



FUEL BRIEF

Best  Farming System™

The Soil Rejuvenation Specialists

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Compacted soil reduces your farm profitability

The connection between draft resistance and fuel consumption

As a farmer, you're used to measuring your growing season's success in terms of crop yield. However, crop yield is only one factor in determining farming success. The real measure of success is the profit you make.

While your income is related to your crop yield, many factors affecting the cost of producing that yield can significantly reduce your profit margin.

One of those factors is the fuel you consume while tilling.

Scientific studies have shown that tractor fuel consumption is a significant cost in farm operations, especially in tillage¹, the friction of soil against tilling equipment can create significant resistance and increase the torque required to pull a plow². It's a matter of simple physics: machinery uses fuel, and how much fuel gets used depends on how hard the soil is to till. Less plow draft resistance equals less fuel consumption.

The following table shows the potential fuel consumption savings based on a minimum reduction of one percent in fuel consumption, using scientific data on average diesel consumption per hectare for tillage operations³.

1 Vilde, Sandris and Rucins, *Minimization of Soil Tillage*

2 Vilde, Rucins, *The Impact of Soil Physical and Mechanical Properties on Draft Resistance of Ploughs*

3 *Farm Business Management*, University of Illinois Department of Agriculture and Consumer Economics, September 23, 2005. (Original figures converted to metric.)





Fuel consumption based on plow type³

(Based on research from the University of Illinois Department of Agriculture and Consumer Economics)

Per Acre

Chisel Plow

5 liters/acre

1,000 acres = 5,000 liters

1 percent reduction = 50 fewer liters

Moldboard Plow

9.1 liters/acre

1,000 acres = 9,100 liters

1 percent reduction = 91 fewer liters

Mulch Tiller (disk, chisel)

6.2 liters/acre

1,000 acres = 6,200 liters

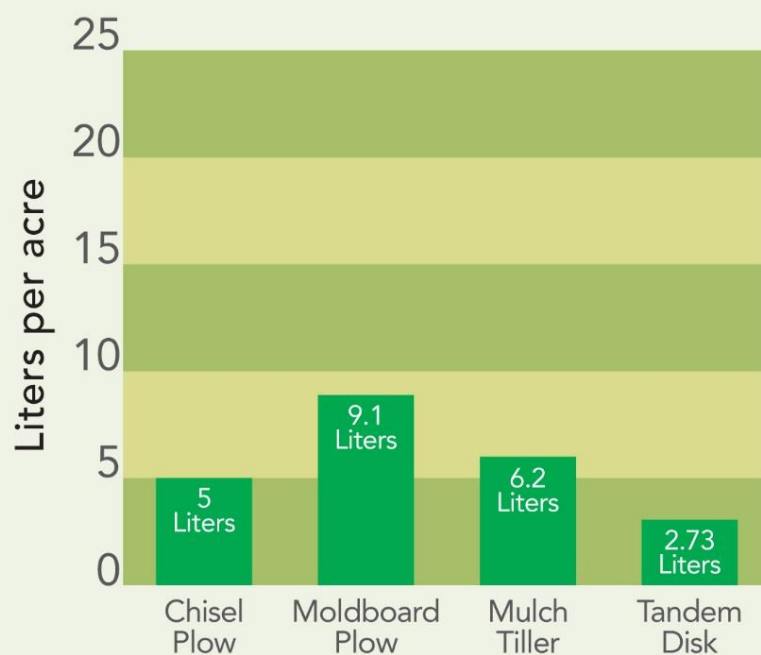
1 percent reduction = 62 fewer liters/1,000 acres

Tandem Disk

2.73 liters/acre

1,000 acres = 2,730 liters

1 percent reduction = 27.3 fewer liters/1,000 acres



Per Hectare

Chisel Plow

12.5 liters/hectare

1,000 hectares = 12,500 liters

1 percent reduction = 125 fewer liters

Moldboard Plow

22.25 liters/hectare

1,000 hectares = 22,250 liters

1 percent reduction = 222.5 fewer liters

Mulch Tiller (disk, chisel)

15.5 liters/hectare

1,000 hectares = 15,500 liters

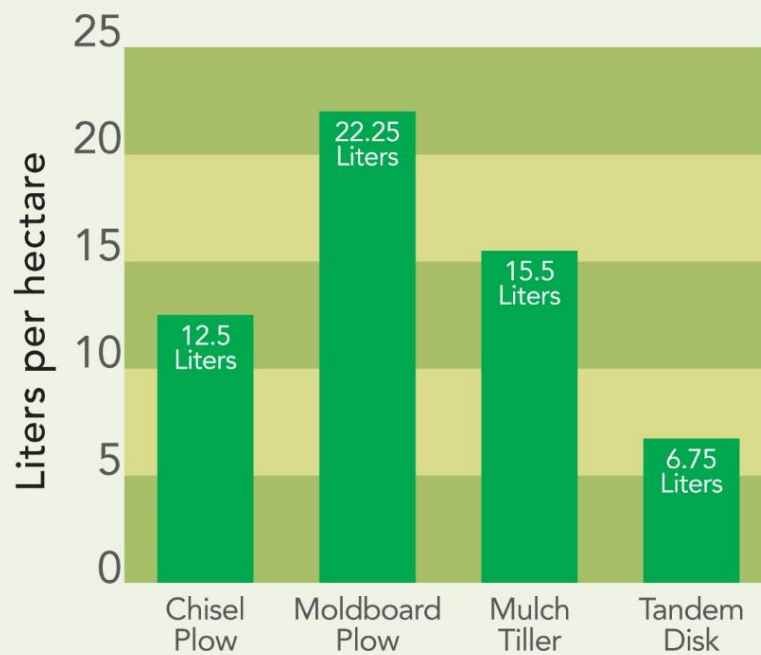
1 percent reduction = 155 fewer liters/1,000 hectares

Tandem Disk

6.75 liters/hectare

1,000 hectares = 6,750 liters

1 percent reduction = 67.5 fewer liters/1,000 hectares





**The Best Farming Systems™
can help reduce the volume
of tractor fuel and increase
your profits.**

Best  **Farming System™**
The Soil Rejuvenation Specialists

Since the 1990s a significant part of our research has been aimed at finding ways to enhance soil health. Over time, heavily fertilized soil compacts, increasing its resistance to tilling. The Best Farming Systems four-step process naturally creates rejuvenated, healthy, aerated soil, which tills more easily.

It's clear that when it comes to fuel costs, over time soil treated with the Best Farming Systems can decrease draft, decrease tractor fuel consumption and increase the profitability of your farming operation.

How much can a _____ % reduction in tractor fuel costs save you?

STEP 1

Choose equipment type for fuel use calculation:

- A** CHISEL PLOW: 12.5 liters of fuel/hectare (5 liters per acre)
- B** MOLDBOARD PLOW: 22.25 liters of fuel/hectare (9.1 liters per acre)
- C** MULCH TILLER: 15.5 liters of fuel/hectare (6.2 liters per acre)
- D** TANDEM DISK: 6.75 liters of fuel/hectare (2.73 liters per acre)



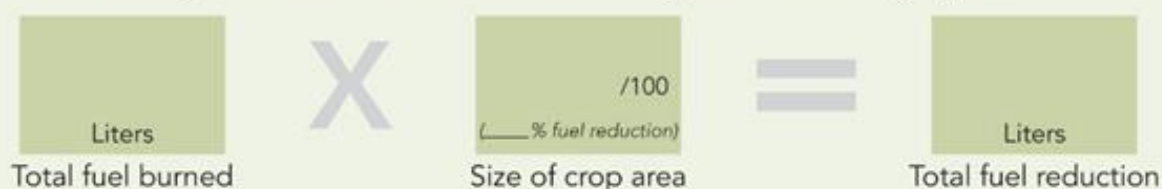
STEP 2

Enter equipment's fuel use number and the size of your crop area:



STEP 3

Calculate your total fuel reduction using Best Farming Systems™:



STEP 4

Calculate your total fuel cost savings:



TOTAL FUEL SAVINGS PER YEAR: \$ _____

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