

## SK-13 Future Farm Summary

	Pasture Rejuvenation, Yr-1 yield up 38%	Pasture Rejuvenation, Yr-1 yield up 80%
<b>Description</b>	Rejuvenate tame pasture to extend grazing days and reduce full winter-feeding days.	Rejuvenate tame pasture to extend grazing days and reduce full winter-feeding days.
<b>Assumptions</b>	<ul style="list-style-type: none"> <li>The farm comprises 50% native and 50% tame pasture, with a focus on rejuvenating only the tame pasture</li> <li>A new stand with 30% legumes (non-bloat) is seeded, using minimum tillage practices, followed by manure application</li> <li>Allow cattle to graze the existing pasture heavily before seeding, maintaining the baseline stocking rate during the seeding year</li> <li>Rejuvenation is carried out every 9 years, with 1/9 of tame pasture undergoing rejuvenation annually</li> <li>Rejuvenation cost is estimated at \$297/ha, adjusted by rejuvenation frequency (9 years), the annual cost is \$33/ha</li> <li>When rejuvenation costs are spread across all pasture areas (native and tame), rejuvenation costs are halved, resulting in average yearly expenses of \$17/ha on all pasture land</li> <li>Yield responds in year-2, increasing carrying capacity by 38%, followed by a 4% annual decline until year-9 when it returns to the baseline level</li> <li>The five-year average stocking rate post-reseeding is 23.52 AU/ac, marking a 7% increase from the baseline. As only tame pasture is rejuvenated, the overall stocking rate improvement is 3.5%</li> <li>Winter feeding days are reduced by 7 days from 165 to 158</li> <li>The extra feed is not sold</li> </ul>	<ul style="list-style-type: none"> <li>The farm comprises 50% native and 50% tame pasture, with a focus on rejuvenating only the tame pasture</li> <li>A new stand with 30% legumes (non-bloat) is seeded, using minimum tillage practices, followed by manure application</li> <li>Allow cattle to graze the existing pasture heavily before seeding, maintaining the baseline stocking rate during the seeding year</li> <li>Rejuvenation is carried out every 9 years, with 1/9 of tame pasture undergoing rejuvenation annually</li> <li>Rejuvenation cost is estimated at \$297/ha, adjusted by rejuvenation frequency (9 years), the annual cost is \$33/ha</li> <li>When rejuvenation costs are spread across all pasture areas (native and tame), rejuvenation costs are halved, resulting in average yearly expenses of \$17/ha on all pasture land</li> <li>Yield responds in year-2, increasing carrying capacity by 80%, followed by an 8% annual decline until year-9 when it returns to the baseline level</li> <li>The five-year average stocking rate post-reseeding is 23.52 AU/ac, marking a 14% increase from the baseline. As only tame pasture is rejuvenated, the overall stocking rate improvement is 7%</li> <li>Winter feeding days are reduced by 14 days from 165 to 151</li> <li>The extra feed is not sold</li> </ul>

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<b>Trade-Off Considerations</b>	<ul style="list-style-type: none"> <li>• New seedlings fail to establish</li> <li>• The impacts on pasture productivity are inconsistent</li> <li>• Risk of bloating</li> <li>• Costs of rejuvenation are variable, and will impact the feasibility of this practice</li> <li>• The pay-off period for pasture rejuvenation will need more than five years</li> <li>• Improved margins in the following years may not cover total upfront costs (cash, depreciation and opportunity costs) of rejuvenation</li> </ul>	<ul style="list-style-type: none"> <li>• New seedlings fail to establish</li> <li>• The impacts on pasture productivity are inconsistent</li> <li>• Risk of bloating</li> <li>• Costs of rejuvenation are variable, and will impact the feasibility of this practice</li> <li>• The pay-off period for pasture rejuvenation will need more than five years</li> <li>• Improved margins in the following years may not cover total upfront costs (cash, depreciation and opportunity costs) of rejuvenation</li> </ul>
<b>5-year average vs. baseline year*</b>		
<b>Estimated Change at Whole Farm Level (\$/year)</b>		
Net Income	-\$18,442	-\$16,408
Net Cash Farm Income	-\$18,486	-\$16,454
<b>Estimated Change at Cow-calf Enterprise (\$/cow)</b>		
Short-term Profits	-\$76	-\$62
Medium-term Profits	-\$76	-\$62
Long-term Profits	-\$76	-\$62

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Water System	
<b>Description</b>	Barley swath grazing for 118 additional days to the original 30 days of swath grazing. The majority of the forage production land is converted to barley production with excess grain sold.
<b>Assumptions</b>	<ul style="list-style-type: none"> <li>Add a solar-powered pump system to existing water source</li> <li>Initial cost at \$7,500</li> <li>Maintenance cost of the water system at \$100/year</li> <li>Additional average daily gain at 0.1 lb per calf</li> <li>Average weaning weight up 19 lbs</li> <li>Sell prices decline due to heavier sell weight with heifers down \$1.9/cwt, and steers down \$1.8/cwt (based on price slide from 5-600 lb to 6-700 lb categories, SK, 2022 Nov, adjusted by weight gain)</li> </ul>
<b>Trade-Off Considerations</b>	<ul style="list-style-type: none"> <li>Upfront capital required to invest in new watering system</li> <li>Water system cost on a per head basis affected by herd size (higher \$/head cost for smaller herd)</li> </ul>
<b>5-year average vs. baseline year*</b>	
<b>Estimated Change at Whole Farm Level (\$/year)</b>	
Net Income	+\$14,904
Net Cash Farm Income	+\$14,824
<b>Estimated Change at Cow-calf Enterprise (\$/cow)</b>	
Short-term Profits	+\$25
Medium-term Profits	+\$25
Long-term Profits	+\$24

\* Changes in profitability come from the practice change as well as debt servicing.

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