## Formulate a Nutrient Request at a Given Ratio of Products by Weight

Last Modified on 01/09/2023 1:45 pm CST

Q. Can a formulation in form-U-net be setup to meet a given nutrient request by supplying equal weights of two different products?

A. Navigate to Material Groups / Edit Selected Material Groups / Edit Data.

In the following example, a request of 40 lbs of Nitrogen per acre is requested, and it needs to be supplied using 50% Urea and 50% Ammonium Sulfate.

Note: This assumes the least cost source of Nitrogen in this group is Urea.

Right-click on a cell in the P column, and select **Insert Custom Column**. Enter a descriptive *Name*, such as 'AMS-Eq'. Set the *Input Scale* to '100', and choose **Insert Column**.

Enter '-2000' in the *Urea* row of the new custom column and '2000' in the *Ammonium Sulfate* row of the same column. Select **Save Changes**.

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Select *Edit Selected Material Groups / Edit Restrictions*. Double-click in the newly created custom row, and change the restriction name, similar to 'AMS-Eq (0=Yes)'. Optionally, change the restriction code in the *Code* column to reflect the name in the *Edit Data* table. Select **Save Changes**.

Restriction Name	Code	Min	Price
Nitrogen	Ν	0.0000	\$0.0000
AMS-Eq (0=Yes)	AMS-Eq	0.0000	\$0.0000

The *Formulation* window now contains the AMS-Eq nutrient. For a formulation resulting in half Urea and half Ammonium Sulfate to supply the Nitrogen request, enter '40' in the *Nitrogen* restriction and '0' in the new restriction, and select **Submit Request**.

Formulation Request						Formulation Results				
		Per Acre		Analysis		Mixed Fert	\$430.00 / Ton	\$430.00		
Nitrogen	>	40.00	Lb.	33.50		Spreading		\$0.00		
N from 1460000	>		Lb.	23.00		Mixing Charge	\$0.00			
N from I210000	>		Lb.	10.50		Applied	\$430.00 / Ton	\$430.00		
AMS-Eq(0=Yes)	>	0.00	Lb.	0.00		Other		\$0.00		
Phosphate	>		Lb.	0.00		Total		\$430.00		
Potash	>		Lb.	0.00		16.8 Acres	\$25.67 / Acre			
Sulfur	>		Lb.	12.00		1.000 Ton	1 Batch			
Magnesium	>		Lb.	0.00		16.8 Acres/Batch				
Zinc	>		Lb.	0.00		119 Lbs/Acre				
Boron	>		Lb.	0.00		2.33 CuFt / Acre				
Calcium	>		Lb.	0.00		51.3 Lbs/CuFt		39.0 CuFt		
						Mix Results				
Acres: 16.750 Rate Per Acre: 119					Item Mix Name	Per Batch	Unit			
Batches: 1 Max Lbs/Batch: 2000						UREA (46-0-0)	1000	Lb.		
Batches: 1 Max Lb			/Batch: 2000			AmmoSulf 21-0-0	1000	Lb.		
						Product	2000	Lb.		