Farm Advisory Service, Soil Nutrient Network

FARM ADVISORY SERVICE

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Calculating P&K requirements for Silage

- Silage Yield West Binny 2200 tonnes in Pit from 54.38ha. (mostly 2 cuts)
- Ave. DM is 20.45% so DM yield is 450 tonnes

Question:

How much Potash and Phosphate

is in the silage pit?

Potassium in Silage (K)

- K in silage analysis is 20g/kg DM (0.02kg)
- 450,000kg of silage DM x 0.02kg = 9000kg of K
- Convert to potash (K_2O) multiply by 1.21
- Equivalent to 10.89 tonnes of Potash

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How much Potash do you need to replace removal?

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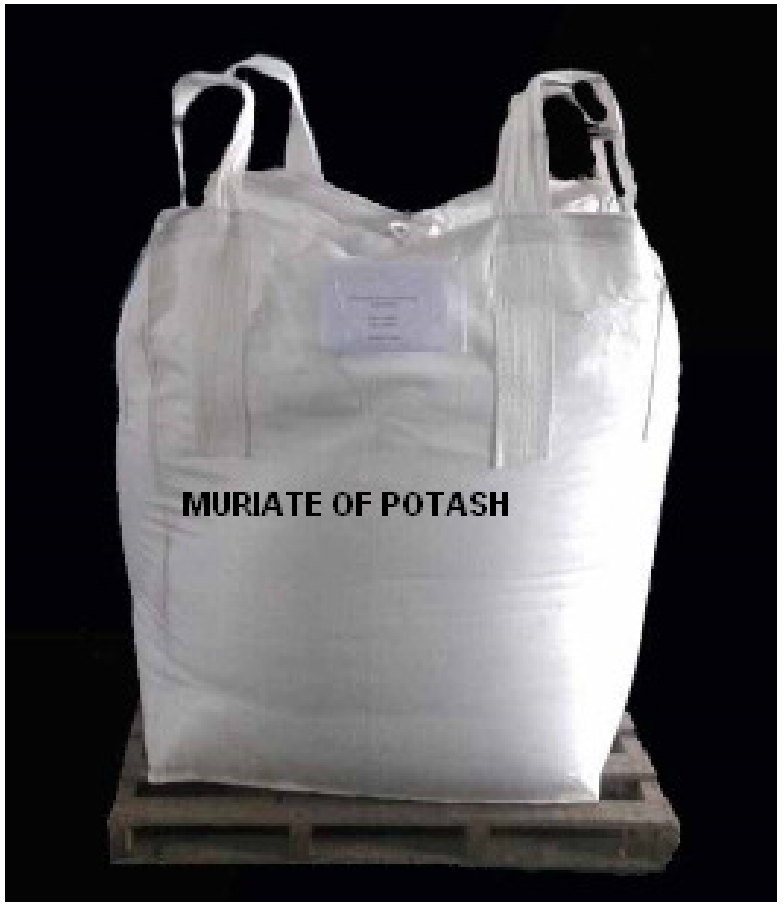
- Muriate of Potash 60% K2O
- need 18.15 tonnes of MOP (approx 30, 600kg bags)
- Slurry ave. potash is 3.2kg/m3
- FYM ave. potash is 8kg of potash per tonne



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Phosphate

- Ave. Phosphorous in silage analysis is 2.6g/kg DM = 0.0026kg
- 450000kg of DM x 0.0026kg = 1170kg
- Convert to P205 multiply by 2.29
- ~2.7 tonnes of phosphate

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How much Phosphate do you need to replace removal?

- Triple Super Phosphate 46% P2O5 so need 5.8 tonnes of TSP (9.7, 600kg bags)
- Slurry ave is 1.2kg/t (6%DM)
- FYM ave 3.2kg/t

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Summary

- Silage removes huge amounts of Potash
- Organic manures can replace potash removed
- Calculate offtakes of P&K with analysis of silage
- Feed the soil or the crop ?

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