Ivey Business School
WESTERN UNIVERSITY · CANADA

Centre for
Building Sustainable Value

MAY 2026

Toward Regenerative **Agriculture**

Exploring Adoption and Expectations in Southwestern Ontario

AUTHORS

Di Iorio, V.
Van de Werf, P.
Gualandris, J.

Ivey Centre for
Building Sustainable Value

ONTARIO SOIL NETWORK

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1.0 Executive Summary

The Collective Action Program (CAP) is a multi-year initiative (2024–2027) led by the Ivey Business School at Western University, designed to foster a community of practice among regenerative farmers in Middlesex County, Ontario. Through workshops and applied projects, CAP aims to catalyze community development and collective learning in regenerative agriculture.

This report provides a quantitative assessment of practices adoption, perceived benefits, and regional competition-collaboration dynamics in Middlesex County and in adjacent counties (Elgin, Oxford, Huron, Perth, Lambton, and Wellington). It establishes a regional baseline to measure progress in regenerative agriculture and community development in the coming years.

Key Findings:

1. **Farmer self-identification**: Among 94 surveyed farms, 20% identified as Conventional (i.e., My farm follows standard agricultural practices that prioritize yield and efficiency, often relying on synthetic inputs and mechanization), 47% as Sustainable (i.e., My farm maintains financial viability while ensuring that farming activities do not harm the environment), and 33% as Regenerative (i.e., My farm uses farming practices that actively restore and enhance environmental conditions previously degraded). This distribution was consistent across Middlesex County and adjacent counties. Sustainable and Regenerative farmers were typically older than Conventional farmers, with Sustainable farmers reporting the longest farming experience. Regenerative farms tended to be smaller in both size and production scale.

2. **Soil health[1] as an underlying need across farmland.** Farmers estimate that soil is not healthy on approximately 50% of county farmland, with Middlesex County farmers reporting slightly lower soil carbon levels. For future projections, farmers predict regenerative practices will cover 40% of land in 3 years and 56% in 10 years. Middlesex County farmers were less optimistic about this adoption rate than those from other counties. Conventional farmers showed greater optimism about regenerative practice diffusion compared to Sustainable and Regenerative farmers. These findings support the case for a simmering soil health issue.

3. **Community dynamics: room for collaboration.** Currently, farmers experience a balance between competition and cooperation. Looking ahead 10 years, overall balance is predicted to remain unchanged, though Middlesex County farmers anticipate slightly more competition while farmers from other counties predict increased collaboration. This suggests opportunities to strengthen cooperation (e.g., equipment sharing, collaborative fieldwork, and deep farming discussions), to support local farming communities.

4. **Conventional, Sustainable and Regenerative farms invest similarly in crop rotation and nutrient management.** Crop rotation emerged as the most widely adopted practice, with an estimated 75-80% of farmland currently under this practice. Farmers rated crop rotation highly for both environmental and economic benefits and reported strong personal adoption. Other key practices with significant adoption across all farmer types include 4R nutrient management and livestock manure management. These similarities among Conventional, Sustainable, and Regenerative farmers can be leveraged to strengthen engagement and collaboration among farmers, even across ideological divides.

[1] Soil health is defined as a three-faceted concept encompassing structural integrity, biological vitality, and physical quality.

5. **Conventional, Sustainable and Regenerative farms differ significantly in their adoption of practices that benefit soil structure, biodiversity, and water quality.** Statistically significant differences emerged between farmer types in adoption rates for no/low till, crop residue management, retiring marginal acres, and natural habitat retention/restoration. Regenerative and Sustainable farmers showed higher adoption of no/low till and crop residue management than Conventional farmers, while Regenerative farmers led also in retiring marginal acres and habitat restoration.

6. **Perceived economic and ecological value of regenerative practices do not differ across farms type**: Farmer types showed limited differences in perceived ecological and economic value of most regenerative practices, except for cover crops and no-till (where Sustainable and Regenerative farmers recognized higher ecological value). Among widely adopted practices, crop rotation, 4R nutrient management, and livestock manure management were rated highest for economic benefits. Least adopted practices included perennialization, wetlands, hedgerows, inter-cropping, agroforestry, and silvopasture—practices also associated with the lowest perceived economic benefits. Improved yield resilience to extreme climate events was the most valued economic benefit for all these practices, followed by cost savings, while payments for ecosystem services (carbon credits, ALUS/OSCIA programs) were rated lowest. These results indicate that stronger financial incentives (e.g., grants, purchase guarantee, convenient loans tight to ecological outcomes) may be needed to boost the adoption of biodiversity practices across farmer types.

2.0 Methods

The survey was designed to: (1) estimate adoption of regenerative practices; (2) assess perceived environmental and economic benefits; (3) measure competition-collaboration dynamics within the farming community; and (4) provide baseline data to track progress.

2.1. Data collection

The target population consisted of farms operating in Middlesex County and adjacent counties in Southwestern Ontario. To ensure full representativeness, an electronic questionnaire was disseminated through the province's main soil-focused farm organizations such as the Ontario Soil Network (OSN) and the Ontario Soil and Crop Improvement Association (OSCI), as well as through professional networks (including agronomist networks) and respondents' own networks within and outside Middlesex County. Participation was voluntary, and respondents received a C$30 honorarium.

Qualtrics was used to administer the questionnaire, which took approximately 30 minutes to complete. Data collection began in mid-September 2025 with the distribution of the Qualtrics survey link and ended on November 24, 2025. A total of 124 responses were received. After screening for completeness and usability, 94 responses were retained for quantitative analysis (all these responses have a completion rate greater than 50%). 34 farms are in Middlesex County whereas 60 farms are in other counties (e.g., Elgin County, Oxford County, Huron County, Perth County, Lambton County, Wellington County). Considering that there are 2355[2] farms in Middlesex County, and assuming that all of them have received our electronic questionnaire, the response rate is low at 1.4%. Despite the low response rate, generalizability is adequate[3]. Respondents reported a mean age of 52.2 years (n=94; median 54) (Table 1), which is two years younger than the Canadian national average of 56.0 years[4]. Moreover, our sample of farms operate across different climate conditions and soil types (Table 2 and 3), and the average farm size in our sample (i.e., 844 acres) is aligned with national average (i.e., 809.4 acres[5]) but larger than the average farm size in Southwestern Ontario (i.e., 249 acres[6]).

The electronic questionnaire included items that were developed based on a review of the regenerative agriculture literature, provincial best management practice frameworks, and multiple consultations with agricultural stakeholders (including representatives from associations such as the Ontario Soil Network), conducted between August and September 2025. Practices included in the questionnaire reflect agroecological practices relevant to Ontario farming systems that have been proved to achieve gains in outcome areas like soil health, biodiversity, nutrient management, and water management.

Questionnaire items were reviewed by farmers and agronomists to ensure clarity, face validity, and contextual relevance. Minor wording adjustments were made following feedback to improve interpretability and reduce ambiguity.

Multiple response formats were used depending on the construct being measured. Estimates of the percentage of land in respondents' farm managed under selected sustainable agricultural practices were collected using a 1–100 slider scale. Practice integration was measured using 7-point Likert-like scales (1 = not at all integrated; 7 = extensively integrated). Perceived environmental and economic importance were measured using 5-point scales (1 = not important at all; 5 = extremely important). Perceptions of business relationship were measured using a 7-point semantic differential scale designed to span two opposite adjectives (i.e., competitive – collaborative).

Bias checks were incorporated using measures of affectivity and social desirability. Farmers (n=84) were asked how they felt on the day they completed the survey, using a scale of 1 (extremely sad) to 5 (extremely happy). On average, they were moderately happy (average of 3.6). Farmers (n=84) were also asked to what extent their farming practices are influenced by their peers using a scale of 1 (strongly disagree) to 5 (strongly agree). On average they were in slight disagreement with this statement (average =2.6). In both cases unpaired Welch two-sample t-tests were undertaken to compare Middlesex County and Other Counties. No significant results were found (the level of affectivity and social desirability is similar across Counties). Analysis of responses by self-identified farmer type (i.e., Conventional, Sustainable, or Regenerative) indicates some statistically significant differences across groups for practices attributed to peer influence (p=0.02): A one-way ANOVA revealed that the social desirability of Conventional farmers (the extent they align their practices to those of others in their region) was greater (p=0.04) than that of Sustainable farmers.

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[2] 2021 Census data available here: https://www.investinmiddlesex.ca/sites/default/files/2022-09/Middlesex%20County%20Agricultural%20Snapshot%20%282022%29%20-%20Final.pdf

[3] With respondents n ≥ 30 (i.e., n = 124), the Central Limit Theorem (CLT) states the sampling distribution is estimated to achieve approximately 97% normality — sufficient for most parametric applications, though not without limitation (Pulickal, 2025) https://doi.org/10.13140/RG.2.2.27685.82404

[4] Statistics Canada (2022). The Daily—Census of Agriculture, 2021. Average age of farm operators. https://www150.statcan.gc.ca/n1/daily-quotidien/220511/dq220511a-eng.htm

[5] 2021 Census data, available here: https://www150.statcan.gc.ca/n1/pub/96-325-x/2021001/article/00012-eng.htm

[6] 2019 Census data, available here at page 2: https://www.odenetwork.com/wp-content/uploads/2021/04/20172019SectoralProfileAgriculture_EN.pdf

2.2. Data analysis

A conservative analytical approach was applied to ensure that findings are robust, transparent, and fully replicable.

Inferential statistical analysis included comparisons between respondents located in Middlesex County (n = 34) and those in surrounding Counties (n = 60); and by self-identified farm type[7] including Conventional (n=16), Sustainable (n= 44) and Regenerative (n= 31).

Because respondents did not always answer every question, the effective sample size (*n*) varies slightly across individual practices and survey items. All reported statistical results therefore reflect the number of valid responses available for each specific comparison.

Where group mean differences were tested for Middlesex County and Other Counties, Welch's independent-samples t-test was used. This approach was selected as a conservative alternative to the standard Student's t-test because it does not assume equal variances or equal group sizes between comparison groups, which is appropriate for survey-based subgroup analysis.

Where group mean differences were tested by farmer type a one-way analysis of variance (ANOVA) was used. When an overall ANOVA indicated a potential difference across farmer types, Scheffé post-hoc tests were used to identify which groups differed, providing a robust and conservative assessment of pairwise contrasts.

Most questions included assessment of multiple parameters (i.e., practices). Thus, results of these inferential statistical analyses should be interpreted cautiously and considered exploratory rather than definitive.

3.0 Results

As noted, there were n=94 completed surveys. Thirty-four of those were from Middlesex County and 60 from Other Counties (e.g., Elgin County, Oxford County, Huron County, Perth County, Lambton County, Wellington County). Survey respondents identified as: Conventional (n=16), Sustainable (n= 44) and Regenerative (n= 31) farmers

3.1 Socio-Demographics

Respondents were, on average, 52 years of age and had been farming for 32 years on a mean farm size of 844 acres (median 350 acres), with essentially all of this (~95%) in production (Table 1). Survey respondents in Middlesex County were about the same age, had farmed for less years and operated considerably smaller farms than respondents from other Counties.

Twenty-nine per-cent of farmers had owned at least a portion of their farm for more than one generation and this was marginally higher for farmers in Middlesex County (31%) as compared to Other Counties (27%)

[7] Three respondents answered "none of the above" for farmer type, and were therefore excluded from inferential analysis.

Table 1. Overview of Survey Respondents

		low	high	mean	median	n
Age	**Overall**	26	82	52	54	94
	Middlesex County	27	70	53	57	34
	Other Counties	26	82	52	60	60
Years Farming	**Overall**	4	120	32	30	90
	Middlesex County	4	59	25	20	31
	Other Counties	4	120	35	30	59
Farm Size	**Overall**	2	11,000	844	350	89
	Middlesex County	10	6,800	619	225	31
	Other Counties	2	11,000	964	393	58
Farm Production	**Overall**	1	10,000	798	89	89
	Middlesex County	3	6,800	622	240	31
	Other Counties	1	10,000	891	338	58

3.2 Farmland Characteristics

Overall, the most common soil types farmed included clay loam, sandy loam and heavy clay (Table 2). Clay loam was the most common soil type for farms in all counties. Sandy loam and heavy clay were the next most common soil types in Middlesex County and sandy loam and sandy clay loam being the next most common in Other Counties.

There was some variability in number of soil types per farm, with 58% of Middlesex County farmers reporting farming on a single soil while 54% of Other Counties farmers reported farming on 2-4 soil types (Table 2).

Table 2. Overview of Soil Types

Soil Type	**Overall**	**Middlesex County**	**Other Counties**
n	92	33	59
clay loam	51%	58%	47%
sandy loam	34%	24%	39%
heavy clay	24%	24%	24%
sandy clay loam	22%	15%	25%
clay	17%	21%	15%
loam	15%	18%	14%
silt loam	13%	15%	12%
sandy clay	10%	9%	10%
sand	10%	15%	7%
sandy clay	10%	9%	10%
silty clay loam	9%	9%	8%
loamy sand	0%	0%	0%
silty sand	5%	6%	5%
silt	1%	3%	0%

Table 3. Overview of Number of Soil Types per Farm

Soil Types	Total	Middlesex County	Other Counties
n	92	33	59
1	47%	58%	41%
2-4	46%	30%	54%
5+	8%	12%	5%
	100%	**100%**	**100%**

Twenty-eight per-cent of farmers (n=90) farmed in Cold, Moist and 11% in Cold, Dry climate. Almost 50% of farmers, in both Middlesex County and Other Counties, could not identify the climate they farmed in (based on survey choices provided) (Table 4).

Table 4. Overview of Climate Types

Climate Type	Overall	Middlesex County	Other Counties
n	90	31	59
6A (Cold, Moist)	28%	26%	29%
6B (Cold, Dry)	11%	19%	7%
Other category	13%	6%	17%
Unknown	48%	48%	47%
	100%	**100%**	**100%**

Almost all farmers (n=89) belonged to an association (Table 5). The Ontario Soil and Crop Improvement Association was most common. Overall, 9% of farmers (n=90) indicated that they were a member of, or in a collaborative relationship with, an Indigenous Community and this was greater in Middlesex County (15%) than Other Counties (5%).

Table 5. Overview of Associations

Associations	Overall	Middlesex County	Other Counties
n	89	32	57
Ontario Soil and Crop Improvement Association (OSCIA)	39%	38%	40%
Other	20%	25%	18%
Ontario Federation of Agriculture (OFA Middlesex)	19%	25%	16%
Ontario Soil Network (OSN)	17%	6%	23%
Christian Farmers Union	2%	3%	2%
None	2%	3%	2%
Agris Coop	0%	0%	0%
Honeyland Ag	0%	0%	0%
	100%	**100%**	**100%**

Forty-seven and 33% of farms (n=91) identified themselves as Sustainable or Regenerative farmers respectively (Table 6).

Table 6. Overview of Associations

Farmer type	Overall	Middlesex County	Other Counties
n	94	34	60
Conventional farmer	17%	12%	20%
Regenerative farmer	33%	35%	32%
Sustainable farmer	47%	47%	47%
None of the above	3%	6%	2%
	100%	**100%**	**100%**

Sustainable and Regenerative farmers were older than Conventional farmers. Sustainable farmers reported farming the longest with Conventional and Regenerative farmers about the same. Farm size and in production were considerably lower for Regenerative farmers (Table 7).

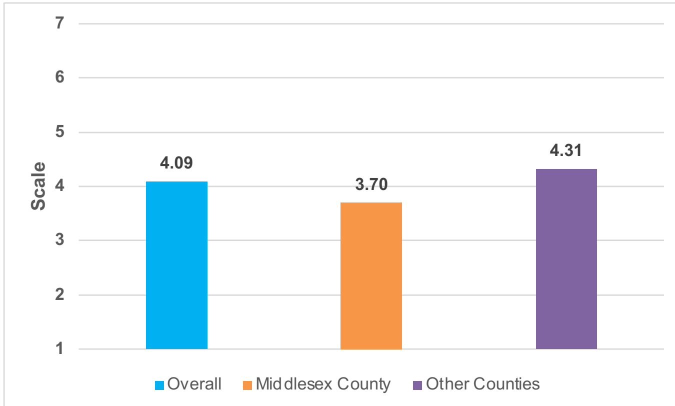
Table 7. Overview of Survey Responses by Farmer Types

		low	high	mean	median	n
Age	**Overall**	26	82	52	54	94
	Conventional	28	82	47	40	16
	Sustainable	26	78	53	56	44
	Regenerative	31	79	55	55	31
Years Farming	**Overall**	4	120	32	30	90
	Conventional	10	61	28	27	16
	Sustainable	4	120	38	40	44
	Regenerative	4	100	25	20	31
Farm Size	**Overall**	2	11,000	844	350	89
	Conventional	100	6,800	1,102	500	16
	Sustainable	20	11,000	979	400	44
	Regenerative	2	2,500	572	270	31
Farm Production	**Overall**	1	10,000	798	89	89
	Conventional	90	6,800	1,066	428	16
	Sustainable	10	10,000	940	375	44
	Regenerative	1	2,400	515	230	31

3.3 Level of Cooperation in Local Farming Community

The estimated level of cooperation (i.e., sharing equipment and other resources, working together in the field, engaging in deep discussions about farming principles, practices and outcomes, etc.) in the local farming community was determined using a scale from 1-7, where 1 was “a sense of competition characterizes most farming relationships in the county”; 4 was “collaboration and competition among farmers in the county are balanced”; and 7 was “meaningful collaboration and engagement characterize most farming relationships in the county”. Overall, answers were concentrated around the mean, depicting good balance between collaboration and competition. While numerically different (Figure 1), an unpaired Welch two-sample t-test found no statistically significant difference in estimated levels of competition/cooperation when comparing responses from Middlesex County to responses from Other Counties ($p > 0.05$).

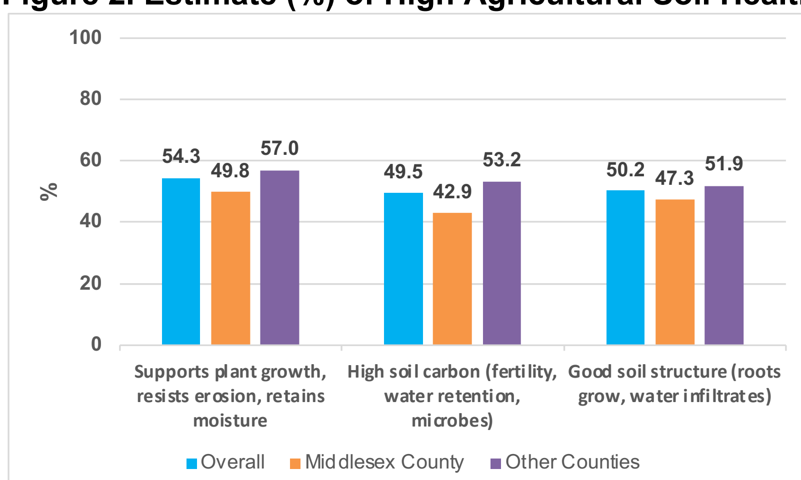
Figure 1. Estimated Level of Cooperation



3.4 Current Extent of Regenerative Farming Practices

Farmers (n=87-88) estimated soil in their county is fairly healthy (~ 50%), across the three parameters of general soil health including structural integrity, biological vitality, and physical quality (Figure 2). On average, farmers in Other Counties (n=55-56) reported higher soil health than farmers in Middlesex County farmers across all three parameters (n=32). For example, farmers in Other Counties scored soil carbon significantly higher compared to farmers in Middlesex (unpaired Welch two-sample t-test, $p=0.04$).

Figure 2. Estimate (%) of High Agricultural Soil Health



Farmers were asked to estimate the percentage of land in their county managed under various agricultural practices (Table 8). Overall (n=66-87), crop rotations were the most common practices used, followed by crop residue management and livestock manure management. Perennialization, silvopasture and efficient irrigation systems were the lowest estimated practices.

Farmers from Middlesex County (n=15-32) responded that, crop rotations were highest, followed by livestock manure management and crop residue management. Grassland rotations, retiring marginal acres and efficient irrigation systems were the lowest estimated practices.

Farmers from Other Counties (n=35-55) responded that, crop rotations were highest, followed by crop residue management and integrated pest management. Hedgerow planting, silvopasture and efficient irrigation systems were the lowest estimated practices.

For the seven practices with highest percentages of estimated land managed (Table 8) there were no statistical differences between Middlesex County and Other Counties.

Seven of 22 practices showed statistically significant county differences ($p < 0.05$), with Other Counties consistently reporting higher mean percentages than Middlesex County for: Cover Crops (p=0.03), Intercropping/Companion Cropping (p=0.04), Wetlands (p=0.0007), Retiring marginal acres (p=0.02), Perennialization (p=0.03), Grassland rotation (p=0.006), and Non-cultivated waterways/riparian corridors/buffer zones (p=0.04). These were generally practices with lower estimates of land managed.

Table 8. Estimate Per-cent of Land Managed Under Various Agricultural Practices in their County

	Overall		Middlesex County		Other Counties	
	n	%	n	%	n	%
Crop rotations	88	75.9	32	78.5	56	74.5
Crop residue management	84	53.8	31	51.4	51	55.3
Livestock Manure Management	86	53.3	31	52.7	55	53.6
Drainage water management	86	49.1	29	43.9	53	52.1
Integrated pest management	84	49.1	30	40.5	52	54.1
4R nutrient management (i.e., applying compost at the right rate, in the right place, at the right time, using the right organic source to enhance soil fertility)	85	45.6	32	45.8	52	45.5
No or low till	87	44.6	32	44.1	55	44.9
Cover Crops	87	39.1	32	31.8	55	43.4
Non-cultivated waterways / riparian corridors / buffer zones	83	33.9	31	25.9	51	38.8
Sourcing and utilizing organic by-products from nearby farms and/or food processors	81	24.9	29	19.0	49	28.2
Pollinator habitat development	82	22.8	29	18.6	50	25.2
Natural habitat retention / restoration	81	20.9	29	15.7	49	23.9
Integrating livestock (e.g., rotational grazing, mob grazing)	82	20.2	27	14.7	53	22.8
Wetlands	77	20.1	27	10.9	48	25.3
Intercropping / Companion Cropping	78	19.4	25	13.3	49	22.7
Agroforestry	73	18.2	23	16.2	42	19.4
Grassland rotation	78	17.8	27	10.5	48	21.8
Hedgerow planting	74	17.7	23	14.9	44	19.1
Retiring marginal acres	76	17.0	27	10.3	45	21.0
Perennialization	73	16.9	24	10.8	43	20.5
Silvopasture	67	13.1	15	11.5	41	13.9
Efficient irrigation systems (e.g., drop-by-drop irrigation)	66	11.9	24	9.5	35	13.3

Farmers also pointed to a handful of additional practices beyond the survey list, including seed saving/varietal adaptation, additional nutrient management practices (e.g., tissue testing, micronutrient foliar programs, and reduced phosphorus), and reduced tillage/strip-till. Others mentioned soil and water monitoring/research, biological inputs such as microbes/inoculants, carbon-sequestration practices like biochar or enhanced mineral weathering, precision agriculture using GPS, equipment sharing, and woodlot management.

Farmers (n=31-86) were then asked to what extent various regenerative practices are integrated within their farm operations (Figure 3), using a scale of 1 (not at all) to 7 (extensively adopted).

Overall, the top practices included crop rotation, crop residue management and 4R nutrient management (Figure 3). The least commonly integrated practices included intercropping/companion cropping, agroforestry and silviopasture.

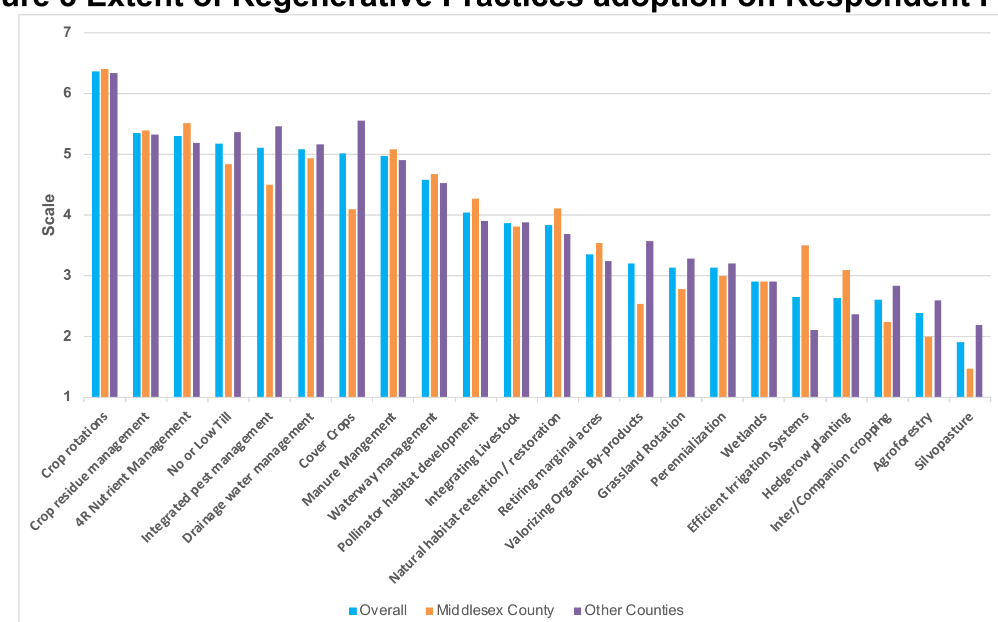
Farmers from Middlesex County (n=12-32) responded that, crop rotations were highest, followed by 4R Nutrient Management and crop residue management. Least integrated practices included intercropping/companion cropping, agroforestry and silviopasture (Figure 3)

Farmers from Other Counties (n=19-54) responded that, crop rotations were highest, followed by cover crops and integrated pest management. Hedgrow planting, silviopasture and efficient irrigation systems were the lowest estimated practices (Figure 3).

For the four most common practices (crop rotation, residue management, 4R nutrient management, and low/no till) there were no statistical differences between Middlesex County and Other Counties. Two of 22 practices showed statistically significant county differences ($p < 0.05$), with Other Counties reporting higher practice than Middlesex County for: Cover Crops ($p = 0.002$) and Integrated pest management ($p = 0.04$).

Analysis of responses by self-identified farmer type identifies differences across groups. Differences between groups were found for no/low till ($p=0.001$), crop residue management (0.01), retiring marginal acres (0.04) and natural habitat retention/restoration ($p=0.03$). For no/low till and crop residue management, Regenerative and Sustainable farmers had higher responses ($p<0.05$) than Conventional farmers. For retiring marginal acres and natural habitat retention/restoration responses from Regenerative farmers were higher ($p<0.1$) than for Sustainable farmers.

Figure 3 Extent of Regenerative Practices adoption on Respondent Farms



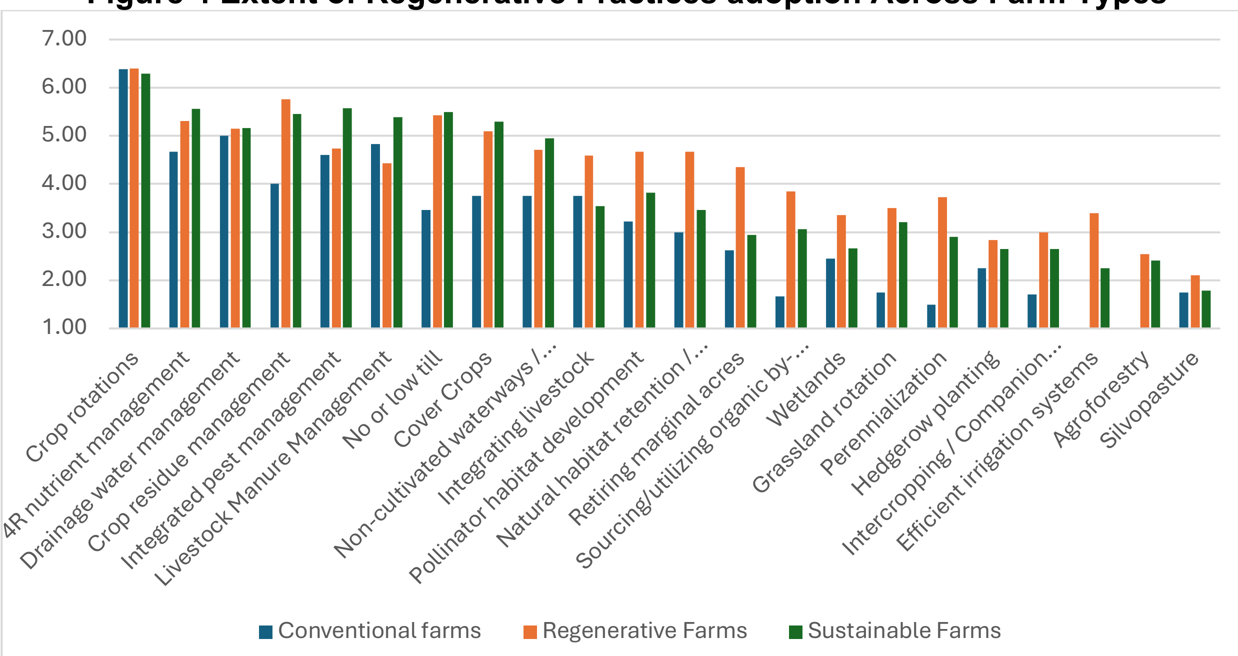
When practice-integration scores are disaggregated by farm type (Conventional vs. Sustainable vs. Regenerative; “None of the above” responses are excluded), a clear gradient emerges across many practices (Figure 4).

Conventional farms tend to report higher integration for a smaller subset of more widely adopted practices (e.g., crop rotations and nutrient-management-related practices), with mean scores dropping more quickly across the remaining practices. In contrast, Sustainable and especially Regenerative farms show higher integration across a broader set of practices.

Significant differences were identified between farmer types for no/low till (Conventional mean 3.46 vs. Regenerative 5.43 vs. Sustainable 5.49; $p=0.001$). Scheffé-adjusted pairwise comparisons indicate that Regenerative and Sustainable farmers reported higher no/low-till integration than Conventional farmers ($p<0.05$ for both comparisons).

Regenerative farms also show higher average scores than Sustainable farms on several “proactive” practices (i.e., natural habitat retention/restoration: 4.67 vs 3.00, and retreating marginal acres: 4.35 vs 2.94), although these differences do not remain significant after conservative multiple-comparison adjustment.

Figure 4 Extent of Regenerative Practices adoption Across Farm Types



3.5 Environmental Benefits of Regenerative Agriculture Practices

Farmers (n=86-87) were asked to rate the various practices based on the perceived importance in contributing to environmental benefits (e.g., increase soil health, carbon sequestration, water filtration and retention, and above ground biodiversity) within their county, using a scale of 1 (not important at all) to 5 (extremely important).

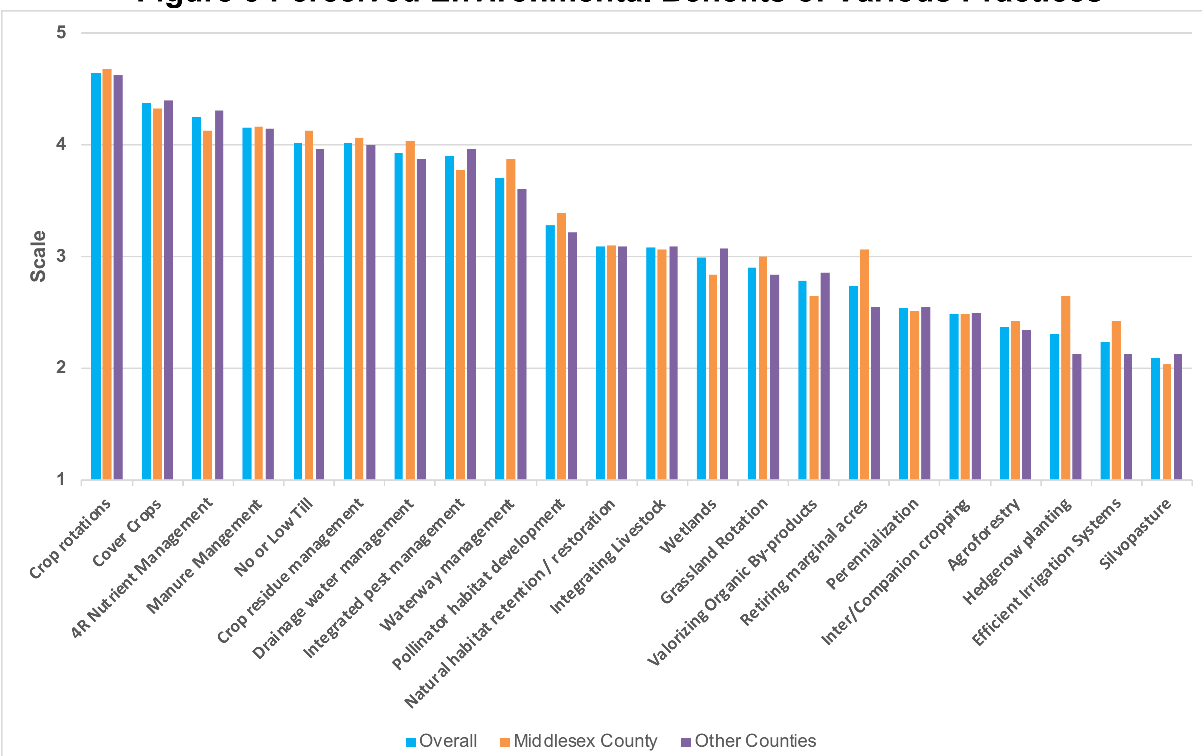
Highest rated practices included crop rotations, cover crops and 4R nutrient management (Figure 5). Lowest rated practices included hedgerow plantings, efficient irrigation systems and silviopasture.

Farmers from Middlesex County (n=30-31) responded that, crop rotations were highest followed by cover crops and livestock manure management. Agroforestry, efficient irrigation systems and silviopasture were the lowest rated practices, even if the scientific literature suggests they can produce significant ecological benefits[8].

Farmers from Other Counties (n=55-56) responded that crop rotations were highest followed by cover crops and 4R nutrient management. Hedgerow plantings, silviopasture and efficient irrigation systems and were the lowest rated practices.

No significant (p<0.05) results were found when comparing the perceived environmental benefits of each practice in Middlesex to the Other Counties .

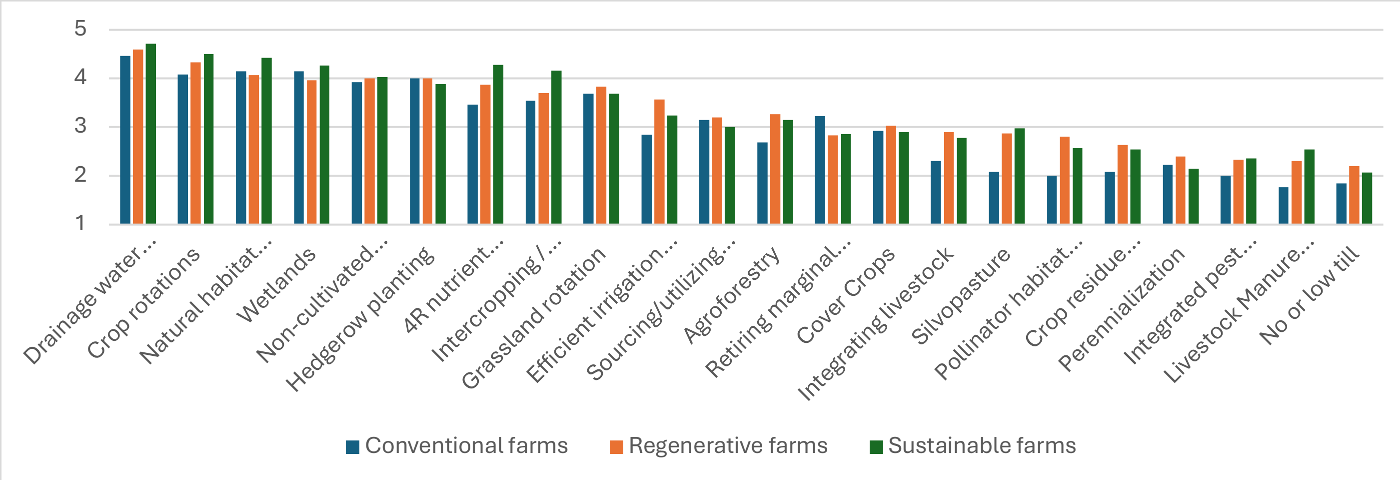
Figure 5 Perceived Environmental Benefits of Various Practices



Analysis of responses by self-identified farmer type (Figure 6) indicates that differences across groups are limited, indicating that even Conventional farmers recognize the environmental value of practices that they do not yet adopt extensively. There was a significant differences between groups for cover crops (p=0.04). For no/low till, responses from Sustainable farmers were higher (p<0.1) than for Conventional farmers.

[8] https://www.ivey.uwo.ca/media/zxwpcpod/03_24_26-carbfarmreportfinal.pdf

Figure 6 Perceived Environmental Benefits Across Farm Types



3.6 Economic Benefits of Sustainable Agricultural Practices

Farmers (n=85) were asked to rate the various practices based on the perceived importance in contributing to economic benefits (e.g., increase profitability, reduce costs, and enhance long-term sustainability of agricultural operations) within their county, using a scale of 1 (not important at all) to 5 (extremely important) (Figure 7).

Highest rated practices included crop rotations, 4R nutrient management and livestock manure management. Lowest rated practices included, agroforestry, hedgerow planting and silvopasture.

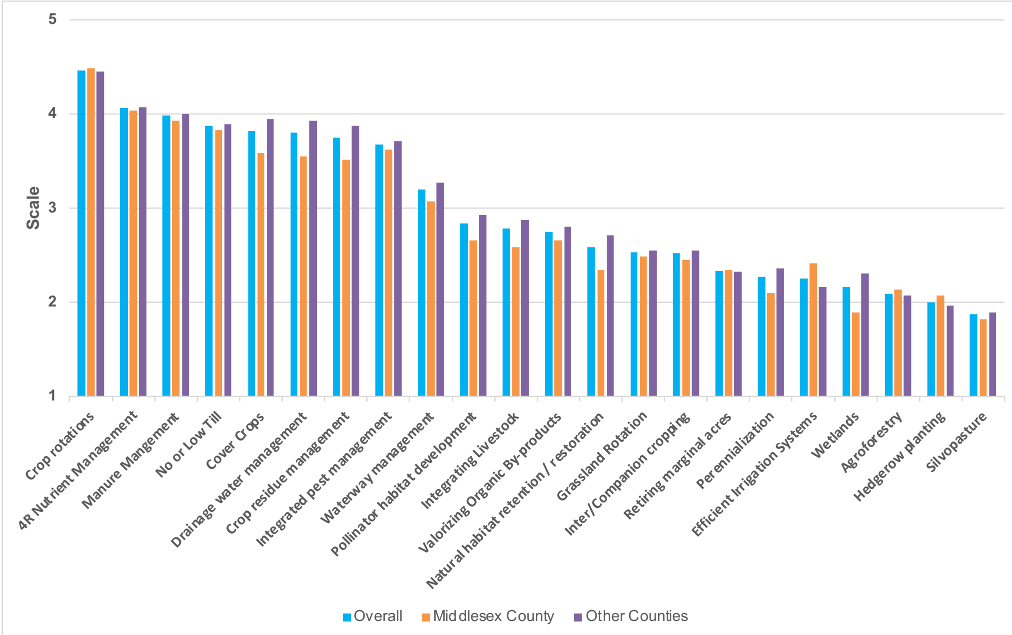
Farmers from Middlesex County (n=25) responded that, crop rotations were highest followed by 4R nutrient management and livestock manure management. Hedgerow planting, silviopasture and wetlands were the lowest rated practices.

Farmers from Other Counties (n=56) responded that crop rotations were highest followed by 4R nutrient management and livestock manure management. Agroforestry, hedgerow planting and silviopasture were the lowest rated practices.

Unpaired Welch two-sample t-tests were undertaken to compare Middlesex County and Other Counties for each practice. No significant ($p<0.05$) results were found.

Analysis of responses by self-identified farmer type (i.e., Conventional, Sustainable, or Regenerative), using one-way ANOVA, showed no statistically significant differences across farmer types.

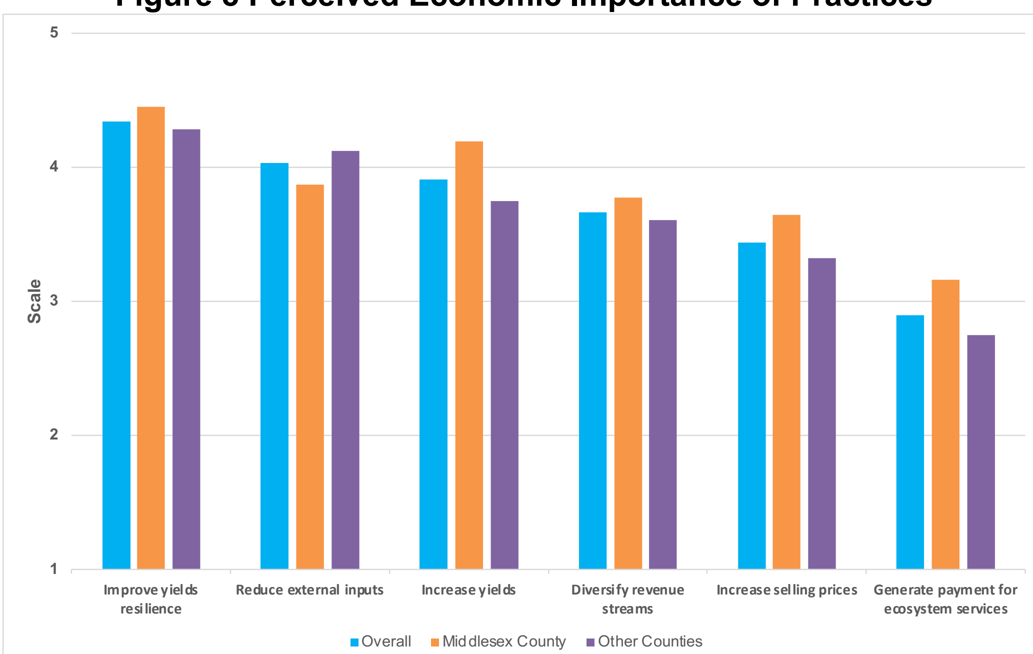
Figure 7 Perceived Economic Benefits of Various Practices



For the practices farmers (n=87) considered most economically beneficial in the previous question, they were asked to rate, using a scale of 1 (not at all) to 5 (to a large extent), the economic relevance of these practices (Figure 8). Improve yield resilience to extreme climate events (e.g. droughts, floods, etc.) was rated highest while generate payment for ecosystem services (e.g., carbon credits, payments from ALUS and OSCIA) was rated lowest (Figure 7). This carried through Middlesex (n=31) and Other Counties (n=57), with no significant differences identified.

Analysis of responses by self-identified farmer type (i.e., Conventional, Sustainable, or Regenerative), using one-way ANOVA, showed no statistically significant differences across farmer types.

Figure 8 Perceived Economic Importance of Practices



Farmers also highlighted practical, on-farm actions and the broader conditions needed to support them. One farmer described “systematic tiling and improved waterways” as a way to manage water, reducing peak flows while sustaining low flows, and eventually allowing soil to warmer up faster. Another farmer highlighted that “it would be great if we could be paid for our best management practices, on the farm, but the price of our commodities are the same regardless of our practices used.” Finally, another farmer flagged “food forest management”, both private and community based.

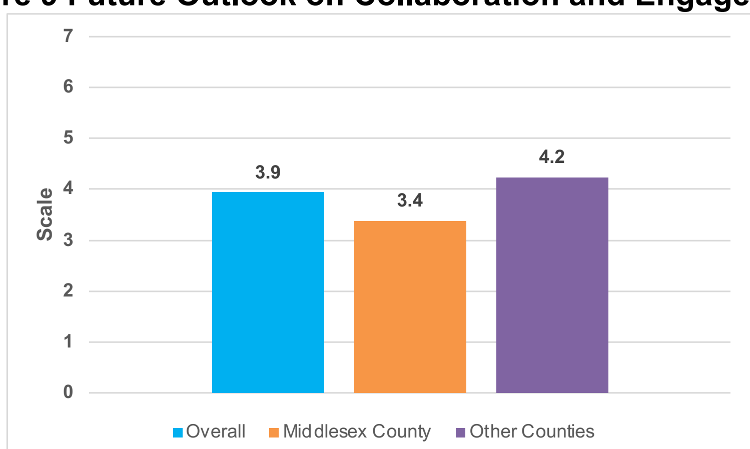
3.7 Future Outlook

Farmers were asked to predict the level of collaboration and engagement (i.e., sharing equipment, working together, engage in deep discussions about sustainable farming principles, practices and outcomes, etc.) that will characterize the farming community in your region 10 years from now using a scale of 1 (a sense of competition will characterize most farming relationships in the county); 4 (collaboration and competition among farmers in the county will be balanced) ;and 7 (meaningful collaboration and engagement will characterize most farming relationships in the county). Farmers (n=84) predicted that there will be fair balance between collaboration and competition (Figure 9), with farmers from Middlesex County (n=29) predicting less collaboration and engagement, and farmers from Other Counties (n=55) predicting more.

Unpaired Welch two-sample t-tests were undertaken to compare Middlesex County and Other Counties for each practice with Other Counties rating significantly (p=0.02) higher than Middlesex County.

Analysis of responses by self-identified farmer type (i.e., Conventional, Sustainable, or Regenerative), using one-way ANOVA, showed no statistically significant differences across farmer types.

Figure 9 Future Outlook on Collaboration and Engagement

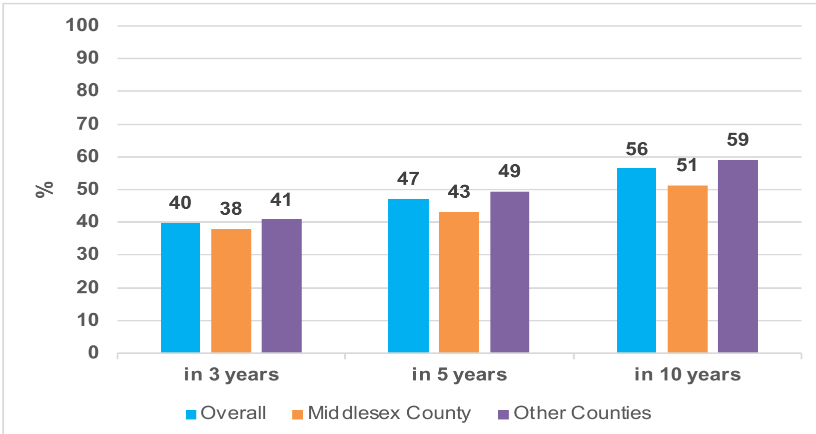


Farmers (n=84) were asked to predict the percentage of land that will be managed under sustainable practices in the next 3, 5, and 10 years in their county (Figure 10). Farmers predicted that in three years it would be 40% and 56% in ten years. Farmers from Middlesex County (n=29) were less optimistic that those from Other Counties (n=55), in this regard.

Unpaired Welch two-sample t-tests were undertaken to compare Middlesex County and Other Counties. No significant results were found.

Analysis of responses by self-identified farmer (i.e., Conventional, Sustainable, or Regenerative) indicates some statistically significant differences across groups for practices ($p=0.02$). Using one-way ANOVA Conventional farmers predicted more land under sustainable practices than Sustainable farmers for all three-time estimates ($p=0.001$ for three years to 0.03 for 10 years). Self-identified Regenerative farmers predicted more land under sustainable practices in 3 ($p=0.004$) and 5 ($p=0.02$) years than Sustainable farmers.

Figure 10 Prediction of Land Under Sustainable Practices (%)



While Regenerative and Sustainable farmers are similar to Conventional farmers when it comes to the management of land under production, they tend to differ more significantly in terms of no/low till, crop residue management, diversification (i.e., companion plants, permaculture) and the provision of natural and semi-natural habitats.

4.0 Conclusions

This baseline indicates Southwestern Ontario has a strong platform for scaling regenerative agriculture, but progress will depend on moving beyond "high-consensus" practices into those that deliver longer-term soil, water, biodiversity, and economic outcomes. Farmers across Conventional, Sustainable, and Regenerative types largely converge on the value and current uptake of core practices (notably crop rotations and nutrient management). That alignment is a strategic asset: it lowers the social and technical barriers to region-wide programming and provides a shared entry point for engagement.

At the same time, farmers' estimates point to a persistent, widespread soil-related need (with soils described as "not healthy" on roughly half of county farmland), and Middlesex respondents report slightly lower soil carbon than those in adjacent counties. Farmers expect regenerative practices to expand substantially over the next decade, but Middlesex farmers appear less optimistic about both adoption and future collaboration. Strategically, this suggests that Middlesex may require more targeted confidence-building and enabling conditions to keep pace with regional diffusion.

A consistent pattern emerges across the findings: the practices with the lowest adoption are also those perceived to offer the weakest economic value – particularly biodiversity- and habitat-oriented practices (e.g., perennialization, wetlands, hedgerows, intercropping, agroforestry, silvopasture). This implies the binding constraint is less about recognizing environmental importance and more about feasibility and payoff (cost, risk, complexity, and uncertain returns). If policy and program leaders want measurable gains in soil structure, biodiversity, and water quality, the strategy must shift from awareness-raising to reducing risk and improving the economic case for these practices.

Overall, Southwestern Ontario farmers have regenerative momentum. However, achieving the next stage of regenerative outcomes will require pairing top-down policy and program design that make higher-impact practices economically and operationally viable with bottom-up investments in farmer-to-farmer learning, trusted advisory support, and local partnerships – so adoption can be sustained and scaled over time. This is the “middle ground” where CAP is designed to work, by convening a community of practice, reducing adoption risk through shared learning and applied projects, and accelerating measurable soil, water, and biodiversity outcomes.