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Farm Size and Agricultural Extension Programs: Insights from New Mexico's US Agriculture Census Data

Abstract

Agricultural production in New Mexico is characterized by a sharp disparity between farm sizes. A small proportion (13.6%) of large farms accounts for the majority (92.8%) of agricultural output ($2.7 billion), while small farms represent the majority of farming operations (73.8%). This article examines the implications of these structural differences for agricultural extension programming. Based on the 2022 USDA Census of Agriculture and the authors' field-based expertise, the study identifies key programming areas where extension needs diverge by farm size: water and soil management, labor shortages, machinery, livestock management, marketing strategies, and food safety compliance. Findings suggest that differentiated extension approaches, tailored to the resource base and operational realities of small and large farms, are necessary to improve extension program delivery and effectiveness. Addressing these differences will require additional resources, strategic prioritization, and flexible extension models responsive to New Mexico's diverse agricultural landscape.

Keywords: agriculture, Extension program, large, size, small

Introduction

Recent agricultural census data show that the vast majority of New Mexico's (NM) agricultural output is produced by a small proportion of large-sized farms (USDA NASS, 2024). Nearly 90% of the agricultural value produced recently came from the largest 5% of NM farms (Table 1, Figure 1). Smaller farms, which account for 2% of total agricultural value produced and represent 81% of all NM farms, are significant from a social and community standpoint, as they contribute to preserving food self-sufficiency, reducing rural poverty, and increasing community well-being (FAO, 2017; Hazell, 2005).

Table 1. Total value of agriculture products sold and number of farms in New Mexico, 2022.

Farm value of products sold	Number of farms	Total value of product sold ($1,000)	% of total NM farms	% of total value sold
Small Farms				
less than $1,000	7,897	912	37.6	0.0
$1,000-$2,499	3,310	5,373	15.8	0.2
$2,500-$4,999	2,091	7,428	10.0	0.3
$5,000-$9,999	2,195	15,483	10.5	0.5
$10,000 to $19,999	1,543	21,443	7.4	0.7
Subtotal	17,036	50,639	81.2	1.7
Middle farms				
$20,000 to 24,999	476	10,530	2.3	0.4
$25,000-$39,999	639	19,723	3.0	0.7
$40,000-$49,999	295	12,964	1.4	0.4
$50,000-$99,999	841	59,287	4.0	2.0
$100,000 to 249,999	712	113,299	3.4	3.8
Subtotal	2,963	215,803	14.1	7.3
Large Farms				
$250,000 to 499,999	383	135,533	1.8	4.6
$500,000 to $999,999	240	165,157	1.1	5.6
$1,000,000 or more	354	2,381,905	1.7	80.8
Subtotal	977	2,682,595	4.7	91.0
Total	20,976	2,949,037	100.0	100.0

A farm is defined by NASS in their statistical reporting. Source: USDA NASS, 2024.

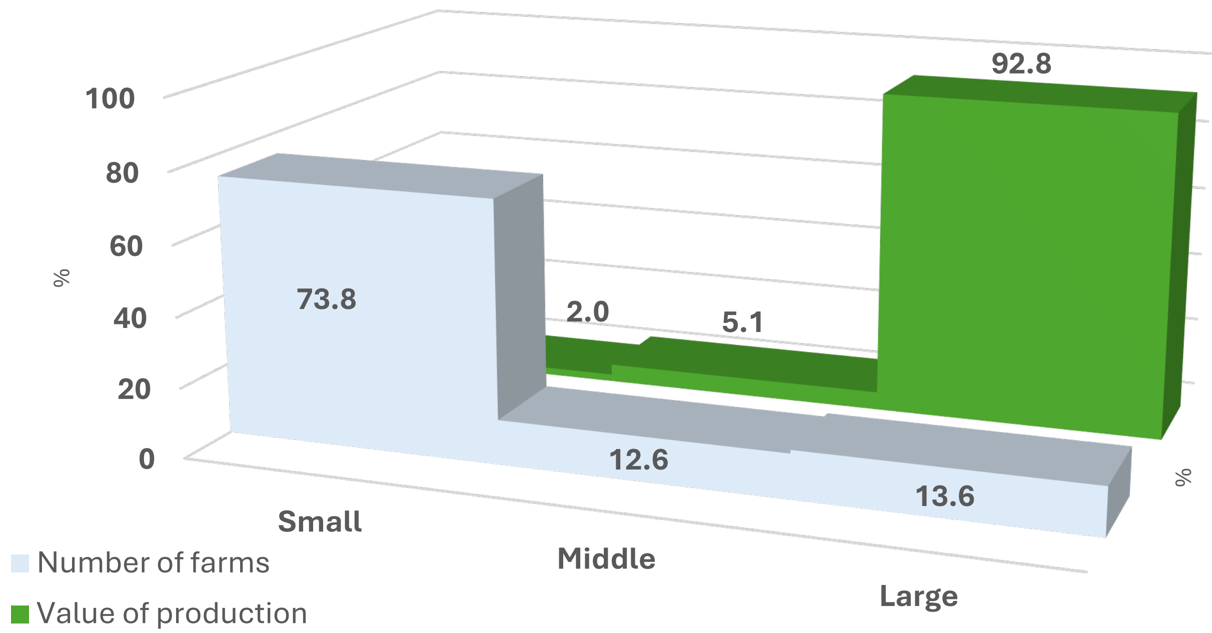

Figure 1. Number of farms and values of agriculture production by farm size in New Mexico, 2022. Small farm size is defined as <$20,000, middle farm size $20,000 - $250,000, and large farm size>$250,000 in agricultural products sold. Source: USDA NASS, 2024).

The effect of farm size on agricultural production outcomes has been well studied in the production literature (Paul et al., 2004; Vitale et al., 2019). Large farms (sales > $250,000) have substantially more resources and capital, which, combined with the scale effects, enables them to adopt new technologies such as mobile communications, drones, remote sensing, precision agriculture, and, more recently artificial intelligence (Berdegué et al., 2001; Dutta and Goswami, 2020; Ozguven, 2023; Pray and Fuglie, 2001; Qiang et al., 2012). According to Duffy (2009) and Lowenberg-DeBoer (2019), the large size advantage allows them to use more powerful and efficient mechanization, as well as other infrastructure-related equipment such as irrigation systems and precision agriculture technologies. In contrast, Eicher et al. (2006) reported that small farms (sales <$20,000) possessed equivalent management skills and were often more efficient due to their flexibility to adapt. However, other studies report their limited size constrained their ability to cover fixed costs (Featherstone et al., 1997; Hall and LeVeen, 1978; Olson and Vu, 2009).

This structural reliance on a relatively small number of large-scale operations introduces potential vulnerabilities to the state's agricultural system. Large farms often have more experience than small farms and typically greater commercial viability (USDA NASS, 2024). However, they continue to face significant challenges. For example, when milk prices recently collapsed from $24.70/cwt in July 2022 to $15.70 in July 2023, some large dairy producers in NM either declared bankruptcy or were forced into temporary shutdown (Hagevoort, 2023). Small farms face distinct challenges, including low productivity, capital constraints, off-farm employment pressures, and limited marketing skills (NMSU, 2023a,b).

This article explores differences in economic production between large and small NM farms to assist extension programs in developing initiatives that help each farm type improve performance. Although previous studies have investigated size differences, to the best of our knowledge no one has translated those findings into specific, scalable extension program strategies. This paper outlines actionable recommendations to align extension programs with the distinct needs of both small and large producers.

Background and Methods

The farm size classification used in this study follows the natural breakpoints evident in USDA NASS reporting. In NM, farms with less than $20,000 in agricultural sales are treated as small operations, farms with sales between $20,000 and $249,999 sales are grouped as medium, and farms with sales above $250,000 are considered large commercial operations in 2022 (USDA NASS, 2024). This NM classification has more modest income classification compared to standard practice across USDA reporting, in which small farms have an upper threshold of $350,000 and large farms begin at $1,000,000 (USDA ERS, 2021; USDA ERS, 2016). In other regions farm sizes are defined differently; for instance, the Vermont Agency of Agriculture, Food, and Markets (2025), classifies small farms with a much lower threshold of $20,000.

While gross sales is the dominant criterion in federal NASS reporting, it often masks fundamental differences in land use, production systems, and extension needs. For example, a 30-acre onion farm may well fall into the “large” income category, while a 200-acre hay operation might be classified as “small,” depending on commodity prices, productivity, and market access. Land-based characteristics such as crop acreage, forage availability, and herd size are critical for understanding the resource endowments and operational constraints that producers face on the ground. In practice, farm size also differs substantially by crop type, even within specialty crop categories. That 30-acre onion grower may satisfy the NASS “large” income threshold, but may lack irrigation infrastructure, storage facilities, or pesticide training needed for scaling-up to achieve commercial scale benefits. A pecan producer likewise may require over 250 acres to consistently meet “large farm” thresholds, but due to longer production cycles and price volatility is more akin to a small-scale operation. In livestock systems, both herd size and grazing acreage are equally as important as receipts. A cow-calf ranch with 100 animals may be technically “medium” by income, but in marginal productivity areas corresponding low stocking rates would require support for fencing, forage management, and branding compliance equivalent to “large” farms.

Because of the importance of acreage, we took the detailed acreage and livestock inventory data from the NASS Quick Stats system and reorganized it to align with the income-based farm typologies reported in Table 1. Specifically, we calculated average acreage and herd characteristics across commodity categories, and then folded those into the small, medium, and large income bins used in federal reporting. This approach allowed us to bridge two critical dimensions: the economic scale captured by gross sales and the land- or herd-based scale that shapes real-world production needs. This approach allows for a more complete profile of the state's agricultural structure, recognizing that land use and herd management often diverge from patterns suggested by sales revenue alone.

To bridge the land-use-based farm classification to the corresponding NASS income classes, additional calculations were necessary since farm income was not directly reported by any of the NASS data sources. We extracted farm income and land-use data directly from NASS Quick Stats using their online search engine (USDA NASS, 2025). Where necessary, adjacent economic classes were aggregated to fit the acreage category bins, e.g. 10-49 acres, to develop a consistent framework. To estimate farm income in each acreage bin, we multiplied each bin's acreage by the NASS-reported yields and market prices to estimate total farm income. Average farm income was calculated by dividing total estimated farm income by the number of farm operators corresponding to each of the acreage bins.

We devised an acreage-based classification of farm scale across five key agricultural sectors in New Mexico: onions, peppers, pecans, hay, and cattle (Table 2). Each commodity is categorized into the NASS income defined farm size (small, medium, or large) using land-based indicators such as harvested acreage or herd inventory.

Table 2. Farm size for main crops, forage, and livestock in NM in 2022.

Acres	# of Farms	Total Harvested Acres	Estimated Ave Farm Sales ($)	NASS Farm Type (% of Total)[a]
Onion				
0.1-0.9	121	60.5	$2,062	Small (68.4%)
1.0-14.9	17	50	$102,068	Medium (9.6%)
15+	39	5,165	$2,892,734	Large (22.0%)
Pepper				
0.1-4.9	293	112	$4,582	Small (80.5%)
5-49.9	32	723	$99,846	Medium (8.8%)
50+	39	7,650	$976,469	Large (10.7%)
Pecan				
0.1-4.9	1,400	2,088	$3,676	Small (72.5%)
5-99.9	411	8,257	$97,112	Med (21.4%)
100+	179	90,534	$2,174,309	Large (9.4%)
Hay				
0.1-99.9	50,300	305,287	$8,796	Small (84.4%)
100-499	9,279	2,089,853	$137,908	Med (15.5%)
500+	399	842,145	$838,979	Large (0.7%)
Cattle[b]				
1–49	3,300	1-19	$13,118	Small (43.7%)
50–259	3,800	20-199	$51,912	Med (50.3%)
260+	462	200+	$1,217,778	Large (6.4%)

[a] NASS farm type follows form definition used in Table 1: small (<$20,000 farm sales);medium (<$250,000); and large (>$250,000).
[b]Cattle operations report herd inventory (total head) rather than harvested acreage

The data reveal that what qualifies as a "large" farm varies substantially across commodities. For example, a large onion farm begins at 15 acres and on average generates an estimated $2.9 million in annual farm sales, while pepper farms require at least 50 acres to be classified as large and have lower sales of $976,469 (Table 2). In contrast, large pecan farms, which require extensive land to reach commercial scale, require at least 100 acres and generate more than $2.1 million per farm (Table 2).

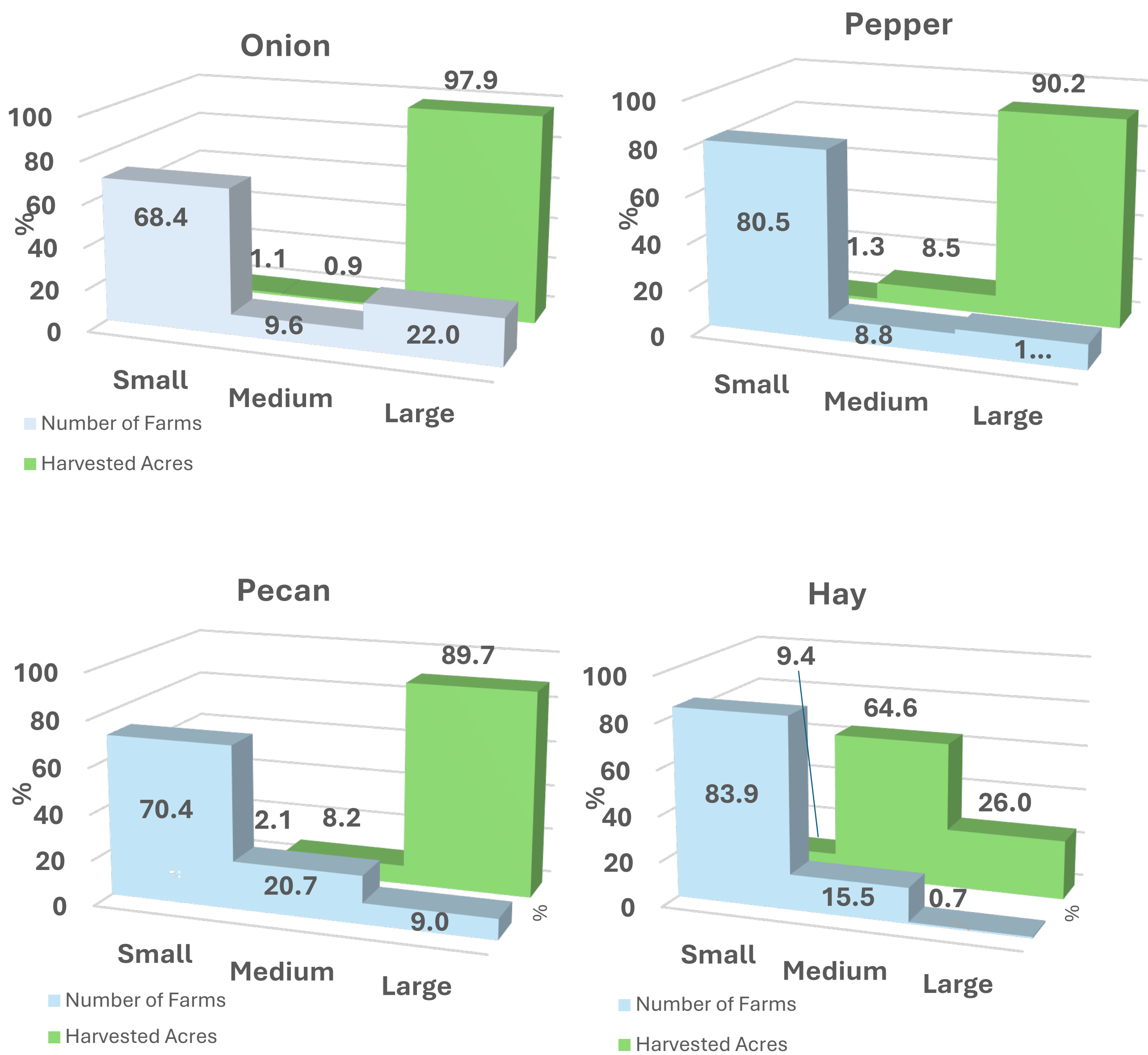

Figure 2. Number of farms and harvested acres by NASS income-based farm size classification in New Mexico, 2022

The pattern is consistent in forage and livestock systems. Large hay farms—defined as those operating over 500 acres—account for just 0.7% of operations, yet average $838,979 in income and operate on more than 842,000 total acres statewide (Table 2). Similarly, large cattle operations manage over 260 acres and typically hold more than 200 head, averaging more than $1.2 million in farm income. By contrast, small hay farms operate on under 100 acres and average less than $9,000, while small cattle operations (with fewer than 20 head) average just over $13,000 (Table 2). Importantly, these scale patterns also allow for enterprise equivalence comparisons across farm types: for example, a 15-acre onion operation generating over $2.8 million in sales may be economically equivalent to a 200-head cattle ranch managing over 260 acres, or a medium-sized pecan orchard with 100 acres in production.

Results: Extension Areas of Difference by Farm Size

To better understand how farm size influences extension needs, we developed a set of thematic focus areas grounded in a combination of stylized facts, expert opinion, and supporting literature. This approach draws on the authors' field-based experience in New Mexico agricultural systems supported by extension reports, USDA Census data, published studies, practitioner surveys, and repeated trends documented in federal and state-level reporting. While not statistically tested in this study, the themes reflect well-known patterns across farm size categories, highlighting differences in constraints, practices, and priorities between small, medium, and large farms.

Each theme—ranging from water management and machinery use to food safety compliance—was selected because of its consistent appearance in extension diagnostics and planning efforts (Table 3). For instance, water management has repeatedly surfaced as a scale issue: small farms often rely on flood irrigation due to cost constraints, while large farms increasingly invest in drip or micro-sprinkler systems to improve efficiency. Similarly, in machinery access, large operations typically own specialized equipment such as combines or forage harvesters, whereas small producers may operate with just one multipurpose tractor or rely on custom operators.

Table 3. Priority issues of size difference in the agriculture Extension program in NM, with supporting literature and Extension experts' opinion

Extension Theme	Large Farm Issues	Small Farm Issues
Water Management	Increasing adoption of drip and micro-sprinkler irrigation systems to improve efficiency in response to chronic drought and regulatory pressure.	Continued reliance on traditional flood irrigation due to high upfront costs and limited access to capital for infrastructure upgrades.
Soil Management	Managing intensive use of fertilizers and pesticides while adopting no-till and conservation tillage to meet environmental compliance standards.	Maintaining traditional tillage practices with growing interest in organic and low-input soil health strategies; limited access to conservation incentives.
Labor Constraints	Severe labor shortages in dairy and specialty crops; heavy reliance on hired or migrant labor; increasing risk of operational disruptions.	Greater reliance on family labor or part-time help; more flexibility but limited ability to scale up operations.
Machinery Ownership	Investment in high-value, specialized machinery (e.g., forage harvesters, cotton pickers), but rising repair, data proprietary, new technology barriers, and consulting fees pose maintenance challenges.	Dependence on one multipurpose tractor or custom operators due to capital constraints; generally more efficient with lower-cost equipment.
Livestock Management	Managing large grazing areas and herd tracking over expansive rangeland; better positioned to adopt virtual fencing and drone technologies.	Smaller herds and less land allow for more direct management; focus on forage productivity and feed efficiency.
Marketing Channels	Focus on wholesale and retail contracts; exposure to market volatility but ability to leverage scale and storage capacity for timing advantage.	Dependence on farmers' markets, CSAs, and food hubs; limited access to wholesale buyers; stronger diversification in product mix.
Food Safety Compliance	Subject to FSMA regulations; compliance requires substantial financial and administrative effort, especially in high-volume or fresh produce operations.	Often exempt from FSMA, but still face indirect pressure from buyers and institutions to follow documented food safety protocols.

Sources: Authors' synthesis based on expert opinion, USDA NASS (2024), and New Mexico Extension programming experience.

These types of differences are not merely operational; they shape extension delivery models, workshop formats, regulatory outreach, and even risk management messaging. By structuring the table around extension-relevant contrasts, the farm scale approach supports more targeted engagement strategies and aligns with long-standing extension goals of serving diverse producer populations equitably and effectively. The themes do not claim to capture every nuance of size-based differentiation but provide a practical, field-informed framework that extension agents can use to prioritize programming and design scale-appropriate interventions.

Water management

As climate change intensifies, drought has been severe across New Mexico, and water tables have steadily declined (Udall and Overpeck, 2017). The Rio Grande River, the primary source of surface water for agricultural use in the state, is under increasing pressure as demand rises and supplies become less reliable (DeMouche, 2004). In this context, water management has become a defining issue differentiating large and small farms.

Recent evidence from Arizona suggests that large-scale operations in arid regions are increasingly adopting advanced irrigation technologies—such as drip and micro-sprinkler systems—to conserve water and improve efficiency (Arizona Department of Water Resources, 2023; University of Arizona Extension, 2023; University of Arizona Cooperative Extension. 2025). Arizona's On-Farm Water Irrigation Efficiency Project, highlighted by the Western Growers Association, shows how investments in precision irrigation systems—especially drip irrigation, soil moisture sensors, and automated delivery systems—are expected to generate substantial water savings, exceeding 20% compared to current irrigation methods (Medler, 2023). While direct, up-to-date data specific to New Mexico irrigation practices are limited, it is reasonable to infer that large New Mexico farms with adequate support will follow similar trends, given the shared environmental and regulatory pressures across the Southwest. These improved practices offer a model that New Mexico Extension agents can study to identify scalable strategies for improving water efficiency among NM large farms.

In contrast, small farms in New Mexico often continue to rely on traditional flood irrigation methods, largely due to limited access to capital for system upgrades and the high upfront costs associated with modern irrigation technologies (NMSU, 2005). This reliance on flood irrigation results in higher water losses and less efficient use of a scarce resource. Extension agents working in New Mexico will need to focus not only on supporting the adoption of cutting-edge irrigation technology among larger operations but also on identifying scalable, affordable strategies to help small farms transition away from inefficient flood irrigation practices. This may include promoting low-cost upgrades, improving water delivery methods, or facilitating cooperative access to shared irrigation infrastructure.

By addressing both ends of the farm size spectrum, Extension programs can help ensure that water conservation efforts are effective, equitable, and responsive to the diverse needs of New Mexico’s agricultural landscape.

Soil management

While large farms in New Mexico have increasingly adopted no-till practices to enhance soil health, small farms often continue to rely on intensive tillage methods, which can degrade soil structure and reduce organic matter content (USDA NASS, 2024). Recent assessments show that large farms in New Mexico are following national trends in no-till adoption: the Soil Health Institute’s analysis of the 2017 Census of Agriculture reports over 1,000 operations using cover crops—a practice often linked with no-till—and notes that larger farms are more likely to adopt these conservation practices (Soil Health Institute, 2022). Additionally, the New Mexico Healthy Soil Working Group highlights the importance of no-till drills in maintaining soil health and water retention, underscoring a growing interest among larger New Mexico operations in soil sustainability (NM Healthy Soil Working Group, 2023).Fertility is also an issue for large farms who use more fertilizers and chemicals to maintain crop yields, so their challenge is to adopt soil conservation practices and adhere to Environmental Protection Agency regulations (US EPA, 2025).

To address soil fertility and conservation, many small-scale farmers are turning to organic amendments such as composted manures and plant-based materials (NMSU CES, 2017). These organic inputs not only improve soil structure and water retention but also enhance microbial activity, leading to more resilient and productive soils. New Mexico State University Extension highlights that incorporating compost into soil management practices can significantly benefit soils with low organic matter—a common characteristic in arid regions of the state (NMSU 2016a). Compost applications help increase water-holding capacity, reduce soil compaction, and provide essential nutrients, thereby improving overall soil productivity. Additionally, small farms are exploring vermicomposting techniques, which utilize earthworms to decompose organic waste into nutrient-rich castings (NMSU CES 2016b). This method offers a sustainable way to recycle farm and kitchen waste into valuable soil amendments, further supporting soil health and fertility.

Extension agents play a crucial role in supporting these practices by providing education on composting methods, soil testing, and the benefits of organic amendments. By promoting the use of locally available organic materials, extension services can help small farms enhance soil conservation efforts, reduce dependence on synthetic fertilizers, and improve long-term agricultural sustainability. Small farms, likewise, will need to conserve soil while focusing on improving productivity. Providing no-till technology is also crucial to small farms. Here, investment barriers will need to be overcome. Cost-sharing through cooperative arrangements and the use of custom operators are program opportunities.

Labor shortages

The agricultural industry in the U.S. has historically faced persistent difficulties in managing labor shortages. The USDA Farm Labor Stabilization and Protection Pilot Program is a recent initiative aimed at addressing labor supply issues (USDA FSA, 2024). Large farms are heavily reliant on hired labor to complete operations and often face shutdowns due to labor shortages (El Paso Inc., 2023).

In specialty crops, such as green chile production, the harvest labor demands a significant amount of human labor that is difficult to satisfy due to its seasonal nature, resulting in declining chili production over recent years (NMDA, 2022). Labor shortages have increased labor costs, suppressing chili profitability. In contrast, small farms rely more on family labor and are generally better able to adapt to labor shortages than larger farms.

Machinery ownership and use

Census data show that the value of agricultural machinery in NM declined from 2017 to 2022, despite machinery prices increasing by approximately 70% during the COVID era (US Federal Reserve Bank, 2024). This decline is likely the result of farms extending the useful life of their existing machinery due to higher replacement costs or the availability of higher-quality machinery with longer service lives (USDA NASS, 2024). While about half of all farms have trucks and tractors, large farms are more likely to own combines, cotton pickers and strippers, forage harvesters, and hay balers. Large farms are interested in new, efficient machines and in finding cost-effective ways to repair their existing equipment. However, rising repair costs – driven partly by new software tied to emission standards – have become a significant issue (Investigate Midwest, 2024).

Large farms tend to rely on owning their equipment and often struggle to find laborers to operate it, resulting in inefficient allocation of machinery resources. In contrast, small farms are often more efficient with machinery, owning smaller, less costly equipment such as tractors and implements, and frequently hiring custom operators for harvesting and other operations requiring expensive, specialized machinery that would be unaffordable given their limited scale.

Livestock management

Livestock production in NM is heavily regulated by NM Livestock Board, which requires branding (NM Livestock Board, 2024) and oversees adherence to EPA regulations (US EPA, 2024). On average, cow-calf production in NM requires approximately 100 acres of land (Gifford et al, 2023). Large farm management primarily focuses on herd management, including tracking and gathering, significant challenge given the expansive nature of grazing operations (Malpai Borderland Group, 2023). In contrast, small farms experience fewer difficulties in herd management and are better able to prioritize increasing grass productivity and developing optimal feed rations (Animas Creek Farm, 2024). While ranching has seen substantially less technological innovation compared to crop production, large farms are better positioned to invest in emerging technologies such as virtual fencing and drones, which have the potential to improve rangeland management through precision grazing.

Marketing strategy

Large farms most often market their products to in-state and/or out-of-state wholesalers, exposing them to price volatility. However, some large farms are influential enough to have market power and negotiate favorable prices with retailers. In contrast, small farms are price takers, subject to virtually all market fluctuations, and typically market their products through farmers' markets and regional food hubs.

Large farms, particularly pecan orchards, are sufficiently capitalized to invest in storage facilities, allowing them to market products year-round, avoid seasonal price collapses, and capture peak demand during holidays (Las Cruces Sun News, 2019). Small farms, meanwhile, are often better able to diversify their product offerings (Farm to Table, 2025; NMSU, 2024).

Food safety compliance

Increasing food safety requirements impose significant costs on large farms, as consumers demand higher standards (US FDA, 2024). One large onion producer (Gillis Farm, 2024) stated that he would shut down if food safety compliance costs continued to rise. In contrast, small farms - with revenues under $25,000 -are generally exempt from the Food Safety Modernization Act (FSMA) currently in place.

From themes to programming: emerging recommendations

In translating these differences into action, several programmatic directions emerge. First, water and soil programming could be better stratified by capital outlays: for small farms, this means expanding technical assistance for low-cost drip kits, access to NRCS EQIP microgrant programs, and group-based water-sharing strategies. For large

farms, extension may focus on optimizing advanced irrigation technologies, improving nitrate management, and integrating remote sensing tools for soil conservation.
Labor programming should address alternative, size-appropriate staffing models: small farms need support in recruiting and managing part-time and family labor, while large farms require guidance on navigating H-2A compliance, labor risk mitigation, and automation strategies in dairy and specialty crop sectors. Machinery programming should likewise address scale explicitly: small farms benefit from training in cooperative equipment leasing and maintenance of low-capital tools, while large farms need continuing education on software-based equipment diagnostics, carbon tracking, and emissions compliance.

Livestock programming can incorporate size-specific content. For small producers, forage-based feed plans, rotational grazing, and simple pasture fencing workshops may be more relevant, whereas large-scale producers may be ready to engage in experimental virtual fencing trials, UAV monitoring of herds, and remote tagging technologies. Marketing programs should continue supporting direct-to-consumer approaches for small farms while also offering value chain negotiation strategies for larger operations. Finally, food safety programs should distinguish between farms that are FSMA-exempt and those that are not—offering basic GAP certification and on-farm hygiene for the former, and full FSMA regulatory preparedness for the latter.

Discussion: Challenges in Extension Programming by Farm Size

This study relies on the authors' cumulative field experiences and related expert opinion to identify farm-size-based differences in extension needs across New Mexico. Although widely used in agricultural policy and advisory research, this approach also carries important methodological limitations. Our findings are not derived from hypothesis testing or rooted in direct empirical evidence, but instead emerge from experience, observation, and acquired field-based knowledge. While this allows for rapid synthesis and field-ready insight, the expert opinion-based extension issues are inherently interpretive and vary in relevance across regions, commodities, or time periods.

Additionally, expert opinion, though foundational in extension work, is not easily verifiable or replicable; it may reflect institutional norms or selective observation rather than universal trends. Unlike quantitative studies such as Paul et al. (2004) or Featherstone et al. (1997), which use statistical models to isolate size-related effects, our work provides a diagnostic framework that is pragmatic rather than predictive. We offer it not as a substitute for formal analysis, but as a complementary tool for extension planning in data-limited and culturally diverse environments like New Mexico.

The intended practical utility of our framework is to address the broader challenge of best allocating scarce NM extension resources across farms of vastly different scale. In New Mexico, most counties have only a single extension agent responsible for agricultural programming as well as 4-H youth development, family and consumer sciences, nutrition education, and other responsibilities. This high workload has contributed to frequent turnover and burnout in some counties (NMSU, 2023a). In such a constrained environment, extension personnel must make difficult decisions about how to prioritize programming—whether to focus efforts on small-scale, beginning farmers or on the large-scale operations that produce the majority of the state's agricultural output.

As noted in foundational texts such as Van den Ban and Hawkins (1996), the role of an Extension agent is to "help farmers form an opinion and make good decisions by communicating with them and providing the information they need." This definition does not distinguish between farm sizes—nor should it. Nonetheless, programming in New Mexico has historically tilted toward support for small and beginning farmers, including initiatives like Master Gardener programs, food safety workshops for small-scale producers, urban integrated pest management (IPM), and drip irrigation training for gardeners and small-acreage farms (NMSU, 2023b). While these programs are essential, our findings suggest that large farms face equally distinct and under-addressed challenges—particularly in labor management, regulatory compliance, and technology adoption—that merit greater attention in future extension strategy.

Conclusion: Perspective and Policy Implications

This study identified several critical areas—water and soil management, labor, machinery access, livestock management, marketing, and food safety—where farm size drives markedly different extension needs. Effective extension programming requires sustained investment from both state and federal agencies and must operate within their policy frameworks, funding structures, and evolving regulatory expectations. The ongoing challenge lies in how best to distribute limited extension personnel and resources across a highly diverse farming population. NMSU Cooperative Extension Services has already made strides by tailoring programs: offering foundational support and skills training to small and beginning farmers, while also extending advanced research findings and technological innovations to large-scale operations with broader economic reach.

As New Mexico continues to diversify its agricultural economy, extension programs must remain responsive to both the structural realities of farm size and the evolving needs of producers. We recommend further dialogue—within the state and nationally—on how farm scale affects program design, staffing models, and long-term impact. The framework presented here provides a practical foundation for such discussions and may serve as a useful starting point for other states facing similar challenges.

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