

Nutrient Removal Calculator

As crops are harvested, the soil can become depleted of vital nutrients. Find out how much you should be replacing.

TUTORIAL ✕


NUTRIENT REMOVAL CALCULATOR

UNITS: Imperial Metric

1 CHOOSE YOUR CROP:

 Soybean |  Corn |  Wheat

2 YIELD:

INCLUDE ECONOMIC IMPACT:

3 N SOURCE: ?

4 N COST: ?

5 P SOURCE: ?

6 P COST: ?

7 K SOURCE: ?

8 K COST: ?

CALCULATE

Learning How To Use This Tool



If you don't know the current nutrient prices in your area, consult your local retail agronomist.

1) Crop selector:

We have assembled crop removal data for a large number of crops from scientific publications from around the world.

Economic impact button:

If you would like to know the value of the crop nutrients being removed, click this feature on. By doing so, you will be asked to select fertilizer sources and costs.

4) N cost:

Enter a cost for that product, you can use a reported value or a local value.

6) P cost:

Enter a cost for that product, you can use a reported value or a local value.

6) K cost:

Enter a cost for that product, you can use a reported value or a local value.

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NUTRIENT REMOVAL CALCULATOR

UNITS: Imperial Metric

1 CHOOSE YOUR CROP:

Soybean | Corn | Wheat

2 YIELD: Enter #

INCLUDE ECONOMIC IMPACT:

3 N SOURCE: Select Source

4 N COST: Enter # \$/ton

5 P SOURCE: Select Source

6 P COST: Enter # \$/ton

7 K SOURCE: Select Source

8 K COST: Enter # \$/ton

CALCULATE

Unit Selection:

Your unit preference will allow you to enter crop yields and nutrient costs in units native to either the imperial or metric systems.

2) Yield:

Enter a potential yield based upon previous experience or what your crop actually yielded.

3) N source selector:

Select an N source that you are likely to use to fertilize your next crop.

5) P source selector:

Select a P source that you are likely to use to fertilize your next crop.

7) K source selector:

Select a K source that you are likely to use to fertilize your next crop.

Learning How to Use the Tool

You can show the impact of crop removal on soil test level using the following general rules of thumb.

- For every 20 pounds of P removed without fertilization soil test level will decrease by 1 ppm.
- For every 6 pounds of K removed without fertilization soil test level will decrease by 1 ppm.
- Incorporating these general rules of thumb can aid your discussion by showing a user that skipping fertilization will decrease soil test level for subsequent crops.



Going Beyond The Basics



Going Beyond the Basics

Scenario 1

We are providing two scenarios to demonstrate how the Nutrient Removal Calculator works.

The screenshot shows the 'NUTRIENT REMOVAL CALCULATOR' app interface. At the top, there is a 'TUTORIAL' button and a close button. Below the title is a green circular logo with a plant icon. The 'UNITS' section has 'Imperial' selected with a radio button. The 'CHOOSE YOUR CROP' section shows three options: Soybean (selected), Corn, and Wheat. The 'YIELD' field is set to 75. The 'INCLUDE ECONOMIC IMPACT' checkbox is checked. The 'N SOURCE' dropdown is set to 'Urea'. The 'N COST' field is 450. The 'P SOURCE' dropdown is set to 'DAP (18-46-0)'. The 'P COST' field is 600. The 'K SOURCE' dropdown is set to 'KCI (0-0-60)'. The 'K COST' field is 550. A large green 'CALCULATE' button is at the bottom.

TUTORIAL [Close]

NUTRIENT REMOVAL CALCULATOR

UNITS: Imperial Metric

1 CHOOSE YOUR CROP:

< Soybean | Corn | Wheat >

2 YIELD: 75

INCLUDE ECONOMIC IMPACT:

3 N SOURCE: Urea ?

4 N COST: 450 ?

5 P SOURCE: DAP (18-46-0) ?

6 P COST: 600 ?

7 K SOURCE: KCI (0-0-60) ?

8 K COST: 550 ?

CALCULATE

Going Beyond the Basics

Scenario 1

Click “Calculate”.

The results reveal that 285 pounds of N was removed with a value of \$0 (because legumes replace their own nitrogen naturally, no dollar amount will be attributed to the nitrogen’s removal), 63 lbs of P_2O_5 /acre were removed with a value of \$29.03, and 98 lbs of K_2O /acre were removed with a value of \$44.69.



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NUTRIENT REMOVAL CALCULATOR

CHANGE VALUES | **EMAIL RESULTS**

75 bushels

NUTRIENT	lbs/acre	\$/acre
N	285	\$0.00*
P_2O_5	63	\$29.03
K_2O	98	\$44.69

* Nitrogen removed with this crop likely came from the plant's ability to fix nitrogen from the atmosphere.

How will this theoretically impact subsequent soil test levels?

Soil test P level would decrease by 3 ppm and soil test K level would decrease by 16 ppm (remember the rules of thumb).

Going Beyond the Basics

Scenario 2


We are providing two scenarios to demonstrate how the Nutrient Removal Calculator works.

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NUTRIENT REMOVAL CALCULATOR

UNITS: Imperial Metric

1 CHOOSE YOUR CROP:

 Soybean |  Corn |  Wheat

2 YIELD: 80

INCLUDE ECONOMIC IMPACT:

3 N SOURCE: Urea

4 N COST: 450

5 P SOURCE: DAP (18-46-0)

6 P COST: 600

7 K SOURCE: KCl (0-0-60)

8 K COST: 550

CALCULATE

Going Beyond the Basics

Scenario 2

Click “Calculate”.

The results reveal that 120 lbs/acre of N was removed with a value of \$58.70. With straw, 176 lbs/acre of N was removed with a value of \$86.09.

48 lbs/acre of P_2O_5 was removed with a value of \$22.12. With straw, 61 lbs/acre of P_2O_5 was removed with a value of \$28.02.

27 lbs/acre of K_2O was removed with a value of \$12.47. With straw, 120 lbs/acre of K_2O was removed with a value of \$55.00.




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NUTRIENT REMOVAL CALCULATOR

CHANGE VALUES | **EMAIL RESULTS**

 | **80 bushels**

NUTRIENT	WITH STRAW		WITHOUT STRAW	
	lbs/acre	\$/acre	lbs/acre	\$/acre
N	176	\$86.09	120	\$58.70
P_2O_5	61	\$28.02	48	\$22.12
K_2O	120	\$55.00	27	\$12.47

How will this theoretically impact subsequent soil test levels?

If only grain was removed, soil test P level would decrease by 2.5 ppm and soil test K level would decrease by 4 ppm (remember the rules of thumb).

If grain and straw were removed, soil test P level would decrease by 3 ppm and soil test K level would decrease by 20 ppm.