



Return on Investment- Soil Health

By John McGregor, MFGA Extension Support

“Soil health makes sense, but does it make dollars?”

“And the whole crux of it is it doesn’t really matter how good it does for the environment, how good it does for your neighbors. If you can’t make money doing it, then it’s not going to be something that’s sustainable for the long run.” [Brownfield](#)

When you think/talk about soil health, producers gravitate towards practices that tend to fall under the Regenerative Agriculture (Regen Ag) umbrella. If we consider “Regenerative Agriculture” as farming practices that, among other benefits, rebuilds soil organic matter and restores degraded soil biodiversity, resulting in carbon drawdown and improved water cycling. These practices, when successful, help improve soil health.

Adopting practices that improve soil health comes with a price tag that is referred to as the return on investment (ROI).

ROI looks at a dollar invested returning at least a dollar. Mb Ag has produced cost of production worksheets for years that can show a producer what the increased return might be for each additional dollar spent on an input. But!

What we don’t have are ROI worksheets for some of the practices associated with Regen Ag.

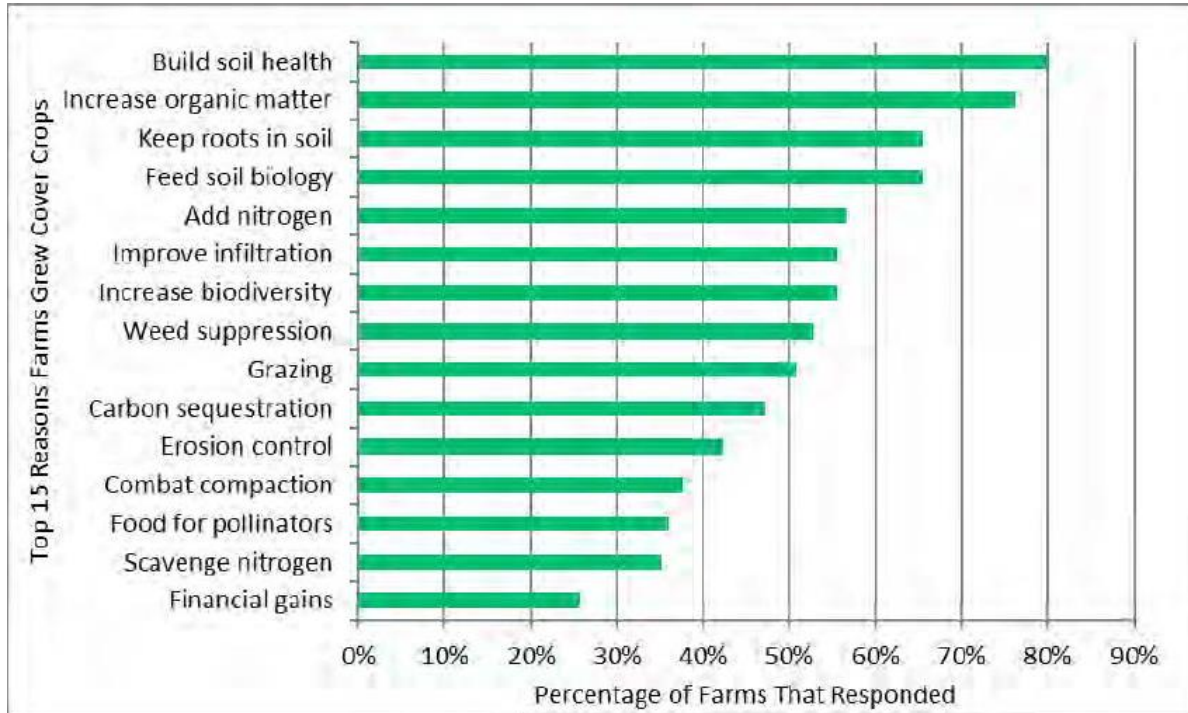
If we were to look at the Regen Ag practice of no-till (reduced till), we could show how it can have a high ROI due to its lower input costs in machinery and fuel. It can also result in improved yield, reduced erosion, and improved organic matter. Even if yields are slightly lowered with no-till, the reduced costs may still show a positive ROI.

Regen Ag practices utilizing Cover Crops to improve soil health are a lot harder to generate a positive ROI. The University of Manitoba [2020 Prairie Cover Crop Survey](#) showed that 4% of farms that responded reported that cover crops resulted in a drop in their farm profit. A much higher 24% identified that cover crops resulted in no change to their profit, and a further 24% identified that they saw an increase in farm profit. A substantial proportion of respondents (47%) were not able to identify the impact that cover crops had on farm profit.

Although it is hard to identify the source of the ROI from the survey, the high number of livestock producers participating in the survey (79%) could account for some or all of the positive ROIs if cover crops were used as feed and legumes and/or manure added

additional fertility to the soil. Of course, for some, the true ROI includes factors such as job satisfaction, quality of life, and opportunity costs.

Some of these factors (see below) were identified in the survey as reasons producers decided to grow cover crops.



The relative importance of ROI for each farm practice can vary by operator.

With cover crops, a true ROI on improved soil health and reduced erosion may outweigh any short-term negative financial ROI.

No-till practices, cover crops, and diversified crop rotations (biodiversity) are soil health practices to focus on when doing a financial analysis.

Look at where the additional costs go, where the savings come from, and how these affect fuel use, fertilizer, and herbicide costs. What is the value of soil that is not lost to erosion.

You can get a clear picture of the return to soil health practices by putting a value on the nutrients gained from additional organic matter, water holding capacity, and the impact on crop yields.

To do this, you need to have benchmarks such as soil organic levels, fertility levels, water infiltration rates, and even earthworm populations so that even if your financial ROI isn't positive, you can measure progress (true ROI) on soil health.

The final benefit of a positive true ROI is for those who want to leave the farm as good as or better than they found it.