Bayer Crop Science: DKsilos

Mexico & Honduras
Welcome To
Your 60dB Results

We enjoyed hearing from 400 of DKsilos cattle ranchers in Mexico and Honduras – they had a lot to say!

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Performance Snapshot

Cattle ranchers served by DKsilos are highly satisfied and are experiencing positive livelihood changes. There is room to deepen impact by digging into their suggestions.

<table>
<thead>
<tr>
<th>Way of Farming</th>
<th>Cattle Health</th>
<th>Impact</th>
<th>Self-Reported Outcomes</th>
<th>Cattle Rancher Voice</th>
<th>Net Promoter Score®</th>
<th>Challenges</th>
<th>Livestock Production</th>
<th>Money Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>45% ‘very much improved’</td>
<td>52% ‘very much improved’</td>
<td>29% quality of life ‘very much improved’</td>
<td>- 43% talk about increased income - 14% say their corn yield increase - 13% mention healthier livestock</td>
<td>“The corn silage that we produce due to DKsilos provides more energy to the cattle. The differences in the offspring permanently go away due to the food. They are more robust every day as they are eating from the reserves that we have.” - Male, 54</td>
<td>69 on a -100 to 100 scale</td>
<td>18% report challenges</td>
<td>33% livestock production ‘very much increased’</td>
<td>20% ‘very much increased’</td>
</tr>
</tbody>
</table>

Data Summary
DKsilos Performance: 400 cattle rancher phone interviews between February and April 2023 in Mexico & Honduras.
Top Insights

1. Improvements in way of farming is a significant pre-requisite for cattle ranchers to realize greater corn silage production. 45% of cattle ranchers report ‘very much improved’ way of farming, citing adoption of high-quality corn seeds as the top change. Those who report improved way of farming are more likely to have realized higher corn silage production. This underscores the importance of technical support offered by DKsilos in ensuring cattle ranchers adopt good practices when harvesting corn and preparing silage. See pages 13, 14, 15.

2. DKsilos has been successful in encouraging silage preparation, which has resulted in cost savings. Roughly half of the cattle ranchers report producing more silage since DKsilos. On average, cattle ranchers report harvesting ~100 tons of corn in 3 hectares of land or more. When asked about way of farming changes, 18% say they either started silage preparation or made their current process more systematic. They also spend lesser on cattle feed, indicating process efficiencies and cost-savings that DKsilos may be encouraging. See pages 11, 14, 19.

3. Cattle ranchers see value in their livestock’s health improving, which is positively influencing their livelihoods. Roughly half of the cattle ranchers report witnessing positive changes in their livestock’s health, primarily around improving weight. They are also more likely to have realized higher livestock production and thus, higher income. When asked about how they perceive the value offered by DKsilos, those who witnessed cattle health improvements were more likely to rate the value as ‘good’ or ‘very good’. See pages 17, 18, 20.

4. The quality of inputs and technical support drives satisfaction among cattle ranchers, but there is room to focus on consistency. DKsilos has a Net Promoter Score® of 69, which is excellent. Cattle ranchers are satisfied with the quality of corn seeds offered and the avenue to realize higher corn yields. Dissatisfied cattle ranchers talk about inadequate technical assistance. They want consistency in interactions, better delivery of information, or access to more skilled trainers. Acting on this feedback can enhance satisfaction and loyalty. See pages 26, 27, 28, 29, 33.

5. In addition to consistent technical support, cattle ranchers want less expensive seeds and better access to finance. Considering the adoption of high-quality corn seeds is a top way of farming change, cattle ranchers would benefit from being able to afford them easily. 26% of cattle ranchers suggest lowering of input costs, and 12% mention that they want to avail credit to be able to manage their farm. Additionally, they want access to rented machinery, so they can prepare silage effectively and better-quality corn seeds. See pages 31, 33.
Cattle Rancher Voices

We love hearing cattle ranchers’ voices. Here are some that stood out.

Impact Stories
67% shared how DKsilos had improved their quality of life

"[DKsilos] has increased productivity and improved the lives of everyone who works with them. As the corn yield increases, you have a little more forage available. And that available forage is to keep more cattle in the barn. That extra [feed] is what raises the profitability of the business." - Male, 34

"Now [my cattle] are always well-fed. They are always well-maintained even in drought. Land which is sown with yellow seeds helps when the pasture is low." - Male, 46

"In times of drought, [silage] helps a lot to feed the animals. DKsilos had allowed us to be more prepared and not worry as much." - Female, 25

"The DKALB seed is very peculiar. It gives fiber and the fiber fattens the cattle. DKsilos taught us how to use the equipment at the beginning. Later, we got our own machinery and little by little, we have gained a great experience." - Male, 38

"It has reduced unnecessary expenditures that we used to deal with when we had pests and also because the seeds that DKsilos provides are very good." - Male, 52

"Many of us were old-fashioned. Before, the cattle got very sick. We gave them a different kind of feed but with the silo, it is different. Now, they grow and get fatter faster." - Female, 54

Opinions on Value Proposition
71% were Promoters and highly likely to recommend

"We have been working for 2 years now, it has served me well because in times of drought, the silo has kept the cattle from dying. They have also given me a lot of advice and we have more food available." - Female, 38

"[DKsilos] helped me to stop buying corn from others and start growing my own. The engineer has helped me rent the machinery to make silage as in this town, there was no way to do it." - Male

"[DKsilos] has been advising me. There are doubts when we start making the silage - on how to clump it, what products to use, how to compact the silage, the timing. Little details look very simple, but we don't know them." - Male, 39

Opportunities for Improvement
80% had a specific suggestion for improvement

"If they consider us in terms of seed prices, if there is any help in the price of fertilizers, that is our weakness, the price of fertilizers." - Male, 53

"I have not been able to buy [seeds] again. The coat of my cows was shiny and their milk was better. I know it is difficult to contact me because there is no signal at the ranch. I would like to be sold to and I would like [DKsilos] to get closer to me." - Female, 66

"The technician does not become a seller, they should provide more advice in the field, not only by phone." - Male, 31
Who Are You Reaching?

- Demographics
- Income Inclusivity
- Land Size and Yields

What Impact Are You Having?

- Way of Farming
- Corn Silage Production
- Livestock Production
- Cattle Health
- Income Change
- Quality of Life
- Borrowing Impact

How Can You Improve?

- DKsilos Satisfaction
- Technical Support Satisfaction
- Challenges
- Value Perception
- Suggestions for Improvement
Demographics: Overview (1/2)

The average cattle rancher served by DKsilos is 46 years-old and lives in a household with 3 other members. The country breakdown is due to a combination of factors: contacts received (79% Mexico + 21% Honduras), eligibility of respondents, and response rates in each country. All respondents who qualified for the study were asked to confirm whether they rear or own livestock and if they received technical assistance from DKsilos. Throughout this report, we showcase results segmented by country.

A majority of cattle ranchers we spoke with are male, living in Mexico. On average, they have been engaging with DKsilos for 2 years.

About the DKsilos Cattle Ranchers We Spoke With
Data relating to respondent characteristics (n = 400)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Location</th>
<th>Tenure with DKsilos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>95%</td>
<td>2 years on average</td>
</tr>
<tr>
<td>Female</td>
<td>5%</td>
<td>51%</td>
</tr>
</tbody>
</table>

Average Household Size: 4.3
Average Age (in years): 46

Note: In case of some metrics, the ‘N’ number is less than 400 because respondents selected ‘don’t know or can’t say’ or chose not to answer the question.
Demographics: Education Level

Cattle ranchers served by DKsilos are relatively well-educated, with half of them reporting tertiary education levels.

We asked cattle ranchers about their highest level of education. Across Mexico and Honduras, half of the cattle ranchers we spoke with have completed their tertiary education.

Throughout this report, we also showcase results segmented by two key education levels:
1. Up to secondary education
2. Tertiary education

About the DKsilos Cattle Ranchers We Spoke With
Data relating to respondent characteristics (n = 367 | Mexico = 257, Honduras = 110)

<table>
<thead>
<tr>
<th>Education Levels</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
</tr>
<tr>
<td>51%</td>
<td></td>
</tr>
<tr>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Honduras</td>
<td></td>
</tr>
<tr>
<td>54%</td>
<td></td>
</tr>
<tr>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>18%</td>
<td></td>
</tr>
</tbody>
</table>

- Tertiary education
- Upper secondary school
- Lower secondary school
- Primary school
- None
Income Inclusivity: Mexico

Using the Simple Poverty Scorecard, we measured how the income profile of your cattle ranchers compares to the Mexico national average.

Mexico is an upper-middle income country, with the poverty line of $5.50. 18% of cattle ranchers live under $5.50 per day, compared to 38% nationally.

This indicates that DKsilos is serving wealthier cattle ranchers than the Mexico national population, resulting in an Inclusivity Ratio of 0.55.

This finding is in line with more than half of the cattle ranchers reporting tertiary education levels and are farming on more than 3 hectares of land (see page 8 and 11).

Compared to the Mexico population, there is room for DKsilos to be working with less well-off cattle ranchers.

Income Distribution of DKsilos Relative to Mexico Average
% living below $xx per person / per day (2011 PPP) (n = 220)

<table>
<thead>
<tr>
<th>Income Level</th>
<th>% of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Poor</td>
<td>17%</td>
</tr>
<tr>
<td>Poor</td>
<td>10%</td>
</tr>
<tr>
<td>Low Income</td>
<td>18%</td>
</tr>
<tr>
<td>Emerging Middle Class + Above</td>
<td>33%</td>
</tr>
<tr>
<td>Max</td>
<td>55%</td>
</tr>
</tbody>
</table>

Inclusivity Ratio
Degree that DKsilos is reaching low-income cattle ranchers in Mexico

0.55

We calculate the degree to which you are serving low-income customers compared to the general population:
1 = parity with population
> 1 = over-serving
< 1 = under-serving.
See Appendix for calculation.
Income Inclusivity: Honduras

Compared to Honduras’ national average for relative wealth, there is room for improvement in DKsilos’ reach of lower-income segments.

60 Decibels normally uses the Poverty Probability Index® or a Simple Poverty Scorecard to estimate poverty levels. This index is not available for Honduras. So, we used the EquityTool to provide insights on income levels.

Almost all of the cattle ranchers we spoke with in Honduras lie in the top 20% of the Honduras national population. This indicates room for DKsilos to support more under-served cattle ranchers.

DKsilos Honduras National Income Profile
% living in the corresponding quintile (n = 101)

- Top 20%
- 60 - 80%
- 40 - 60%
- 20 - 40%
- Bottom 20%

91%
9%

How to Read the Chart:

The EquityTool measures relative wealth to understand which wealth quintiles customers fall under and how they compare to their country’s population.

The national population is equally split into five quintiles, with 20% of the population in each quintile. Quintile 1 is the poorest and quintile 5 is the wealthiest.

Note: The Equity Tool relies on DHS 2011-12 data, which is slightly outdated. We can consider a different approach for any future studies.
Land Size and Yields

On average, cattle ranchers we spoke with harvested close to 100 tons of corn in the most recent farming season. 4 in 5 did not sell silage to others, but of those who did, 50 tons was sold on average.

72% grow corn on 3 hectares or more

<table>
<thead>
<tr>
<th>Land Size</th>
<th>Overall</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 hectare</td>
<td>3%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>1 - 3 hectares</td>
<td>25%</td>
<td>23%</td>
<td>30%</td>
</tr>
<tr>
<td>3 - 5 hectares</td>
<td>21%</td>
<td>22%</td>
<td>19%</td>
</tr>
<tr>
<td>&gt; 5 hectares</td>
<td>51%</td>
<td>53%</td>
<td>47%</td>
</tr>
</tbody>
</table>

Average corn yield reported is 98 tons

<table>
<thead>
<tr>
<th>Corn Yield</th>
<th>Overall</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 60 tons</td>
<td>35%</td>
<td>32%</td>
<td>41%</td>
</tr>
<tr>
<td>60 - 150 tons</td>
<td>28%</td>
<td>29%</td>
<td>26%</td>
</tr>
<tr>
<td>&gt; 150 tons</td>
<td>33%</td>
<td>35%</td>
<td>28%</td>
</tr>
<tr>
<td>Do not remember</td>
<td>4%</td>
<td>4%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Average silage sold is 50 tons

<table>
<thead>
<tr>
<th>Silage Sold</th>
<th>Overall</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 25 tons</td>
<td>30%</td>
<td>29%</td>
<td>33%</td>
</tr>
<tr>
<td>25 - 80 tons</td>
<td>29%</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>&gt; 80 tons</td>
<td>34%</td>
<td>32%</td>
<td>22%</td>
</tr>
<tr>
<td>Do not remember</td>
<td>7%</td>
<td>5%</td>
<td>11%</td>
</tr>
</tbody>
</table>

*Excludes respondents who chose any of the following: ‘Don’t know or can’t say’, ‘Did not harvest corn in the most recent farming season’ or ‘Did not sell silage’.
Who Are You Reaching?

- Demographics
- Income Inclusivity
- Land Size and Yields

What Impact Are You Having?

- Way of Farming
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- Cattle Health
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- Borrowing Impact

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- Challenges
- Value Perception
- Suggestions for Improvement
Way of Farming: Overview

Overall, three quarters report improved way of farming. Cattle ranchers in Honduras are more likely to report 'very much improved' way of farming, in contrast to their Mexican counterparts.

We observed no major differences by education levels, gender, or tenure of the cattle rancher.

Dive deeper into the way of farming changes implemented by cattle ranchers in the next page!

45% of cattle ranchers report significant improvements in their way of farming because of DKsilos.

Changes in Way of Farming

Q: Has your way of farming changed because of DKsilos? Has it: (n = 400 | Mexico = 288, Honduras = 112 | Up to secondary education = 181, Tertiary education = 186)

- Got much worse
- Got slightly worse
- No change
- Slightly improved
- Very much improved
Way of Farming: Top Improvements

Usage of high-quality seeds is slightly higher among cattle ranchers with a tenure of more than 2 years, compared to those engaged for 2 years or less (33% vs. 22%). Cattle ranchers who report ‘no change’ (23%) say so because they are:

- Already implementing the same farming method or system (62%)
- Only changing seeds and nothing more (20%)
- Finding the technical assistance delivery to be poor (16%)

When we look at open-ended responses, we discover the top reason why cattle ranchers say their way of farming has improved is usage of high-quality corn seeds.

Top Way of Farming Improvements

Q: Please explain how your way of farming has improved. (n = 400 | Improved = 298*). Open-ended, coded by 60 Decibels.

<table>
<thead>
<tr>
<th>Top Way of Farming Improvements</th>
<th>Overall</th>
<th>Both Countries</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size (n)</td>
<td>400</td>
<td>298</td>
<td>210</td>
<td>88</td>
</tr>
<tr>
<td>Usage of high-quality DKALB seeds</td>
<td>27%</td>
<td>36%</td>
<td>33%</td>
<td>43%</td>
</tr>
<tr>
<td>Improved planting methods</td>
<td>20%</td>
<td>26%</td>
<td>24%</td>
<td>31%</td>
</tr>
<tr>
<td>Appropriate fertilizer and pesticide usage</td>
<td>18%</td>
<td>24%</td>
<td>24%</td>
<td>23%</td>
</tr>
<tr>
<td>Improved technical knowledge about farming</td>
<td>12%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Started preparing silage</td>
<td>9%</td>
<td>12%</td>
<td>17%</td>
<td>1%</td>
</tr>
<tr>
<td>Greater focus on livestock health</td>
<td>8%</td>
<td>10%</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>Usage of machinery / equipment</td>
<td>7%</td>
<td>10%</td>
<td>13%</td>
<td>1%</td>
</tr>
<tr>
<td>Better irrigation practices</td>
<td>5%</td>
<td>6%</td>
<td>4%</td>
<td>10%</td>
</tr>
</tbody>
</table>

*Question was asked to those who reported improvements in way of farming.
Corn Silage Production

49% of cattle ranchers say their total production of corn silage has ‘very much improved’. A majority say they utilized the same amount of land to realize this increase, indicating higher productivity.

Cattle ranchers reporting increased silage production are more likely to have implemented the following way of farming changes, compared to those reporting ‘no change’ or ‘decrease’ in production:

> Usage of high-quality seeds (31% vs. 14%)
> Improved planting methods (23% vs. 7%)

**Impact on Silage Production**

Q: Has the total production of your corn silage changed because of DKislos’ service? (n = 400 | Mexico = 288, Honduras = 112)

- **Very much decreased**: 18% (Mexico: 18%, Honduras: 16%)
- **Slightly decreased**: 29% (Mexico: 30%, Honduras: 29%)
- **No change**: 78% increased (Mexico: 49%, Honduras: 50%)

**Reasons for Increase in Production**

Q: Was this increase because you utilized additional land for corn silage production or was it from the same amount of land? (n = 310 | Mexico = 223, Honduras = 87).

- **Overall**:
  - Additional land: 11%
  - Same land: 88% (Mexico: 90%, Honduras: 83%)

**Insight**

Access to high quality seeds is central to cattle ranchers realizing higher silage production. But they are not always easy to afford. Find out more about cattle rancher suggestions on page 33.
Livestock Production

A third of cattle ranchers say their total livestock production has ‘very much improved’. Around 3 in 4 realized an increase with the same livestock, indicating improved cattle productivity.

Honduran cattle ranchers are more likely to have used additional livestock to realize higher production compared to their peers in Mexico.

Cattle ranchers who realized higher corn yields more likely to report significant increase in livestock production compared to those reporting no change (average of 100 tons vs. 53 tons).

Insight

Those who witnessed improved cattle health are more likely to have realized an ‘very much increased’ livestock production (56%), compared to those reporting no change in health (6%). Improving cattle health has implications on not just production, but also income earned. More on the next page!
52% of cattle ranchers mention their overall cattle health has ‘very much improved’ because of DKsilos.

**Changes in Cattle Health**

Q: Has the overall health of your cattle changed because of DKsilos? (n = 400 | Mexico = 288, Honduras = 112 | Up to secondary education = 181, Tertiary education = 186)

- **Overall**
  - Got much worse: 17%
  - Got slightly worse: 30%
  - No change: 19%
  - Slightly improved: 52%
  - Very much improved: 82%

- **Country**
  - Mexico:
    - Got much worse: 17%
    - Got slightly worse: 30%
    - No change: 28%
    - Slightly improved: 53%
    - Very much improved: 82%
  - Honduras:
    - Got much worse: 19%
    - Got slightly worse: 28%
    - No change: 28%
    - Slightly improved: 53%
    - Very much improved: 82%

- **Education**
  - Up to secondary:
    - Got much worse: 12%
    - Got slightly worse: 36%
    - No change: 20%
    - Slightly improved: 52%
    - Very much improved: 57%
  - Tertiary:
    - Got much worse: 23%
    - Got slightly worse: 20%
    - No change: 20%
    - Slightly improved: 52%
    - Very much improved: 57%
Improved cattle weight and better milk production are the top improvements witnessed by cattle ranchers in their livestock’s health as a result of engaging with DKsilos.

### Top Cattle Health Improvements

Q: How has your cattle’s health improved? (n = 400 | Improved = 328*). Open-ended, coded by 60 Decibels.

<table>
<thead>
<tr>
<th>Top Improvements in Cattle Health</th>
<th>Overall</th>
<th>Both Countries</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size (n)</td>
<td>400</td>
<td>328</td>
<td>237</td>
<td>91</td>
</tr>
<tr>
<td>Good weight or cattle gained weight</td>
<td>39%</td>
<td>47%</td>
<td>48%</td>
<td>44%</td>
</tr>
<tr>
<td>Improved milk quality or production</td>
<td>29%</td>
<td>35%</td>
<td>28%</td>
<td>54%</td>
</tr>
<tr>
<td>Improved body conditions</td>
<td>24%</td>
<td>30%</td>
<td>29%</td>
<td>31%</td>
</tr>
<tr>
<td>Better reproductive health</td>
<td>15%</td>
<td>18%</td>
<td>19%</td>
<td>18%</td>
</tr>
<tr>
<td>Resilience to illness</td>
<td>13%</td>
<td>15%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>Resilience during the dry season</td>
<td>12%</td>
<td>14%</td>
<td>19%</td>
<td>3%</td>
</tr>
<tr>
<td>Reduced mortality</td>
<td>5%</td>
<td>6%</td>
<td>8%</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Question was asked to those who reported improvements in cattle health.
Cattle Feed Expenses

15% of cattle ranchers report the amount of money spent on cattle feed to have ‘very much decreased’ because of DKsilos. A third report increased cattle feed expenses.

Cattle ranchers spending lesser on cattle feed are more likely to say ‘very much improved’ way of farming (55%), compared to those reporting no change (31%) or increase in expenditure (38%). This underscores the process efficiencies and cost-savings that DKsilos may be encouraging.

Cattle ranchers in Honduras are more likely to report an increase in expenses than their counterparts in Mexico. However, an increase in expenses could also be a sign of initial uptake of changes in way of farming, which was more prevalent among Honduran cattle ranchers, such as usage of high quality seeds (see page 14).

<table>
<thead>
<tr>
<th>Country</th>
<th>Overall</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>31% increased</td>
<td>7%</td>
<td>24%</td>
<td>32%</td>
</tr>
<tr>
<td>47% decreased</td>
<td>15%</td>
<td>17%</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Overall</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much increased</td>
<td>5%</td>
<td>23%</td>
<td>37%</td>
</tr>
<tr>
<td>Slightly increased</td>
<td>11%</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>No change</td>
<td>16%</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Slightly decreased</td>
<td>19%</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>Very much decreased</td>
<td>22%</td>
<td>35%</td>
<td>20%</td>
</tr>
</tbody>
</table>
Money Earned

1 in 5 cattle ranchers say the money earned from their livestock has ‘very much increased’ and 48% say it ‘slightly increased’. Two-thirds attribute this to an increase in volume sold.

Those reporting an increase in money earned are more likely to have decreased their cattle feed expenses (62%), compared to those who report no change in earnings (19%). This is reiterated by 57% attributing income change to a reduction in cost. Savings is one of DKsilos’ key value additions.

Cattle ranchers reporting ‘no change’ in money earned mention:

- The high cost of inputs or production (31%)
- No change in cattle health or production (21%)

Changes in Money Earned From Livestock
Q: Has the money you earn from your livestock changed because of DKsilos? (n = 400 | Mexico = 288, Honduras = 112)

Reasons for Increase in Money Earned
Q: What were the main reasons for the increase in money earned? (n = 258 | Mexico = 197, Honduras = 61)
Quality of Life: Overview

Cattle ranchers reporting ‘very much improved’ quality of life are more likely to have realized deeper impact, compared to their counterparts reporting ‘no change’:

> Better livestock health (34% vs. 7%)
> Higher livestock production (53% vs. 18%)
> Reduction in feed expenses (42% vs. 9%)
> Improved income (39% vs. 8%)

This is mirrored by our qualitative findings. Learn more on the next page!

29% of cattle ranchers report a significant improvements in their quality of life because of DKsilos.

Quality of Life Change

Q: Has your quality of life changed because of DKsilos? Has it: (n = 400 | Mexico = 288, Honduras = 112 | Up to secondary education = 181, Tertiary education = 186)

- Got much worse
- Got slightly worse
- No change
- Slightly improved
- Very much improved
Quality of Life: Top Improvements

When we look at open-ended responses, we discover that increased income is the top reason why cattle ranchers say their quality of life has improved.

Top Quality of Life Improvements

Q: How has your quality of life improved? (n = 400 | Improved = 270*). Open-ended, coded by 60 Decibels.

<table>
<thead>
<tr>
<th>Top Quality of Life Improvements</th>
<th>Overall</th>
<th>Both Countries</th>
<th>Mexico</th>
<th>Honduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size (n)</td>
<td>400</td>
<td>270</td>
<td>195</td>
<td>75</td>
</tr>
<tr>
<td>Increased income</td>
<td>43%</td>
<td>63%</td>
<td>65%</td>
<td>57%</td>
</tr>
<tr>
<td>Greater corn yield</td>
<td>14%</td>
<td>21%</td>
<td>24%</td>
<td>13%</td>
</tr>
<tr>
<td>Healthier livestock</td>
<td>13%</td>
<td>19%</td>
<td>18%</td>
<td>23%</td>
</tr>
<tr>
<td>Reduced production cost</td>
<td>13%</td>
<td>19%</td>
<td>24%</td>
<td>8%</td>
</tr>
<tr>
<td>Improved milk production</td>
<td>12%</td>
<td>18%</td>
<td>12%</td>
<td>33%</td>
</tr>
<tr>
<td>Reduced stress</td>
<td>11%</td>
<td>16%</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>Improved silage production</td>
<td>10%</td>
<td>14%</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>Prepared for the dry season</td>
<td>8%</td>
<td>12%</td>
<td>13%</td>
<td>9%</td>
</tr>
</tbody>
</table>

*Question was asked to those who reported improvements in quality of life.

Respondents were asked to describe – in their own words – the improvements in their quality of life since engaging with DKSilos. The top outcomes are shown on the right.

Cattle ranchers who report ‘no change’ in their quality of life report:

- No difference in their household’s standard of living (48%)
- High cost of production (20%)
- Too soon to tell (14%)
Borrowing Impact

A quarter of cattle ranchers used credit or loans for their farm in the past year. 9% of them find borrowing repayments to be a ‘heavy burden’.

Honduran cattle ranchers are more likely to have used credit for their farms in the last 12 months, compared to their Mexican counterparts (44% vs. 17%). Repayment burden is somewhat uniformly experienced across countries.

**Borrowing Status**
Q: Did you use credit or loans for your farm in the last 12 months? (n = 397 | Mexico = 286, Honduras = 111)

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td>Mexico</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>Honduras</td>
<td>44%</td>
<td>56%</td>
</tr>
</tbody>
</table>

**Repayment Burden**
Q: Thinking about your household’s borrowing repayments, are they: (n = 97 | Mexico = 48, Honduras = 49)

- Overall: 9% A heavy burden, 6% Somewhat of a burden, 31% Not a problem
- Mexico: 6% A heavy burden, 58% Somewhat of a burden, 36% Not a problem
- Honduras: 12% A heavy burden, 61% Somewhat of a burden, 27% Not a problem
Impact by Education Levels

More-educated cattle ranchers appear to be realizing slightly deeper impact, compared to their less-educated counterparts.

Average performance across metrics:
> Up to Secondary Education: 38%
> Tertiary Education: 41%

Impact Comparison by Education Levels
(n = 400)

Key:
- Up to Secondary Education
  n = 181
- Tertiary Education
  n = 186

- Way of Farming
  % ‘very much’ and ‘slightly’ increased
- Quality of Life
  % ‘very much’ and ‘slightly’ increased
- Silage Production
  % ‘very much’ and ‘slightly’ increased
- Cattle Production
  % ‘very much’ and ‘slightly’ increased
- Cattle Health
  % ‘very much’ and ‘slightly’ increased
- Money Earned
  % ‘very much’ and ‘slightly’ increased
Who Are You Reaching?
- Demographics
- Income Inclusivity
- Land Size and Yields

What Impact Are You Having?
- Way of Farming
- Corn Silage Production
- Livestock Production
- Cattle Health
- Income Change
- Quality of Life
- Borrowing Impact

How Can You Improve?
- DKSilos Satisfaction
- Technical Support Satisfaction
- Challenges
- Value Perception
- Suggestions for Improvement
The Net Promoter Score® for DKsilos is 69 which is excellent.

Net Promoter Score® (NPS)
Q: On a scale of 0-10, how likely are you to recommend DKsilos to a friend, where 0 is not at all likely and 10 is extremely likely? (n = 400 | Mexico = 288, Honduras = 112 | Up to secondary education = 181, Tertiary education = 186)

- Detractors
- Passives
- Promoters

<table>
<thead>
<tr>
<th>Country</th>
<th>Detractors</th>
<th>Passives</th>
<th>Promoters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>6%</td>
<td>21%</td>
<td>74%</td>
</tr>
<tr>
<td>Mexico</td>
<td>6%</td>
<td>23%</td>
<td>71%</td>
</tr>
<tr>
<td>Honduras</td>
<td>15%</td>
<td>83%</td>
<td>80%</td>
</tr>
<tr>
<td>Up to secondary</td>
<td>6%</td>
<td>22%</td>
<td>72%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>6%</td>
<td>22%</td>
<td>72%</td>
</tr>
</tbody>
</table>

NPS 69

Please see the appendix to know more about how the NPS is calculated.
DKsilos Satisfaction: Drivers

Promoters are highly satisfied with the quality of corn seeds offered by DKsilos. Passives and Detractors want consistent and adequate technical assistance.

Mexico  
(n = 288)

71% are Promoters. They love:
1. Good corn seed quality (44%)
2. Improved corn yield (40%)
3. Good technical assistance (32%)

23% are Passives: They like:
1. Good corn seed quality (40%)
2. Improved corn yield (32%)

But complain about:
1. Inadequate/inconsistent assistance (20%)

6% are Detractors. They dislike:
1. Inadequate technical assistance (10 respondents)
2. High cost of seeds (5 respondents)
3. Company being interested only in sales (4 respondents)

Honduras  
(n = 112)

83% are Promoters. They love:
1. Good corn seed quality (61%)
2. Improved corn yield (44%)
3. Good technical assistance (20%)

15% are Passives: They like:
1. Good corn seed quality (41%)
2. Good technical assistance (18%)
3. High seed resistance (18%)

Tip:
Highlight the above value drivers in marketing. Promoters are powerful brand ambassadors—can you reward them?

2% are Detractors. They dislike:
1. Not witnessing expected growth (2 respondents)
2. High cost of seeds (1 respondent)
3. Inadequate technical assistance (1 respondent)

Tip:
Negative word of mouth is costly. What’s fixable here?

Tip:
Passives won’t actively refer you in the same way that Promoters will. What would it take to convert them?
Technical Support Satisfaction: Overview

The Net Promoter Score® for DKsilos' technical support is 52, which is also excellent.

In addition to understanding cattle rancher satisfaction with DKsilos overall, we zoomed into their experience with the technical support received.

The NPS for technical support is slightly lower than that of the overall program (52 vs. 69), but still indicates relatively high satisfaction and loyalty among cattle ranchers.

We found no differences in satisfaction by tenure of the cattle rancher. However, there are noticeable differences by education levels. More on page 34.

Net Promoter Score® (NPS)

Q: On a scale of 0-10, how likely are you to recommend technical support from DKsilos advisors to a friend, where 0 is not at all likely and 10 is extremely likely? (n = 400 | Mexico = 288, Honduras = 112 | Up to secondary education = 181, Tertiary education = 186)

<table>
<thead>
<tr>
<th>Country</th>
<th>Detractors</th>
<th>Passives</th>
<th>Promoters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>14%</td>
<td>20%</td>
<td>66%</td>
</tr>
<tr>
<td>Mexico</td>
<td>13%</td>
<td>20%</td>
<td>67%</td>
</tr>
<tr>
<td>Honduras</td>
<td>19%</td>
<td>18%</td>
<td>63%</td>
</tr>
<tr>
<td>Up to secondary</td>
<td>9%</td>
<td>21%</td>
<td>70%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>19%</td>
<td>20%</td>
<td>61%</td>
</tr>
</tbody>
</table>

NPS 52 54 44 61 42
Technical Support Satisfaction: Drivers

Promoters of DKsilos’ technical support value the consistent and frequent advice. Passives and Detractors feel that the interactions are inconsistent.

Mexico (n = 288)

67% are Promoters. They love:
1. Consistent and frequent advice (64%)
2. Knowledgeable and reliable advisors (25%)
3. Avenue to learn new methods (10%)

20% are Passives: They like:
1. Good technical recommendations (31%)
2. End-to-end support offered (20%)
But complain about:
1. Inconsistent interactions (53%)

13% are Detractors. They dislike:
1. Poor technical assistance delivery (50%)
2. Advisors being self-interested (36%)
3. Limited knowledge and skills of advisors (33%)

Honduras (n = 112)

63% are Promoters. They love:
1. Consistent and frequent advice (30%)
2. Knowledgeable and reliable advisors (24%)
3. Good technical recommendations (23%)

18% are Passives: They like:
1. Good technical recommendations (33%)
But complain about:
1. Inconsistent interactions (33%)
2. Inexperienced / unqualified advisors (29%)

19% are Detractors. They dislike:
1. Poor technical assistance delivery (62%)
2. Limited knowledge and skills of advisors (33%)
3. Limited number of advisors available (19%)

Tip:
Highlight the above value drivers in marketing. Promoters are powerful brand ambassadors—can you reward them?

Tip:
Passives won’t actively refer you in the same way that Promoters will. What would it take to convert them?

Tip:
Negative word of mouth is costly. What’s fixable here?
Challenges: Overview

18% of cattle ranchers report challenges with DKsilos.

Cattle ranchers with tertiary education are more likely to report challenges with DKsilos (22%), as compared to their peers who have studied up to secondary (14%).

The NPS of cattle ranchers with no challenges is higher than the average NPS – this has been indicated in the table to the far right.

Timely challenge resolution can have a significant impact on cattle rancher satisfaction and loyalty.

Cattle Ranchers Reporting Challenges
Q: Have you experienced any challenges with DKsilos? (n = 400 | Mexico = 288, Honduras = 112 | Up to secondary education = 181, Tertiary education = 186)

<table>
<thead>
<tr>
<th>Country</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>82%</td>
</tr>
<tr>
<td>Honduras</td>
<td>84%</td>
</tr>
<tr>
<td>Up to secondary</td>
<td>86%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>78%</td>
</tr>
</tbody>
</table>

| DKsilos Overall NPS | 69 |
| Did not experience challenges | 77 |
| Experienced challenges | 32 |
| Technical Support NPS | 52 |
| Did not experience challenges | 60 |
| Experienced challenges | 14 |
Challenges: Top Issues

The top challenge reported by cattle ranchers is poor corn seed quality.

Most Common Issues Among 18% of Cattle Ranchers Reporting Challenges

Q: Please explain the challenges you have experienced. (n = 72 | Mexico = 47, Honduras = 25). Open-ended, coded by 60 Decibels.

16% in Mexico

30% (5% of all cattle ranchers)
mention poor seed quality

19% (3% of all cattle ranchers)
report inadequate technical assistance

17% (3% of all cattle ranchers)
talk about lack of inputs or machinery

22% in Honduras

28% (2% of all cattle ranchers)
mention high rate of crop diseases

28% (5% of all cattle ranchers)
talk about poor seed quality

12% (2% of all cattle ranchers)
report bad post-sale follow up

“In the last harvest, I believe that the seed wasn’t of good quality because we did not see the results we had seen previously with DKsilos’ seeds.”
- Male, 37

“Last year, they changed the technician. When they visited me, they said that they didn’t have seeds on the days I needed it, and the adviser didn’t come to visit us.”
- Male, 40

“Due to the lack of a silage applicator, the corn was gone, and I could not make silage. There are no silage machines.”
- Male, 58

Note: The percentages in brackets are a proportion of the total sample.
17% of cattle ranchers think that the value offered by DKsilos is ‘very good’. This did not differ across countries.

<table>
<thead>
<tr>
<th>Perception of DKsilos Value Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q: Do you think the value offered by DKsilos is…? (n = 400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Mexico</td>
</tr>
<tr>
<td>Very poor</td>
<td>8%</td>
</tr>
<tr>
<td>Poor</td>
<td>35%</td>
</tr>
<tr>
<td>Fair</td>
<td>38%</td>
</tr>
<tr>
<td>Good</td>
<td>17%</td>
</tr>
<tr>
<td>Very good</td>
<td>55%</td>
</tr>
</tbody>
</table>
Suggestions for Improvement

More than 4 in 5 cattle ranchers have specific suggestions for DKsilos, with consistent technical assistance being the top suggestion.

15% of cattle ranchers had no suggestion to share, and an additional 6% indicated appreciation for DKsilos’ intervention.

Cattle ranchers in Honduras are more likely to say the following, compared to their Mexican counterparts:

> Need more inputs (12% vs. 3%)
> Reduce input cost (38% vs. 22%)
> Provide consistent assistance (38% vs. 27%)

**Suggestions from Cattle Ranchers**

Q: Is there anything that DKsilos can do that would be particularly helpful to you? (n = 400)

- **Provide consistent technical assistance** 30%
- **Reduce input cost** 26%
- **Improve access to finance** 12%
- **Increase machinery availability** 7%
- **Provide inputs** 6%
- **Provide additional information** 5%
- **Provide benefits for loyal customers** 5%
- **Improve seed quality** 4%
- **Deploy skilled engineers** 4%

“The quality of the seeds is great, but I would say that their prices are a little high. In general, the prices are elevated everywhere but I think DKsilos could work on that.” - Male, 52

“Now there is a new representative. He comes and it’s not the same. There was one engineer I trusted him a lot. He would bring me the seeds. I trusted him so much that I gave him money. He was fired, that he no longer works with DKsilos. He did not return the money.” - Male, 60

“They could give us more time to pay because here, we take out bags of corn on credit. And they could give us the whole package of inputs like they used to do in the past.” - Male, 50
Cattle ranchers with lower education levels appear to be more satisfied with DKsilos, compared to their more-educated counterparts.

Although education levels do not drastically influence how impact is experienced (see page 24), cattle ranchers with a tertiary education appear more likely to be demanding more from the DKsilos program. This points to the varying expectations from both groups.

Average performance across metrics:
> Up to Secondary Education: 71%
> Tertiary Education: 60%

**Satisfaction Comparison by Education Levels**
(n = 400)

<table>
<thead>
<tr>
<th>Key:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to Secondary Education</td>
</tr>
<tr>
<td>n = 181</td>
</tr>
<tr>
<td>Tertiary Education</td>
</tr>
<tr>
<td>n = 186</td>
</tr>
<tr>
<td>NPS – DKsilos</td>
</tr>
<tr>
<td>Proxy for satisfaction with the program</td>
</tr>
<tr>
<td>NPS – Technical Support</td>
</tr>
<tr>
<td>Proxy for satisfaction with the technical assistance</td>
</tr>
<tr>
<td>No Challenges</td>
</tr>
<tr>
<td>% saying ‘no’ challenges with DKsilos</td>
</tr>
<tr>
<td>Value Perception</td>
</tr>
<tr>
<td>% ‘very good’ or ‘good’ value offered by DKsilos</td>
</tr>
</tbody>
</table>
Appendix
For those who like to geek out, here’s a summary of some of the calculations we used in this deck.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Promoter Score&lt;sup&gt;®&lt;/sup&gt;</td>
<td>The Net Promoter Score is a common gauge of cattle rancher loyalty. It is measured through asking cattle ranchers to rate their likelihood to recommend your service to a friend on a scale of 0 to 10, where 0 is least likely and 10 is most likely. The NPS is the % of cattle ranchers rating 9 or 10 out of 10 (‘Promoters’) minus the % of cattle ranchers rating 0 to 6 out of 10 (‘Detractors’). Those rating 7 or 8 are considered ‘Passives’.</td>
</tr>
</tbody>
</table>
| Inclusivity Ratio          | The Inclusivity Ratio is a metric developed by 60 Decibels to estimate the degree to which an enterprise is reaching less well-off customers. It is calculated by taking the average of Company % / National %, at the $1.90, $3.20 & $5.50 lines for low-middle income countries, or at the $3.20, $5.50 and $11 lines for middle income countries. The formula is: <br> \[
\frac{1}{3} \sum_{x=1}^{3} \frac{(\text{Company Poverty Line } x)}{(\text{Country Poverty Line } x)} / 3
\] |
| Equity Tool                | The Equity Tool helps you gauge whether you are serving the relatively rich or poor in your country. Based on the responses to the 10+ Equity Tool questions, respondents are assigned a wealth quintile. If someone is in the bottom wealth quintile, they are among the poorest people in the country. If they are in the top quintile, they are among the wealthiest. |
Methodology Overview

400 phone interviews completed between February and April 2023.

<table>
<thead>
<tr>
<th>Language</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey mode</td>
<td>Phone</td>
</tr>
<tr>
<td>Survey length</td>
<td>36</td>
</tr>
<tr>
<td>Survey duration</td>
<td>~17 – 20 minutes</td>
</tr>
<tr>
<td>Population size</td>
<td>&gt; 35,000</td>
</tr>
<tr>
<td>Database size</td>
<td>1,529</td>
</tr>
<tr>
<td>Call attempts</td>
<td>5 per respondent</td>
</tr>
<tr>
<td>Completed</td>
<td>288</td>
</tr>
<tr>
<td>Response rate*</td>
<td>22%</td>
</tr>
<tr>
<td>Confidence level</td>
<td>90%</td>
</tr>
<tr>
<td>Margin of error</td>
<td>5%</td>
</tr>
</tbody>
</table>

*Although Mexico had a lower response rate, a higher sample size was reachable due to the larger contact database shared.

Data Collection Funnel – Response Rate: 26%
Response rate is calculated from eligible respondents.

Note: No response includes unanswered calls, phone turned off, and phone out of service.
About 60 Decibels

60 Decibels makes it easy to listen to the people who matter most. 60 Decibels is an impact measurement company that helps organizations around the world better understand their cattle ranchers, suppliers, and beneficiaries. Its proprietary approach, Lean Data, brings farmer-centricity, speed and responsiveness to impact measurement.

60 Decibels has a network of 830+ trained Lean Data researchers in 70+ countries who speak directly to cattle ranchers to understand their lived experience. By combining voice, SMS, and other technologies to collect data remotely with proprietary survey tools, 60 Decibels helps clients listen more effectively and benchmark their social performance against their peers.

60 Decibels has offices in London, Nairobi, New York, and Bengaluru. To learn more, visit 60decibels.com.

We are proud to be a Climate Positive company.

Your Feedback

We’d love to hear your feedback on the 60dB process; take 5 minutes to fill out our feedback survey here!

Acknowledgments

Thank you to Constance, Antonieta, and Jose for their support throughout the project. This work was generously sponsored by Bayer Crop Science.
We have reduced costs.
We no longer buy silage from others.
We have increased our income.
Our cattle have been well fed.

The cattle have:

> no placental retentions,

> the pregnancy of the animals has been good,

> I have higher milk production.