



**STRATEGIES TO REDUCE EXCESS SOIL TEST PHOSPHORUS BUILDUP ON LIVESTOCK FARMS**

**Introduction to Case Studies**

**PURPOSE**

The purpose of the case studies listed below is to demonstrate the economic and environmental value of, and strategies for, balancing imports vs exports of phosphorus entering and leaving dairy and beef-finishing farms. When annual imports exceed exports, soil test phosphorus builds up to excessive levels, creating a risk of increased phosphorus in runoff. This problem is often more acute on farms with limited acreage for manure spreading relative the number of livestock maintained. Several strategies for reducing farm phosphorus imports or increasing exports are presented in the case studies from Minnesota farms listed below and linked from the Phosphorus Management on Livestock Farms webpage.

**Case Study Description:**

Case Study Name	Strategy
Reduce Ration Phosphorus	Reduce lactation phosphorus to NRC recommended levels.
Reduce Feed Waste	Reduce feed waste to reduce imported phosphorus.
Eliminate Starter Fertilizer, Dairy	Eliminate starter fertilizer on high soil test phosphorus fields on dairy farms.
Eliminate Starter Fertilizer, Beef	Eliminate starter fertilizer on high soil test phosphorus fields on beef feedlot farms.
Stop Importing Manure	Stop importing poultry manure used for nitrogen fertilization.
Export Manure	Export dairy pen-pack manure.
Incorporate Manure	Incorporate manure immediately to conserve nitrogen and allow lower application rates to meet crop nitrogen needs.
Increase Crop Production	Increase crop production for feed or sale on the farm's existing acres to reduce feed phosphorus imports or increase exports.
Acquire More Land	Acquire more crop land through lease, purchase, or exchange to increase crop production for feed or sale, reducing feed phosphorus imports or increasing exports.

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