distribution of respondents by total household income before taxes in 2024

