

# Using 'Nutrient From' in form-U-net

Last Modified on 01/10/2023 10:03 am CST

**Q. When requesting a blend, how can a specific product amount be requested regardless of Least Cost Formulation or additional nutrient contributors supplied by the product that are not requested?**

A. The *Nutrient From* feature in form-U-net can be used to request a specific product amount.

In the following example, a Material Group has been established containing DAP (18-46-0) and MESZ (12-40-0-10S). DAP is priced as the least cost item to supply phosphate in normal circumstances.

The grower would like to use MESZ but because it is more expensive and to keep costs at a minimum, half of the P request will be fulfilled using DAP. A *Nutrient From* needs to be set up for each of these phosphate items. To begin, open form-U-net and go to *Material Groups / Edit Selected Material Group / Edit Data*.

**Material Group MYBLEND: Edit Full Data**

Mix Name:	Restriction Info:						Data Value:			
Mix Name	N	P	K	S	Mg	Zn	B	Ca	DEN	
Urea (46-0-0)	46.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.6700	
DAP (18-46-0)	18.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00	30.7702	
MESZ (12-40-0-10S)	12.00	40.00	0.00	10.00	0.00	0.00	0.00	0.00	30.7692	
Muriate of Potash (0-0-60)	0.00	0.00	60.00	0.00	0.00	0.00	0.00	0.00	31.7899	
Ammonium Sulfate (21-0-0)	21.00	0.00	0.00	24.00	0.00	0.00	0.00	0.00	36.3597	
Zinc Sulfate (36% Zn)	0.00	0.00	0.00	20.00	0.00	36.00	0.00	0.00	26.7301	
Borate (14%B)	0.00	0.00	0.00	0.00	0.00	0.00	14.30	0.00	44.4395	
Limestone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.7500	
Product	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	

Save Changes    Reset Grid

Select the 46 in the P column of the DAP (18-46-0) row. Right-click that same cell and select *Add 'Nutrient From' Column*.

**Material Group MYBLEND: Edit Full Data**

Mix Name:	Restriction Info:					Data Value:				
Mix Name	N	P	K	S	Mg	Zn	B	Ca	DEN	
Urea (46-0-0)	46.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.6700	
DAP (18-46-0)	18.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00	30.7702	
MESZ (12-40-0-105)	12.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	30.7692	
Muriate of Potash (0-0-60)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.7899	
Ammonium Sulfate (21-0-0)	21.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.3597	
Zinc Sulfate (36% Zn)	0.00	0.00	0.00	20.00	0.00	36.00	0.00	0.00	26.7301	
Borate (14%B)	0.00	0.00	0.00	0.00	0.00	0.00	14.30	0.00	44.4395	
Limestone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.7500	
Product	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	

Add 'Nutrient From' Column

Insert Custom Column

Delete Selected Column

Save Changes    Reset Grid

A new column is added to the grid as shown below.

**Material Group MYBLEND: Edit Full Data**

Mix Name:	Restriction Info:					Data Value:				
Mix Name	N	P	01_RES	K	S	Mg	Zn	B	Ca	
Urea (46-0-0)	46.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DAP (18-46-0)	18.00	46.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00	
MESZ (12-40-0-105)	12.00	40.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	
Muriate of Potash (0-0-60)	0.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00	0.00	
Ammonium Sulfate (21-0-0)	21.00	0.00	0.00	0.00	24.00	0.00	0.00	0.00	0.00	
Zinc Sulfate (36% Zn)	0.00	0.00	0.00	0.00	20.00	0.00	36.00	0.00	0.00	
Borate (14%B)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.30	0.00	
Limestone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Product	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Save Changes    Reset Grid

Repeat the steps above to create a *Nutrient From* for MESZ. When finished, select **Save Changes**. *Edit Data* will have two new columns as shown below.

**Material Group MYBLEND: Edit Full Data**

Mix Name:	Restriction Info:					Data Value:				
Mix Name	N	P	02_RES	01_RES	K	S	Mg	Zn	B	
Urea (46-0-0)	46.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DAP (18-46-0)	18.00	46.00	0.00	46.00	0.00	0.00	0.00	0.00	0.00	
MESZ (12-40-0-105)	12.00	40.00	40.00	0.00	0.00	10.00	0.00	0.00	0.00	
Muriate of Potash (0-0-60)	0.00	0.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00	
Ammonium Sulfate (21-0-0)	21.00	0.00	0.00	0.00	0.00	24.00	0.00	0.00	0.00	
Zinc Sulfate (36% Zn)	0.00	0.00	0.00	0.00	0.00	20.00	0.00	36.00	0.00	
Borate (14%B)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.30	
Limestone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Product	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Save Changes    Reset Grid

Select the *Formulation* tab in the upper left hand corner. In the *Formulation Request* grid, two new options are available.

Formulation Request			
		Per Acre	Analysis
Nitrogen	>	<input type="text" value="0.00"/>	Lb. 0.00
Phosphate	>	<input type="text" value="--"/>	Lb. 0.00
P from I12400105	>	<input type="text" value="--"/>	Lb. 0.00
P from I184600	>	<input type="text" value="--"/>	Lb. 0.00
Potash	>	<input type="text" value="--"/>	Lb. 0.00
Sulfur	>	<input type="text" value="--"/>	Lb. 0.00
Magnesium	>	<input type="text" value="--"/>	Lb. 0.00
Zinc	>	<input type="text" value="--"/>	Lb. 0.00
Boron	>	<input type="text" value="--"/>	Lb. 0.00
Calcium	>	<input type="text" value="--"/>	Lb. 0.00

To allow form-U-net to use the Least Cost Formulation method, specify the quantity in the *Phosphate* cell. To specify an amount from a specific item, enter the quantity for the item added by the *Nutrient From*.

**Note:** When using the *Nutrient From* request of a specific item, the quantity of that item will be supplied. As a result, there's a risk of over-formulating due to the other nutrients, such as N and S in this example. For more information on addressing over-formulation, review [Formulation Results in form-U-net Are Incorrect](#).

In the example below, 20 Lbs. each of Phosphate will be requested from DAP and MESZ.

**Formulation Request** ▲

		Per Acre	Analysis
Nitrogen	>	100.00	Lb. 12.32
Phosphate	>	--	Lb. 40.32
P from I12400105	>	20.00	Lb. 37.86
P from I184600	>	20.00	Lb. 2.46
Potash	>	--	Lb. 0.00
Sulfur	>	--	Lb. 9.46
Magnesium	>	--	Lb. 0.00
Zinc	>	--	Lb. 0.00
Boron	>	--	Lb. 0.00
Calcium	>	--	Lb. 0.00

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Acres:  Rate Per Acre:

Batches:  Max Lbs/ Batch:

**Formulation Information** ▲

Description/Comments:



**Formulation Results** ▲

Mixed Fert	\$30.00 / Ton	\$30.00
Spreading		\$0.00
Mixing Charge		\$0.00
Applied	\$30.00 / Ton	\$30.00
Other		\$0.00
Total		\$30.00
2.5 Acres	\$12.17 / Acre	
1.000 Ton	1 Batch	
2.5 Acres/Batch		
812 Lbs/Acre		
12.49 CuFt /Acre		
65.0 Lbs/CuFt		30.8 CuFt

**Mix Results** ▲

Item Mix Name	Per Batch	Unit
DAP (18-46-0)	107	Lb.
MESZ 12-40-0-105	1893	Lb.
Product	2000	Lb.

**Margin Information** ▲

Item Code	Cost	Margin	Price	Edit
I184600	\$450.00	19.64 %	\$560.00	
I12400105	\$0.00	0.00 %	\$0.00	
Product	\$24.11	19.63 %	\$30.00	