

Is My Livestock/Poultry Operation in Balance?

An understanding of nutrient balance and primary source of purchased nutrients is key to operating a livestock operation in an environmentally sustainable manner. Three methods are provided for estimating if a nutrient imbalance may be an issue on your farm. Those methods include

- (1) A checklist of potential indicators of nutrient imbalance (Table 2-1).
- (2) Whole Farm Nutrient Balance (see Appendix A) provides the “bottom line” answer to this issue. It also provides a measurement of progress made toward environmental sustainability following the implementation of changes. You, the producer, must be willing to assemble information for animal purchases and sales, feed and grain purchases and sales, fertilizer purchases, manure sales, and possibly other contributors defined in Figure 2-3 for a one-year period.
- (3) Manure nutrient production vs. crop nutrient utilization (see Lesson 31, Manure Utilization Plans). This method checks the ability of your land base to utilize the nutrients in manure. An excess of manure nutrients for crop production suggests a likely whole farm nutrient imbalance.

The indicators found in Table 2-1 may help you identify if nutrient concentration might be an issue on your farm. Increasing soil P levels is a good indicator of a potential imbalance. Most of the P accumulation on a livestock and crop farm is likely to be stored in the soil (with the exception of livestock operations with an anaerobic lagoon). In addition, a livestock operation’s reliance on purchased feed for the majority of feed nutrients is also an excellent indicator of a nutrient imbalance (assuming that manure is not transferred to off-farm customers).

Is whole farm nutrient balance a concern for your livestock operation? Answering this question is the first step toward achieving environmental sustainability.

Table 2-1. Environmental Stewardship Assessment: Indicators of a possible imbalance that may exist on your farm. Check those that apply. “Yes” response indicates that potential for nutrient imbalance is high.

Yes	No	Don't Know	
___	___	___	Soil P levels for the majority of fields are increasing with time.
___	___	___	Soil P levels for the majority of fields are identified as “High” or “Very High” on the soil test.
___	___	___	The majority (more than 50%) of the protein and P in the ration originates from off-farm sources.
___	___	___	Livestock feed programs routinely contain higher levels of protein and/or P than National Research Council or land-grant university recommendations.
___	___	___	A manure nutrient management plan is not currently used to determine appropriate manure application rates to crops.
___	___	___	Less than 1 acre of crop land is available per animal (1,000 lbs of live weight), and no manure is transported to off-farm users.