

**FERTILIZER SOURCE COMPARISON CALCULATOR**

1) Corn Nutrient Removal

lbs needed/acre

Yield Selected	Range:
180 bushel/acr	100-330

P2O5	63
K2O	36

Selected Fertilizer				
Sources	Name	N %	P2O5 %	K2O %
Synthetic P	DAP	18	46	0
Organic P	Beef Cow M	0.6	0.4	0.9
Synthetic K	Potash	0	0	60
Organic K	Beef Cow M	0.6	0.4	0.9

For P2O5			Other nutrients added?		
lbs/acre	source name	lbs nutrient/acre			
137	DAP	N	25	K2O	0
15750	Beef Cow Manure	N	95	K2O	142

For K2O			Other nutrients added?		
lbs/acre	source name	lbs nutrient/acre			
60	Potash	N	0	P2O5	0
4000	Beef Cow Manure	N	24	P2O5	16

Possible Fertilizer Choices				
	N %	P2O5 %	K2O %	
Synthetic P	MAP	11	52	0
Synthetic P	DAP	18	46	0
Synthetic P	APP	10	34	0
Synthetic K	Potash	0	0	60
Synthetic K	KNO3	13	0	44
Organic PK	Dairy Cow	0.5	0.2	0.4
Organic PK	Beef Cow M	0.6	0.4	0.9
Organic PK	Swine Man	0.6	0.5	0.4
Organic PK	Sheep Mar	0.8	0.5	1
Organic PK	Poultry Ma	1	1.2	0.6
Organic PK	Horse Man	0.4	0.2	0.2
Organic P	Bone Meal	2	18	0
Organic K	Kelp Meal	1	0.1	5

1) Soybean Nutrient Removal

lbs needed/acre

Yield Selected	Range:
60 bushel/acr	35-90

P2O5	47
K2O	68

Selected Fertilizer				
Sources	Name	N %	P2O5 %	K2O %
Synthetic P	MAP	11	52	0
Organic P	Bone Meal	2	18	0
Synthetic K	KNO3	13	0	44
Organic K	Kelp Meal	1	0.1	5

For P2O5			Other nutrients added?		
lbs/acre	source name	lbs nutrient/acre			
91	MAP	N	10	K2O	0
263	Bone Meal	N	5	K2O	0

For K2O			Other nutrients added?		
lbs/acre	source name	lbs nutrient/acre			
155	KNO3	N	20	P2O5	0
1368	Kelp Meal	N	14	P2O5	1

Possible Fertilizer Choices				
	N %	P2O5 %	K2O %	
Synthetic P	MAP	11	52	0
Synthetic P	DAP	18	46	0
Synthetic P	APP	10	34	0
Synthetic K	Potash	0	0	60
Synthetic K	KNO3	13	0	44
Organic PK	Dairy Cow	0.5	0.2	0.4
Organic PK	Beef Cow M	0.6	0.4	0.9
Organic PK	Swine Man	0.6	0.5	0.4
Organic PK	Sheep Mar	0.8	0.5	1
Organic PK	Poultry Ma	1	1.2	0.6
Organic PK	Horse Man	0.4	0.2	0.2
Organic P	Bone Meal	2	18	0
Organic K	Kelp Meal	1	0.1	5

Manure values from [https://ocamm.osu.edu/sites/ocamm/files/imce/Manure/MM-Resources/604\\_Mar](https://ocamm.osu.edu/sites/ocamm/files/imce/Manure/MM-Resources/604_Mar) Manure values from [https://ocamm.osu.edu/sites/ocamm/files/imce/Manure/MM-Resources/604\\_ManureMgmtGuide\\_2006.pdf](https://ocamm.osu.edu/sites/ocamm/files/imce/Manure/MM-Resources/604_ManureMgmtGuide_2006.pdf).  
Organic P and K sources from PNW646 factsheet.

**EXTENDING FURTHER - LOGISTICS**

Average Farm Size	acres
Ohio Farm Size	175
US Farm Size	444

From: [https://www.nass.usda.gov/Statistics\\_by\\_State/Ohio/Publications/Ag\\_Across\\_Ohio/2021/aao2103.pdf](https://www.nass.usda.gov/Statistics_by_State/Ohio/Publications/Ag_Across_Ohio/2021/aao2103.pdf)

CORN					SOYBEAN				
For P2O5					For P2O5				
lbs/acre	source name	Truckloads (45,000)			lbs/acre	source name	Truckloads (45,000)		
		Per Ohio Farm	lbs/truck				Per US Farm	lbs/truck	
137	DAP	23967	0.53	60809	91	MAP	15952	0.35	40472
15750	Beef Cow Manure	2756250	61.25	6993000	263	Bone Meal	46083	1.02	116920

For K2O				For K2O			
	lbs/acre	source name	Per Ohio Farm	Truckloads (45,000 lbs/truck)	Per US Farm	Truckloads (45,000 lbs/truck)	
Synthetic K	60	Potash	10500	0.23	26640	0.59	Synthetic K
Organic K	4000	Beef Cow Manure	700000	15.56	1776000	39.47	Organic K

  

For K2O				For K2O			
	lbs/acre	source name	Per Ohio Farm	Truckloads (45,000 lbs/truck)	Per US Farm	Truckloads (45,000 lbs/truck)	
Synthetic K	155	KNO3	27205	0.60	69022	1.53	Synthetic K
Organic K	1368	Kelp Meal	239400	5.32	607392	13.50	Organic K

