

Adding Filler in form-U-net

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Q. When making a dry fertilizer grade of 13-13-13, form-U-net is adding Filler. Why is it using Filler and can another product be used?

A. In this example, a one ton blend using a standard dry Material Group containing 18-46-0, 0-0-60, and 46-0-0 is being used. The blended products must supply 260 lbs (13% of 2,000) each of actual N, P, and K for the blend to test to a grade of 13-13-13. The mix result for a 2,000 lb batch is shown below.

Mix Results ▲		
Item Mix Name	Per Batch	Unit
DAP (18-46-0)	565	Lb.
UREA (46-0-0)	344	Lb.
0-0-60	433	Lb.
Filler	658	Lb.
Product	2000	Lb.

The products available to fulfill the request - Dap, Urea, and Potash - are required in a quantity of only 1,342 lbs per ton ($565 + 344 + 433 = 1,342$). The remaining amount of 658 lbs in a ton mix needs to come from another product. Filler is typically a limestone or calcium product used for this balance. Otherwise, if another product, such as 21-0-0-24S, is used to fill the remaining ton of blend, additional N and S are added no longer resulting in a 13-13-13 analysis. It would be a 19-13-13-7.9S blend as shown below.

19-13-13 - 7.9S			
Material Name	Percent	Units/Batch	
DAP (18-46-0)	28.25	565.00	Lb.
UREA (46-0-0)	17.20	344.00	Lb.
0-0-60	21.65	433.00	Lb.
AmmoSulf 21-0-0	32.90	658.00	Lb.