

Fertilizer Chooser - finding the least costly fertilizer package. (S08-dobermann082316-Poster)

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Abstract:

Fertilizer Chooser is a new software to select the least costly nutrient sources based on quoted prices for fertilizer products and the application cost. Fertilizer Chooser is the final step in making fertilizer decisions. It assumes that a target fertilizer recommendation for balanced plant nutrition has been obtained by other means such as soil testing, a regional blanket recommendation, or a user-specified recommendation. Fertilizer Chooser helps to (i) translate a nutrient recommendation into the right amount of different fertilizer sources, and (ii) select the least costly nutrient sources based on quoted prices for fertilizer products and the application cost. The program uses a linear optimization procedure to find the best combination of fertilizers and application costs to minimize the total cost of fertilization under the constraint that the final amounts must match the recommended nutrient rates. The user is encouraged to explore different fertilization scenarios, but a final choice must also consider other aspects such as product quality, service, available application technology, and long-term impacts on soil fertility and the environment.

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