OMNIGENCE
ASSET MANAGEMENT

Farmland Investment Models:

Risk adjusted return comparison between cash rents and profit sharing

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EXECUTIVE SUMMARY

Farmland has delivered some of the strongest risk-adjusted returns of any institutional asset class over the past decade – Sharpe ratios of 1.1 to 1.9 versus approximately 0.4 for public equities. This advantage rests on two pillars: consistent land appreciation averaging 7-9% annually, and stable income from tenant leasing. The lease structure chosen by the landowner determines whether that income pillar is stable or more volatile – and therefore whether the Sharpe advantage is preserved or eroded.

This paper compares two leasing strategies for identical farmland: cash rent, where the landlord receives a fixed prepaid payment regardless of crop outcomes; and profit sharing, where the landlord receives a negotiated percentage (25%, 50%, or 75%) of net farm income after all operating costs. The analysis uses a three-crop rotation (canola, spring wheat, red lentils), three commodity price scenarios with flexible input costs, and scenario probabilities derived from fifteen years of outcomes.

The central finding is that cash rent is the superior strategy on every quantifiable risk-adjusted dimension, by a margin that is large and robust across all assumptions.

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An additional dimension of risk, not captured in the Sharpe ratio framework, further widens the true performance gap: operational and enforcement risk. Profit sharing is the most operationally burdensome lease structure available – it requires annual verification of both gross revenue and net costs, precise contractual definition of allowable deductions, ongoing audit rights to detect cost manipulation, and post-harvest credit exposure as an unsecured creditor. These requirements compound with portfolio size. The verification, legal, and dispute resolution costs of a profit sharing portfolio materially erode net returns beyond what the Sharpe ratio gap of 0.49-0.54 points already captures. The operational risk analysis in Section 11 addresses these structural considerations in detail. Cash rent eliminates every one of these costs.

Key Metric	Cash Rent	Profit Sharing
Sharpe Ratio	**1.29**	**0.74 – 0.80**
Cash Rent Sharpe Premium	+0.49 to +0.54 (61-73% higher across all profit share levels)	
Probability-weighted mean income	$160/acre (cash rent)	$11-$32/acre
Probability of zero income	0%	40% (all levels)
P(income below cash rent)	100% in every scenario at every split level	
Expected zero-income years per decade	0 of 10 (cash rent)	4 of 10 (profit share)
High price scenario income (25% prob)	$160/acre (cash rent)	$29-$88/acre (profit share)
Low price frequency (historical)	53% of years 2012-2026 (model uses 40% – conservative)	
Split % effect on Sharpe ratio		+0.06 points from 25% to 75% share – immaterial

Key Findings Summary. All figures illustrative, calibrated to SK Crop Planning Guide benchmarks. Profit share income assumes flexible input costs (+10% High / base Mid / -8% Low). Scenario weights: High 25%, Mid 35%, Low 40%.

Cash rent is paid in full prior to seeding – before the growing season begins, before any crop goes in the ground, before any harvest uncertainty arises. The landlord is never a creditor for the current crop year. This prepaid structure eliminates counterparty credit risk entirely and has no equivalent in profit sharing or any other variable leasing arrangement. The lease structure

decision is a portfolio-level choice with risk-adjusted return consequences of the same order of magnitude as the underlying asset allocation decision. Institutional farmland investors should adopt cash rent as the default leasing structure to preserve the asset class Sharpe advantage. Profit sharing introduces commodity price exposure, operating leverage, binary income risk, and substantial operational overhead into what would otherwise be a low-volatility, income-stable investment. The Sharpe ratio gap of 0.49-0.54 points understates the true performance disadvantage of profit sharing because it excludes the recurring verification, audit, legal, and dispute resolution costs analysed in Section 11. These costs scale with portfolio size and are eliminated entirely by cash rent.

1. INTRODUCTION

Farmland's appeal to institutional investors rests on a well-documented combination of consistent capital appreciation, low return volatility, and income generation through tenant leasing. The risk-adjusted case for the asset class – measured by the Sharpe ratio – is among the strongest available across major alternative asset categories, with Prairie farmland delivering Sharpe ratios of 1.1 to 1.9 over the past decade compared to approximately 0.4 for public equities.

What is less frequently examined is how the income layer of that return – the leasing arrangement between landowner and tenant – materially alters the risk-adjusted profile of what is otherwise the same underlying asset. Two investors owning identical farmland, with identical capital appreciation expectations, can end up with very different risk-return profiles depending solely on whether they elect cash rent or a profit-sharing arrangement.

This paper examines that question quantitatively. Using a three-crop rotation (canola, spring wheat, red lentils), three commodity price scenarios, and a probability weighting derived from the frequency of high, mid, and low margin environments observed over 2013 to 2026, we construct a full return and risk decomposition for each lease type. We then compute Sharpe ratios and downside income frequency statistics for each strategy.

The central finding is unambiguous: cash rent dominates profit sharing on a risk-adjusted basis across all profit share percentage levels examined (25%, 50%, and 75%). The cash rent Sharpe ratio of 1.29 is materially superior to the profit share range of 0.74-0.80. The structural reason is straightforward but important: profit sharing transforms the landowner into a residual claimant on a thin-margin business, exposing them to the full operating leverage of grain farming – while delivering lower mean income than cash rent in every scenario tested, including the most favourable commodity environment.

> Key finding: Cash rent delivers a Sharpe ratio of 1.29 versus 0.74-0.80 for profit sharing at any split level. Profit share income is below cash rent income with 100% probability across all scenarios and all split percentages. In 4 years out of every 10, the profit share landlord receives zero income regardless of the share percentage negotiated.

2. THE SHARPE RATIO: RISK-ADJUSTED RETURN MEASUREMENT

The Sharpe ratio, developed by Nobel laureate William Sharpe, measures the excess return earned per unit of total risk. It is the most widely used risk-adjusted return metric in institutional portfolio construction and is particularly well-suited to comparing investment strategies that share the same underlying asset but differ in their income structure.

Formally: Sharpe = (R – Rf) / sigma, where R is the mean portfolio return, Rf is the risk-free rate, and sigma is the standard deviation of total returns. A higher Sharpe ratio indicates more return earned per unit of risk taken. The ratio penalises both lower mean returns and higher return volatility – strategies that suffer on either dimension will produce inferior Sharpe ratios.

In the context of this analysis, the Sharpe ratio is informative for two reasons. First, it captures the income deficit of profit sharing in the numerator: because profit share income is lower on average than cash rent, the mean total return is lower, directly reducing the excess return available per unit of risk. Second, it captures the income volatility of profit sharing in the denominator: because profit share income varies across commodity price environments while cash rent does not, total return volatility is higher under profit sharing, further penalising the Sharpe ratio.

> The Sharpe ratio penalises profit sharing on both dimensions simultaneously: lower mean return reduces the numerator, and higher income volatility increases the denominator. The result is a Sharpe ratio that is 61-73% lower for profit sharing than for cash rent, depending on the split level.

The risk-free rate used throughout is 4.0%, consistent with current Government of Canada bond yields at relevant maturities.

3. METHODOLOGY AND ASSUMPTIONS

3.1 Model Structure

We model two ownership strategies for the same parcel of Canadian Prairie farmland valued at $4,000 per acre. Both strategies assume identical land appreciation of 9% per annum, consistent with the upper range of recent FCC data for Saskatchewan farmland. Appreciation volatility of 7.0% per annum is consistent with the stated annual land price volatility and is supported by NCREIF farmland return data and Omnigence prior research on Prairie province returns. The only structural difference between strategies is the income layer. Total return for each strategy: R = appreciation rate + income yield, where income yield equals landlord income divided by land value.

3.2 Strategy A – Cash Rent

The landowner receives a fixed payment of 4% of land value ($160/acre) prepaid at the start of each season. This payment is contractually fixed and invariant to commodity prices, yields, or input costs. The landowner bears no agricultural operating risk. Income sigma is zero. The only source of total return volatility is land appreciation.

3.3 Strategy B – Profit Sharing

The landowner receives a negotiated percentage of net farm income after all operating costs. We model three share levels: 25%, 50%, and 75% of net profit. The landlord's income is floored at zero – in loss years the landlord receives nothing. This floor is not a protective feature from a risk-adjusted perspective: it depresses mean income without compensating through upside, because the 40% probability of zero income is not offset by proportionally higher payments in good years.

3.4 Crop Rotation and Revenue

We model a three-year rotation: canola, spring wheat, red lentils. Yields are based on Saskatchewan Ministry of Agriculture crop reports and Statistics Canada field crop surveys: canola 37 bu/acre, spring wheat 45 bu/acre, red lentils 1,300 lbs/acre.

Crop	High Price	Mid Price	Low Price
Canola ($/bu)	$16.00	$12.50	$9.00
Spring Wheat ($/bu)	$10.00	$8.00	$6.00
Red Lentil ($/lb)	$0.40	$0.30	$0.20

Table 1. Commodity price assumptions by scenario. Sources: SK Agriculture dashboard, Rayglen Commodities Weekly Grain News 2024-2026; StatsCan 32-10-0359-01.

3.5 Operating Costs and Scenario Probabilities

Operating costs are sourced from the Saskatchewan Ministry of Agriculture Crop Planning Guide: canola $420/acre, spring wheat $370/acre, red lentils $310/acre; rotation average $367/acre. These base costs are then flexed by scenario in Section 5.3: +10% in the High scenario and -8% in the Low scenario to reflect input market co-movement with commodity prices. The base costs stated here are the Mid scenario starting point.

Scenario probabilities reflect observed frequency of each margin environment in Saskatchewan grain farming over 2013-2026, based on annual Crop Planning Guide outcomes and FCC profitability surveys:

- High (25% probability): commodity supercycle conditions – years such as 2021-2022 with exceptional demand and supply shocks driving margins well above average.
- Mid (35% probability): normal operating environment with average yields and prices near the five-year moving average, modest positive margins.
- Low (40% probability): cost squeeze with commodity prices at or below breakeven. This is the modal outcome; both the 2023 and 2026 Crop Planning Guides show most crops at negative or near-zero returns at prevailing prices.

The low scenario is the single most probable outcome. This asymmetry – with the majority of probability weight on below-average profitability – is critical to the analysis and is the primary reason profit-sharing underperforms cash rent so materially on a weighted-average basis.

3.6 Key Model Parameters

Parameter	Value / Assumption
Land value	$4,000/acre
Annual appreciation rate	9.0%
Appreciation volatility (sigma)	7.0% (NCREIF / Omnigence benchmark)
Cash rent	4.0% of land value = $160/acre
Profit share levels tested	25%, 50%, 75% of net profit
Landlord income floor	$0 (landlord cannot receive negative income)
Risk-free rate (Rf)	4.0%
Correlation: income vs appreciation (rho)	0.25 (profit share); 0.00 (cash rent)
Scenario probabilities	High 25%, Mid 35%, Low 40%
Rotation	Canola / Spring Wheat / Red Lentil (equal weight)

Table 2. Model parameters and assumptions.

3.7 Volatility Calculation

Total return volatility uses the standard portfolio variance formula: sigma^2(total) = sigma^2(appreciation) + sigma^2(income) + 2 x rho x sigma(appreciation) x sigma(income)

Income volatility is the probability-weighted standard deviation of income yield across the three scenarios. For cash rent, sigma(income) = 0 and rho = 0, so total volatility equals appreciation volatility alone. The correlation between profit share income and land appreciation is set to rho = 0.25 – positive but modest. This value is derived from the relationship between the two observed volatilities. With annual land price volatility of approximately 7% and annual crop price volatility of approximately 30%, and using a beta coefficient of approximately 0.058 – reflecting the empirical observation that a 30% move in crop prices shifts land values by roughly 1.7% in that year – the implied correlation is: rho = beta x sigma(crop) / sigma(land) = 0.058 x 30% / 7% = 0.25. This reflects the fundamental stickiness of land prices: they respond to sustained multi-year income trends rather than single-year commodity swings.

Crucially, as Section 9 demonstrates, the Sharpe ratio results are robust to any rho in the 0.10-0.40 range: because income sigma (0.29%-0.87%) is an order of magnitude smaller than appreciation sigma (7%), the covariance term moves total sigma by less than 0.2 percentage points across the entire plausible rho range. The Sharpe gap is driven overwhelmingly by the return deficit, not the covariance term.

4. HISTORICAL PRICE FREQUENCY AND SCENARIO PROBABILITY CALIBRATION

The scenario probabilities used in this analysis – High 25%, Mid 35%, Low 40% – are not arbitrary. They are calibrated to the observed frequency of high, mid, and low commodity price and profitability environments in Saskatchewan grain farming over the fifteen-year period from 2012 to 2026. This section presents that empirical record to justify the weights and to demonstrate that the 40% Low scenario weight is, if anything, conservative relative to the historical record.

4.1 Price Classification Methodology

Each crop year is classified as High, Mid, or Low based on annual average farm gate prices for canola, spring wheat, and red lentils, assessed against the price thresholds used in this paper's scenario analysis. The rotation-level classification reflects the overall profitability environment across the three-crop rotation, drawing on Saskatchewan Ministry of Agriculture Crop Planning Guide annual outcomes as the definitive measure of net return over total expenses.

Price thresholds used for classification:

Crop	High	Mid	Low
Canola ($/bu)	>= $14.00	$10.00 – $13.99	< $10.00
Spring Wheat ($/bu)	>= $9.00	$7.00 – $8.99	< $7.00
Red Lentil ($/lb)	>= $0.35	$0.22 – $0.34	< $0.22

Table 3. Price classification thresholds by crop. Thresholds correspond to the paper's scenario assumptions in Section 3.4. Sources: SK Agriculture Crop Planning Guide – Price and Cost History; Rayglen Commodities Weekly Grain News; StatsCan 32-10-0359-01.

4.2 Year-by-Year Classification: 2012 to 2026

The following table classifies each crop year from 2012 to 2026 by price environment and overall rotation profitability, with a brief note on the driving conditions. The overall classification reflects the net return outcome across the canola-wheat-lentil rotation as reported in the annual Saskatchewan Ministry of Agriculture Crop Planning Guide.

Year	Canola	Wheat	Lentil	Overall	Crop Planning Guide Outcome
2012	Mid	High	Mid	Mid	Most crops positive – strong prices post-2011 drought
2013	Mid	Low	Mid	Mid	Canola held; wheat weakened sharply after Wheat Board deregulation
2014	Mid	Low	Low	Low	Most crops near breakeven or negative on full-cost basis
2015	Low	Low	Low	Low	Broad losses; one of the weakest margin environments in the decade
2016	Low	Low	Low	Low	Commodity trough; most crops deeply negative over total expenses
2017	Mid	Low	Mid	Low	Canola recovered but wheat and pulses remained weak
2018	Mid	Low	Mid	Low	China canola restrictions; rotation margins suppressed
2019	Mid	Mid	Low	Mid	Partial canola recovery; wheat improved; lentils soft
2020	Mid	Mid	Mid	Mid	Solid across rotation; pre-supercycle baseline year
2021	High	High	Mid	High	Drought reduced supply; global demand spike; supercycle peak
2022	High	High	Mid	High	Ukraine war drove all-time highs for wheat and canola
2023	Mid	Mid	Mid	Mid	CPG: canola positive $55-$145/ac; wheat negative; lentils positive
2024	Mid	Mid	Mid	Low	CPG 2024: only canola and lentils positive; wheat negative
2025	Mid	Mid	Low	Low	CPG 2025: all net returns negative at prevailing prices (CKRM Sept 2025)
2026	Mid	Low	Low	Low	CPG 2026: spring wheat, barley, yellow peas negative; canola $36/ac only

Table 4. Year-by-year price and profitability classification, 2012-2026 (15 years). Overall classification reflects net return over total expenses across the canola-wheat-lentil rotation. Sources: SK Ministry of Agriculture Crop Planning Guides (annual editions 2013-2026); Rayglen Commodities market commentary; StatsCan 32-10-0359-01; SK Agriculture Price and Cost History series.

4.3 Frequency Summary and Scenario Weight Calibration

The fifteen-year record produces the following frequency distribution of profitability environments:

Environment	Years (of 15)	Actual Freq.	Model Weight	Representative Years
High (supercycle)	2	13%	25%	2021, 2022
Mid (normal margins)	5	33%	35%	2012, 2013, 2019, 2020, 2023
Low (cost squeeze)	8	53%	40%	2014-2018, 2024-2026

Table 5. Frequency summary and scenario weight comparison. Actual frequency is the observed proportion of years in each environment over 2012-2026. Model weight is the probability assigned in the scenario analysis.

Three findings from Table 5 are important for interpreting the scenario analysis. First, the High price environment – commodity supercycles driven by acute supply shocks or global demand disruptions – occurred in only 2 of 15 years, or 13% of the time. The model assigns this scenario a weight of 25%, which overstates its probability relative to the historical record. This is deliberate: it is generous to the profit-sharing case by allocating more probability weight to the scenario where profit share income is highest.

Second, the Low profitability environment occurred in 8 of 15 years, or 53% of the time. This is the single most important empirical finding of this section. The model assigns a weight of only 40% to the low scenario – meaningfully below the 53% actually observed. The 40% weight is therefore conservative: it understates how often the profit-sharing landlord would receive zero income based on the historical record. If the true probability of the low scenario is closer to 53%, the probability-weighted

mean profit share income is even lower than our model produces, and the Sharpe ratio advantage of cash rent is even larger.

Third, spring wheat – one of three crops in the rotation – spent 47% of the fifteen-year period in the low price environment (below $7.00/bu), and was never in the high price environment for more than two consecutive years. Wheat is structurally the weakest pricing crop in the rotation, and its frequency of below-breakeven years is the primary driver of the rotation's overall low-probability weight.

> The Low profitability environment occurred in 8 of 15 years (53%) over 2012-2026. The model's 40% Low scenario weight is conservative relative to the empirical record – it is favourable to the profit-sharing case. Even using the more generous 40% weight, profit sharing delivers an inferior risk-adjusted return to cash rent at every split level.

4.4 Per-Crop Price Frequency

The following table presents the frequency of each price scenario for each crop individually over the fifteen-year period. This disaggregated view illustrates both the structural differences in price behaviour between crops and the rotation-level averaging effect that moderates but does not eliminate overall volatility.

Crop	High (yrs / %)	Mid (yrs / %)	Low (yrs / %)	Key observation
Canola	2 / 13%	11 / 73%	2 / 13%	Dominant mid-price crop; supercycle years (2021-22) only High instances
Spring Wheat	3 / 20%	5 / 33%	**7 / 47%**	Most structurally weak; below $7/bu in nearly half of all years
Red Lentil	0 / 0%	9 / 60%	6 / 40%	Never reached High threshold over period; mid-range dominant

Table 6. Per-crop price frequency, 2012-2026 (n=15 years). High/Mid/Low thresholds as per Table 3. Sources: SK Agriculture Crop Planning Guide – Price and Cost History 2013-2026; Rayglen Commodities Weekly Grain News; StatsCan 32-10-0359-01.

The per-crop frequency data reinforces the conclusion that high commodity prices are the exception, not the norm. Canola – the most commercially important crop in the rotation and the highest-margin crop in good years – was in the High price environment for only 2 of 15 years. Spring wheat was in the Low price environment for nearly half of all years. Red lentils never reached the High threshold over the full fifteen-year period, spending 40% of years in the low range.

These frequencies confirm that a profit-sharing arrangement delivers zero income not just in acute crisis years but in a sustained plurality of normal operating years. The zero-income outcome is not a tail risk to be managed; it is a recurring feature of the profit-sharing income model.

5. CROP ECONOMICS AND PROFIT BUILD

5.1 Gross Revenue by Crop and Scenario

Crop (Yield)	High	Mid	Low
Canola (37 bu/ac)	$592	$462	$333
Spring Wheat (45 bu/ac)	$450	$360	$270
Red Lentil (1,300 lbs/ac)	$520	$390	$260
Rotation Average	**$521**	**$404**	**$288**

Table 7. Gross revenue per acre by crop and scenario ($/acre). Sources: SK Ministry of Agriculture crop reports; Statistics Canada field crop surveys.

5.2 Net Profit and Operating Leverage

Operating costs of $367/acre (rotation average) are deducted uniformly across all scenarios. This creates the operating leverage effect central to this analysis: costs are fixed while revenue swings with commodity prices, amplifying volatility in the residual profit.

Item	High	Mid	Low
Rotation avg gross revenue	$521	$404	$288
Operating costs (flexible – see Section 5.3)	$404	$367	$338
Cost change vs mid scenario	+10%	Base	-8%
Net profit (pre-floor)	**$117**	**$37**	**-$50**
Net profit (landlord floor at $0)	**$117**	**$37**	**$0**
Gross revenue change from Mid	+29%	Base	-29%

Table 8. Operating leverage with flexible costs ($/acre, rotation average). Operating costs flex: +10% High, base Mid, -8% Low. Pre-floor profit remains negative in low scenario even with cost reduction. Sources: SK Ministry Crop Planning Guide.

The operating leverage dynamic in Table 8 is the central mechanism of this paper, and it is not fully neutralised by allowing input costs to flex. Even with costs falling 8% in the low scenario, pre-floor net profit remains -$50/acre. The revenue shortfall in the low scenario exceeds any achievable cost reduction. The landlord income floor still binds at zero. In the high scenario, cost flexibility works in reverse: input costs rise 10% as fertilizer and fuel markets tighten alongside commodity prices, reducing high-scenario net profit from $154 to $117/acre. The operating leverage amplification is therefore asymmetric even under flexible costs: upside gains are trimmed by rising inputs while downside losses still produce zero landlord income.

5.3 Input Cost Flexibility: Justification and Analysis

The assumption that operating costs flex with commodity price environments reflects the documented behaviour of Prairie grain farming input markets. Fertilizer – the dominant variable cost at approximately $120-$150/acre of the rotation average – has a meaningful positive correlation with commodity prices through shared energy market drivers (natural gas is the primary feedstock for nitrogen fertilizer). Fuel and chemical costs are also partially correlated with energy markets. The 10% cost increase in the high scenario and 8% cost reduction in the low scenario are calibrated to the observed range of input cost variability in Saskatchewan Crop Planning Guides across 2012-2026.

Two findings from the flexible cost analysis are analytically important. First, cost flexibility does not rescue the profit-sharing landlord in the low scenario. Even with costs falling $29/acre, the pre-floor net profit remains -$50/acre. The revenue shortfall in the low scenario ($116/acre below mid) substantially exceeds any achievable cost reduction. The zero-income outcome in 40% of years is therefore robust to reasonable input cost flexibility assumptions.

Second, cost flexibility in the high scenario works against the profit-sharing landlord. As commodity prices rise, input markets tighten: fertilizer rises alongside crop prices, fuel costs increase with energy demand. This reduces high-scenario net profit from $154/acre under fixed costs to $117/acre under flexible costs. The net effect of flexible costs is to trim upside income while failing to prevent downside zero-income outcomes – moderately worsening the profit-sharing case relative to fixed costs.

Fixed vs Flexible Cost Comparison ($/acre)	High	Mid	Low
Gross revenue	$521	$404	$288
Fixed costs (base)	$367	$367	$367
Net profit – fixed costs	$154	$37	-$79
Flexible costs (+10% / base / -8%)	$404	$367	$338
Net profit – flexible costs	**$117**	**$37**	**-$50**
Change in profit (flex minus fixed)	**-$37**	$0	+$29
Landlord income floor still binds at $0?	**No**	**No**	**Yes**

Table 9. Fixed versus flexible input cost comparison ($/acre, rotation average). Flexible costs: +10% High, base Mid, -8% Low. Pre-floor profit remains -$50/acre in the low scenario even after cost reduction – the floor still binds at $0. All subsequent analysis uses flexible costs. Sources: SK Ministry Crop Planning Guide; CKRM crop return analysis 2025.

> Cost flexibility does not rescue the profit-sharing landlord in the low scenario – pre-floor profit remains -$50/acre even after an 8% cost reduction. In the high scenario, rising input costs reduce profit from $154 to $117/acre. The net effect of cost flexibility is mildly negative for the profit-sharing case.

6. THE 3 X 3 INCOME MATRIX

The following table presents landlord income per acre across three commodity price scenarios and three profit share percentages, alongside the fixed cash rent of $160/acre.

Scenario (Prob.)	25% Share	50% Share	75% Share	Cash Rent	Cash Premium
High (25%)	$29	$59	$88	**$160**	**$44 – $122**
Mid (35%)	$9	$18	$28	**$160**	**$132 – $151**
Low (40%)	**$0**	**$0**	**$0**	**$160**	**$160 (all)**
Probability-Weighted Mean	**$11**	**$21**	**$32**	**$160**	**$121-$147**

Table 10. Landlord income per acre across the 3x3 scenario and profit share matrix vs. fixed cash rent. Low scenario net profit = -$50/acre pre-floor (flexible costs); landlord receives $0 at all share levels. Cash premium column shows cash rent income advantage over each profit share level.

Three observations from Table 10 are central to the analysis. First, profit share income never exceeds cash rent income in any scenario at any split level – including the most favourable commodity environment. At 75% share in the high scenario, the landlord receives $116/acre against $160/acre cash rent, a $44 deficit. Second, in the mid scenario – the normal operating year – profit share income at any split is between $9 and $28/acre against $160 cash rent, a deficit of $132 to $151/acre. Third, in the low scenario, which occurs in 40% of years, profit share income is zero at all split levels while cash rent delivers $160/acre without interruption.

The probability-weighted mean income across all scenarios captures the cumulative impact: $11/acre at 25% share rising to $32/acre at 75% share, against $160/acre under cash rent. Even the most landlord-favourable split delivers less than one quarter of cash rent income on a probability-weighted basis.

7. RETURN AND VOLATILITY ANALYSIS

7.1 Total Return by Scenario

Total return equals 9.0% appreciation plus income yield. In the low scenario, profit share income yield is zero, so total return equals appreciation alone (9.0%) for all three share levels. Cash rent total return is fixed at 13.0% across all scenarios.

Scenario	25% Share	50% Share	75% Share	Cash Rent
High (25%)	9.73%	10.47%	11.20%	**13.00%**
Mid (35%)	9.23%	9.46%	9.69%	**13.00%**
Low (40%)	9.00%	9.00%	9.00%	**13.00%**
Probability-Weighted Mean	**9.26%**	**9.53%**	**9.79%**	**13.00%**

Table 11. Total return by scenario and strategy. Appreciation 9.0% + income yield. Cash rent total return is scenario-invariant at 13.00%.

7.2 Volatility Decomposition

Volatility Component	25% Share	50% Share	75% Share	Cash Rent
Income sigma	0.29%	0.58%	0.86%	**0.00%**
Appreciation sigma	7.00%	7.00%	7.00%	7.00%
Covariance term (2 x rho x s_a x s_i)	0.01%	0.02%	0.03%	**0.00%**
Total Return Sigma	**7.08%**	**7.17%**	**7.26%**	**7.00%**

Table 12. Volatility decomposition. Total sigma = sqrt(sigma^2_appr + sigma^2_income + 2 x rho x sigma_appr x sigma_income). Rho = 0.25 for profit share, 0.00 for cash rent.

The income volatility added by profit sharing is modest in absolute terms (0.29% to 0.86%) relative to appreciation volatility (7.00%). However through the positive covariance term, which adds variance when two positively correlated return components are combined, total sigma rises from 7.00% to 7.08%-7.26%. The dominant driver of the inferior Sharpe ratio under profit sharing is the return penalty – substantially lower mean income – compounded by a moderate volatility penalty.

8. SHARPE RATIO RESULTS

Sharpe ratios are computed using probability-weighted mean total return, Rf = 4.0%, and total return sigma as derived in Section 7.2.

Sharpe Calculation	25% Share	50% Share	75% Share	Cash Rent
Probability-weighted mean return (R)	9.26%	9.53%	9.79%	**13.00%**
Risk-free rate (Rf)	4.00%	4.00%	4.00%	4.00%
Excess return (R – Rf)	5.26%	5.53%	5.79%	**9.00%**
Total return sigma	7.08%	7.17%	7.26%	7.00%
Sharpe Ratio	**0.74**	**0.77**	**0.80**	**1.29**
Cash rent Sharpe premium	**+0.54**	**+0.51**	**+0.49**	--

Table 13. Sharpe ratio calculation by strategy. Sharpe = (R – Rf) / sigma. Rf = 4.0%.

Cash rent delivers a Sharpe ratio of 1.29 – a premium of 0.49 to 0.54 over profit sharing at any split level. To contextualise this advantage: Omnigence's prior research documents Prairie farmland Sharpe ratios of 1.1 to 1.9 as comparing favourably to the S&P 500's historical Sharpe of approximately 0.4. The profit share Sharpe ratios of 0.74 to 0.80, while still positive, sacrifice a meaningful portion of the risk-adjusted advantage that distinguishes farmland as an institutional alternative asset.

Notably, increasing the profit share percentage from 25% to 75% improves the Sharpe ratio by only 0.06 – from 0.74 to 0.80. This is because income volatility is structural and does not diminish with the share percentage; the landlord simply receives a larger slice of the same volatile residual. The only way to improve the Sharpe ratio materially is to exit the profit-sharing structure entirely.

> A 75% profit share – landlord-favourable by any conventional negotiating standard – produces a Sharpe ratio of 0.80, still 0.49 points below cash rent at 1.29. The lease structure, not the split percentage, is the determinant of risk-adjusted performance.

9. DOWNSIDE INCOME FREQUENCY ANALYSIS

The Sharpe ratio captures the aggregate risk-adjusted return profile. To complement it, we present a downside income frequency analysis that quantifies how often and by how much profit sharing fails to deliver income, relative to cash rent. This is particularly relevant for institutional investors who depend on farmland income for portfolio distributions or liability matching.

Unlike ratio-based metrics, downside income frequency requires no statistical assumptions. The results are derived directly from the scenario probabilities and income outcomes established in Sections 3 through 5.

Downside Income Metric	25% Share	50% Share	75% Share	Cash Rent
Probability of zero income	**40%**	**40%**	**40%**	**0%**
Probability of income below cash rent ($160/ac)	**100%**	**100%**	**100%**	**0%**
Income in worst scenario (Low, 40% prob)	**$0**	**$0**	**$0**	**$160**
Income in modal scenario (Mid, 35% prob)	$9	$18	$28	**$160**
Maximum income achievable (High, 25% prob)	$29	$59	$88	**$160**
Weighted mean income	**$11**	**$21**	**$32**	**$160**
Expected years of zero income per decade	4 of 10	4 of 10	4 of 10	0 of 10

Table 14. Downside income frequency analysis. Probabilities derived directly from scenario weights (High 25%, Mid 35%, Low 40%). Thresholds of $80/ac and $120/ac represent 50% and 75% of cash rent respectively. All profit share levels produce income below cash rent with 100% probability in every scenario.

The downside income frequency analysis produces findings that are more intuitive and more damning than the Sharpe ratio alone. The single most important result is that profit share income falls below cash rent income with 100% probability across all scenarios and all split percentages. This is not a probabilistic statement – it is a structural certainty derived from the eco-

nomics of the profit-sharing model. There is no scenario, no split percentage, and no commodity environment in which profit sharing delivers income equal to or exceeding cash rent.

The 40% probability of zero income deserves particular emphasis. This is not a tail risk – it is the most probable single outcome in any given year. A landlord entering a profit-sharing arrangement should expect to receive zero income in approximately four out of every ten years, regardless of whether they negotiate a 25%, 50%, or 75% share. The split percentage is irrelevant when profits are zero or negative: all share levels produce identical zero-income outcomes in the low scenario.

Even in the best available scenario – high commodity prices occurring with 25% probability – the 75% profit share arrangement delivers only $116/acre, still $44/acre below cash rent. Cash rent is therefore not merely the safer income strategy; it is also the higher-income strategy in every scenario without exception.

> Profit share income falls below cash rent income with 100% probability in every scenario at every split level. In 4 of every 10 years, profit share income is zero at all split levels. Cash rent delivers $160/acre with certainty regardless of commodity prices, yields, or input costs.

10. MODEL SENSITIVITY AND LIMITATIONS

10.1 Appreciation Rate Sensitivity

The 9.0% appreciation assumption is at the upper end of the documented range for Saskatchewan farmland. At 7.0% appreciation (the long-run historical average): cash rent total return = 11.0%, Sharpe = 1.04. Profit share mean total return = 7.26%-7.79%, Sharpe range = 0.46-0.52. The cash rent Sharpe premium widens to 0.47-0.56 points at lower appreciation rates because income becomes a larger share of total return, making the income deficit of profit sharing more consequential. The conclusion strengthens at lower appreciation rates.

10.2 Cash Rent Rate Sensitivity

The 4.0% cash rent yield is the midpoint of the documented 3-5% range. At 3.0% ($120/acre): cash rent Sharpe = 1.19. At 5.0% ($200/acre): cash rent Sharpe = 1.49. In both cases cash rent materially dominates profit sharing. The result is not sensitive to the specific cash rent yield within the observed market range.

10.3 Scenario Probability Sensitivity

The 40% Low scenario weight is conservative relative to the observed 53% historical frequency. Using the empirically observed 53% Low weight would reduce profit share mean income further and widen the Sharpe gap significantly. Using an optimistic 30% Low / 40% Mid / 30% High: profit share mean income reaches $17-$51/acre depending on split level, still materially below $160 cash rent. The direction and magnitude of the result is stable across all plausible probability assumptions. Similarly, the correlation coefficient rho is robust: the Sharpe ratio difference between rho=0.10 and rho=0.40 is less than 0.015 points across all profit share levels, because income volatility (0.29%-0.87%) is an order of magnitude smaller than appreciation volatility (7%). The result does not depend on the rho assumption.

10.4 Model Limitations

Several simplifications should be noted. First, the three-scenario discrete model does not capture the full continuous distribution of outcomes, including extreme tail events. Second, yield risk (drought, disease, hail) is not separately modelled – in years where both prices and yields are poor simultaneously, the profit-sharing case deteriorates further than modelled. Third, some profit-sharing arrangements include guaranteed minimum payments or income caps that would partially modify the results. Fourth, poor tenant quality or profit misrepresentation would further disadvantage the profit-sharing landlord. Fifth, tax treatment differs between strategies – cash rent is generally passive income while profit sharing may constitute active farm income with different deduction eligibility – affecting net after-tax returns beyond the scope of this analysis.

11. OPERATIONAL RISK: ENFORCEABILITY, VERIFICATION, AND DEFAULT

The Sharpe ratio analysis quantifies risk as the volatility of total returns across commodity price scenarios. It does not capture a second, distinct class of risk inherent in profit sharing arrangements: the operational cost of verifying net farm profit, auditing tenant reporting, and recovering income that is disputed or withheld. This unquantified risk is material and compounds the Sharpe ratio disadvantage of profit sharing by adding recurring management costs that reduce net returns further. Fixed cash rent eliminates this operational burden entirely – the only annual obligation is confirming receipt of a fixed payment.

11.1 The Verification Problem: Revenue Plus Costs

Profit sharing requires the landlord to verify not just what revenue was earned but what costs were incurred. Unlike simpler lease structures where a single revenue figure is verified, profit sharing requires verification of the entire cost structure of the farming operation: seed, fertilizer, chemical, fuel, machinery depreciation, labour, and overhead. This substantially expands the surface area for misrepresentation compared to any revenue-only verification.

Revenue verification requires confirmation that the tenant has reported all grain sales. The Prairie elevator system partially mitigates verification risk, as most commercial grain generates a settlement statement. However, cash sales, off-ticket transactions, related-entity routing, and inventory timing manipulation remain gaps that a motivated tenant can exploit.

> Under profit sharing, the landlord's income is the residual after the tenant's costs. Every cost definition ambiguity is an opportunity for the tenant – who controls the books – to reduce that residual. This creates a structural information asymmetry that does not exist under cash rent. The landlord is always negotiating from the weaker information position.

Cost verification is unique to profit sharing and represents the structure's most significant operational vulnerability. The tenant who controls the books also controls which costs are deducted from the profit base before the landlord's share is calculated. Cost inflation is harder to detect and easier to defend than revenue concealment: a tenant who claims above-average fuel costs, applies generous overhead allocations, or charges machinery use at above-market rates may be acting within the letter of a poorly specified lease while systematically eroding the landlord's income.

11.2 Defining Net Farm Profit: The Contract Specification Problem

The profit sharing lease agreement must precisely define the profit calculation methodology or every annual payment event becomes a negotiation. The following categories must each be addressed explicitly:

Machinery and depreciation: Should machinery depreciation be a deductible operating cost? If yes, at what rate and on what asset base? A tenant who owns older, fully-depreciated equipment reports very different profits on an identical farming operation compared to a tenant making new capital purchases. Specifying machinery costs as an actual cash operating charge rather than an accounting depreciation charge – or alternatively agreeing a fixed per-acre machinery allowance – eliminates this ambiguity.

Related-party transactions: A tenant operating through multiple corporate entities can rent machinery from a related company at above-market rates, pay management fees to a related corporation, or purchase inputs from a related supplier at above-market prices. Each transaction reduces the reported profit base before the landlord's share is calculated. The lease should require all material costs to be arm's-length transactions or to be capped at published benchmark rates from the SK Ministry of Agriculture Crop Planning Guide.

Multi-parcel cost allocation: Tenants farming multiple quarters must allocate shared costs – machinery, fuel, management, storage – across parcels. The allocation methodology determines the landlord's income from each specific lease and is difficult to audit. A fixed-cost allocation methodology agreed in advance, tied to seeded acres, is more auditable than a discretionary allocation.

Crop insurance and government programs: Must specify whether SCIC insurance payouts, AgriStability, AgriInvest, and government support payments form part of the profit base. These payments may be the only source of positive farm income in low-price years, making their treatment especially consequential. Excluding them from the profit base means the landlord receives zero income even in years when government programs have compensated the farmer substantially.

Inventory timing and prepaid inputs: Unsold grain on-farm at the calculation date has not generated settlement revenue. Inputs purchased in December for the following crop year – common practice for locking in fertilizer prices – may or may not be deductible in the current period. Both items must be specified. A mark-to-market valuation of on-farm inventory at the period-end settlement price, included in the revenue base, and a cash-basis treatment of costs (only costs paid in the period are deductible), provides the most auditable framework.

11.3 Default Risk and Payment Timing

Profit sharing exposes the landlord to greater default risk than cash rent on every dimension.

Cash rent is paid in full prior to seeding – before the crop is grown. The landlord is never a creditor for the current crop year. The amount is fixed and not contingent on any calculation. Standard landlord remedies under Saskatchewan property law apply immediately to a clearly specified amount. This is the baseline against which all other structures should be measured.

Profit sharing is payable post-harvest, after profit has been calculated and verified. The landlord functions as an unsecured post-harvest creditor, bearing the full crop year before receiving any income. In the 40% of years (53% historically) when farm profit is negative and the floor binds at zero, the landlord receives nothing and has no claim to recover – not because of default but because the contractual amount is zero. In the years when profit is positive and a payment is due, the landlord competes with secured agricultural lenders in the event of tenant insolvency.

The additional default complication unique to profit sharing is the disputed-amount problem. If the landlord and tenant disagree on the profit calculation – a foreseeable outcome given the complexity of the calculation and the incentive misalignment – the amount owed cannot be established until the dispute is resolved. Recovery proceedings for an unspecified amount are more expensive, more time-consuming, and more likely to result in negotiated settlement at a discount than proceedings for a fixed contractual obligation.

A General Security Agreement, securing the profit share against the growing crop, provides some protection. However, the GSA must specify the amount secured, which creates a circular dependency when the profit calculation is disputed. In practice, PPSA registration is frequently omitted from informally negotiated profit sharing arrangements.

11.4 Scalability and Portfolio Governance

Profit sharing creates a recurring annual governance burden that cash rent entirely avoids. A profit sharing portfolio requires annual profit verification for every lease, including review of revenue documentation and cost claims. It requires dispute resolution infrastructure to manage the steady stream of calculation disagreements that arise across a large portfolio. It requires lease agreements of substantially greater complexity – including cost definition schedules, benchmark rate appendices, audit right provisions, and arbitration clauses. And it requires a landlord-tenant relationship management approach that can accommodate the adversarial dynamic inherent in an annual profit audit without destroying the operational relationships on which large-scale farmland management depends.

High tenant retention is one of the structural operational advantages of farmland ownership at Veripath's scale. Profit sharing structures create recurring adversarial dynamics – over cost claims, calculation methodology, and payment amounts – that erode this advantage over time. The management cost of maintaining a profit sharing portfolio at institutional scale is substantially higher than for a cash rent portfolio, and this cost is not captured in the Sharpe ratio comparison.

> The true performance gap between cash rent and profit sharing is larger than the Sharpe ratio differential of 0.49-0.54 points. The quantified gap captures income volatility. The unquantified gap includes: (i) annual profit verification and audit cost across the portfolio; (ii) legal cost of defining and defending the profit calculation methodology; (iii) dispute resolution cost at every payment event; (iv) recovery cost when payments are disputed or defaulted; (v) the legal complexity premium on profit sharing lease documentation; and (vi) the portfolio governance cost of managing variable-income, calculation-dependent leases at institutional scale. Fixed cash rent is the operationally superior structure by a margin this paper's quantitative analysis understates. This is a core structural advantage of the Veripath model.

12. SUMMARY: FULL COMPARISON TABLE

Metric	25% Share	50% Share	75% Share	Cash Rent
Core Assumptions				
Land value ($/acre)	$4,000	$4,000	$4,000	$4,000
Appreciation rate	9.00%	9.00%	9.00%	9.00%
Income basis	25% net profit	50% net profit	75% net profit	4% land value
Income per Acre ($/ac)				
High scenario (25% prob)	$29	$59	$88	**$160**
Mid scenario (35% prob)	$9	$18	$28	**$160**
Low scenario (40% prob)	**$0**	**$0**	**$0**	**$160**
Probability-weighted mean	**$11**	**$21**	**$32**	**$160**
Total Return				
High scenario	9.73%	10.47%	11.20%	**13.00%**
Mid scenario	9.23%	9.46%	9.69%	**13.00%**
Low scenario	9.00%	9.00%	9.00%	**13.00%**
Probability-weighted mean	**9.26%**	**9.53%**	**9.79%**	**13.00%**
Volatility				
Income sigma	0.29%	0.58%	0.86%	**0.00%**
Appreciation sigma	7.00%	7.00%	7.00%	7.00%
Total return sigma	**7.08%**	**7.17%**	**7.26%**	**7.00%**
Risk-Adjusted Return (Rf = 4.00%)				
Sharpe Ratio	**0.74**	**0.77**	**0.80**	**1.29**
Cash rent Sharpe premium	**+0.54**	**+0.51**	**+0.49**	--
Downside Income Frequency				
P(zero income)	**40%**	**40%**	**40%**	**0%**
P(income < $80/ac)	**100%**	**100%**	**75%**	**0%**
P(income < cash rent)	**100%**	**100%**	**100%**	**0%**
Expected zero-income years per decade	**4 of 10**	**4 of 10**	**4 of 10**	**0 of 10**

Table 15. Full comparison summary. Flexible input costs: +10% High, base Mid, -8% Low. Land value $4,000/acre, appreciation 9.0%, sigma 7.0%, Rf 4.0%, rho 0.25. Scenario probabilities: High 25%, Mid 35%, Low 40%.

13. CONCLUSIONS

This analysis produces a clear conclusion: cash rent is the superior lease structure for farmland investment on every measurable risk-adjusted and income frequency dimension. The magnitude of the advantage is significant, not marginal. The Sharpe ratio of cash rent (1.29) is 61-73% higher across all profit share levels than the best-case profit sharing alternative (75% share, Sharpe 0.80). This is predominantly a return story: profit sharing delivers a probability-weighted mean income of $11 to $32/acre against $160/acre under cash rent, and that income deficit directly reduces the excess return available per unit of risk. The volatility penalty of profit sharing – a modest increase in total sigma from 7.00% (cash rent) to 7.08%-7.26% (profit sharing) – compounds this but is secondary.

Four structural findings underpin this conclusion.

- First, the low commodity price environment – in which all profit share income goes to zero – is the most probable single outcome at 40%, calibrated to the observed frequency of below-breakeven years in Saskatchewan grain farming over the past decade. Profit share income falls below cash rent income with 100% probability in every scenario at every split level – there

is no scenario in which profit sharing is the superior income strategy. Increasing the profit share percentage from 25% to 75% improves the Sharpe ratio by only 0.06 points, confirming that the lease structure rather than the split ratio is the determinant of risk-adjusted performance.

- Second, for investors seeking to preserve the well-documented Sharpe advantage of farmland, cash rent is the instrument through which that advantage is protected. Profit sharing introduces operating leverage, commodity price exposure, and binary income risk into what would otherwise be a low-volatility, income-stable investment. It transfers the risk-adjusted advantage of farmland ownership partly back to the tenant without compensating the landowner with superior mean income in any observable scenario.
- Third, the lease structure decision is a portfolio-level choice with consequences for risk-adjusted returns that are of the same order of magnitude as the underlying asset allocation decision.
- Fourth, the operational and enforcement risk of profit sharing represents a performance gap beyond what the Sharpe ratio captures. Profit sharing requires annual verification of both revenue and costs, precise contractual definition of allowable deductions, ongoing audit rights, and post-harvest credit exposure. The cost inflation and related-party transaction risks unique to profit sharing – where the tenant controls the books and determines the deductions before the landlord's share is calculated – represent a structural information asymmetry with no parallel under fixed cash rent. At portfolio scale, the cumulative cost of these governance obligations can be expected to materially reduce net returns below those implied by the Sharpe differential. The true performance gap between cash rent and profit sharing is larger than 0.49-0.54 Sharpe points. Institutional investors should treat these operational costs as an additional risk premium when evaluating lease structure decisions.

> Final conclusion: Cash rent delivers a Sharpe ratio of 1.29 versus 0.74-0.80 for profit sharing, a premium of 0.49-0.54 points, with zero probability of income shortfall versus a 40% probability of zero income under profit sharing. Beyond the quantified Sharpe ratio gap, cash rent eliminates the verification, audit, legal, and governance overhead that compound the cost of profit sharing at institutional scale. The case for cash rent as the default institutional farmland leasing structure is analytically unambiguous on every quantitative and operational dimension.

SOURCES

The following sources informed the data, assumptions, and analysis in this paper.

- Saskatchewan Ministry of Agriculture, Crop Planning Guide (annual editions 2013-2026). Primary source for operating cost benchmarks, yield targets, and return-over-total-expenses profitability classifications by crop and soil zone. Available at: publications.saskatchewan.ca
- Statistics Canada, Table 32-10-0359-01: Estimated areas, yield, production, average farm price and total farm value of principal field crops, annual. Primary source for annual average farm gate prices and yield data for canola, spring wheat, and lentils, 2012-2026.
- Statistics Canada, Table 32-10-0136-01: Farm operating revenues and expenses, annual. Source for farm-level operating cost benchmarks and grain farm profitability data.
- Government of Saskatchewan, Saskatchewan Crop Planning Guide – Price and Cost History (2013-2026). Source for historical farm gate price ranges and operating cost benchmarks used in scenario calibration. Available at: publications.saskatchewan.ca
- Saskatchewan Crop Insurance Corporation (SCIC), Annual Crop Insurance Reference Prices. Source for AAFC-based farm gate price benchmarks and insured yield data used in scenario calibration.
- Farm Credit Canada (FCC), Farmland Values Reports (annual). Primary source for Saskatchewan and Alberta farmland price appreciation rates, provincial benchmarks, and price-to-revenue ratio analysis. Available at: fcc-fac.ca/en/about-fcc/reports
- Farm Credit Canada (FCC), 2024 Year-End Farmland Values Report. Source for recent Saskatchewan appreciation rates and regional farmland value benchmarks used in model calibration.
- Rayglen Commodities, Weekly Grain News (2024-2026). Source for current Saskatchewan farm gate prices for lentils, peas, canola, and spring wheat. Available at: rayglen.com/market-news
- NCREIF (National Council of Real Estate Investment Fiduciaries), Farmland Property Index. Primary source for total farmland return volatility (approximately 7.0% per annum) and long-run return benchmarks used in sigma calibration.
- University of Illinois at Urbana-Champaign, farmdoc daily: Paulson, N., G. Schnitkey, C. Zulauf and J. Baltz. Comparing Fixed Cash, Variable Cash, and Share Rents for 2024. farmdoc daily (13):195, Department of Agricultural and Consumer Economics, October 24, 2023. Source for variable leasing structure comparison methodology and lease type risk-sharing framework.
- University of Nebraska-Lincoln, Center for Agricultural Profitability: An Economic Comparison of Crop Share vs. Cash Rent on a Southeast Nebraska Farm. Cornhusker Economics series, October 15, 2025. Source for crop share versus cash rent comparative framework. Available at: cap.unl.edu
- Purdue University, Center for Commercial Agriculture: Langemeier, M. Comparisons of Net Returns for Crop Share Leases and a Fixed Cash Rent Lease. Center for Commercial Agriculture, Purdue University, September 2021. Source for lease structure net return comparison methodology. Available at: ag.purdue.edu/commercialag
- Omnigence Asset Management, Sortino Ratios of Canadian Farmland (2024). Source for farmland Sharpe and Sortino ratio benchmarks and downside risk analysis of Prairie farmland.
- Omnigence Asset Management, Upside Downside Capture Ratio of Canadian Farmland (2024). Source for Prairie farmland risk-adjusted return benchmarks.
- Omnigence Asset Management, Veripath Global Portfolio Model (2025). Source for provincial farmland Sharpe ratio analysis, appreciation volatility benchmarks, and multi-jurisdiction return analysis.
- Omnigence Asset Management, Saskatchewan and Alberta provincial farmland return analysis (2024-2025). Source for correlation structure between farm income and land appreciation used in rho derivation.

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