

Comprehensive Financial Projections for the MixMate Project

Short-Term Projections (1–3 Years)

1. Anticipated Costs:

- **Initial Investment:** \$54,114 (includes the Mixmate system, installation, and training)
- **Annual Maintenance:** \$500/year to ensure smooth operation and system longevity
- **Annual Fuel Costs:** \$57.60/year (based on running Honda pumps for ~18 hours annually at \$4.00/gallon)
- **Total Costs (Years 1–3):** $\$54,114 + (\$500 \times 3) + (\$57.60 \times 3) = \$55,786.00$

2. Anticipated Revenues/Savings:

- **Chemical Savings:** \$10,800/year (6% of \$180,000 budget)
- **Labor Savings:** \$990/year (33 hours × \$30/hour)
- **Idle Time Savings:**
 1. **Savings Per Acre:** \$0.80/acre, based on AGCO data indicating a 20% reduction in engine hours spent idling
 2. **Annual Savings:** $\$0.80/\text{acre} \times 7,000 \text{ acres} = \mathbf{\$5,600/\text{year}}$
- **Total Savings (Years 1–3):** $(\$10,800 + \$990 + \$5,600) \times 3 = \$52,890.00$

3. Net Cash Flow (Years 1–3):

- **Total Costs:** \$55,786.80
- **Total Savings:** \$52,890.00
- **Cumulative Net Impact (End of Year 3):** $\$35,370 - \$55,786.80 = -\$20,416.80$
- **Insight:** The project operates at a deficit in the initial years due to upfront costs but lays the foundation for long-term savings

Long-Term Projections (4–10 Years)

1. Anticipated Costs:

- **Annual Maintenance:** \$500/year.
- **Annual Fuel Costs:** \$57.60/year.
- **Total Costs (Years 4–10):** $(\$500 + \$57.60) \times 7 = \$3,899.20$

2. Anticipated Revenues/Savings:

- **Chemical Savings:** \$15,480/year (6% of \$258,000 annual budget, starting Year 4, due to plan to apply fungicide acres)
- **Labor Savings:** \$1,320/year (44 hours saved annually at \$30/hour)
- **Idle Time Savings:**
 1. **Savings Per Acre:** \$0.80/acre, based on AGCO data
 2. **Annual Savings:** \$0.80/acre × 10,400 acres = **\$8,320/year**
- **Total Savings (Years 4–10):** (\$15,480 + \$1,320 + \$8,320) × 7 = \$177,980

3. Net Cash Flow (Years 4–10):

- **Total Costs (Years 4–10):** \$3,899.20
- **Total Savings (Years 4–10):** \$177,980
- **Cumulative Net Impact (End of Year 10):**

\$52,890 (Years 1–3) + \$177,980 (Years 4–10) = \$230,870

\$230,870 – (\$55,786.80 + \$3,899.20) = \$171,184

Payback Period

Payback Achieved: By Year 4, cumulative savings surpass initial costs:

- **Cumulative Net Cash Flow at Year 4:** \$7,913

Financial Health Indicators

1. Return on Investment (ROI, 10 Years):

- $(\$171,184 / \$54,114) \times 100 = 316\%$

2. Net Cash Flow:

- Positive cash flow begins in Year 4
- Total net cash flow at the end of 10 years: **\$171,184**

3. Profitability Ratios:

- Over 10 years, the MixMate system generates financial returns exceeding **3 times** the initial investment, demonstrating a strong and sustainable ROI.