

The primary source of nutrients for most animal feeding operations is purchased feed or fertilizer.

### Sources of Nutrient Inputs

The source of nutrient inputs to livestock operations is important to understanding preferred management strategies for reducing water quality risk (Figure 2-6). Commercial fertilizer can be a common source of nutrient inputs for many livestock operations, especially those with large cropping programs. The previously discussed Nebraska study observed that commercial fertilizer was the most significant N input and an important P input for livestock operations with less than 2,500 animal units. However, commercial fertilizer was an insignificant nutrient input for the livestock operations with more than 2,500 animal units (2% of N inputs and 1% of P inputs).

Purchased animal feeds are often the most significant source of the N and P inputs. In the Nebraska study, N inputs as feed varied from 33% to 77% of total N inputs for farms with less than 250 animal units and more than 2,500 animal units, respectively. Phosphorus inputs as feed was the largest nutrient source for most farms. With the growing concentration of livestock and poultry, purchased animal feed is often the most significant source of nutrients even in regions that grow most animal feeds locally. Efforts to correct nutrient imbalances must focus on options for utilizing feed nutrients more efficiently and reducing purchased feed inputs.

Other potential sources of nutrient inputs include purchased animals, legume-fixed N, and nitrates in irrigation water. These sources are typically insignificant or offer few options for input reduction. The one exception may be legume-fixed N grown on dairy operations.

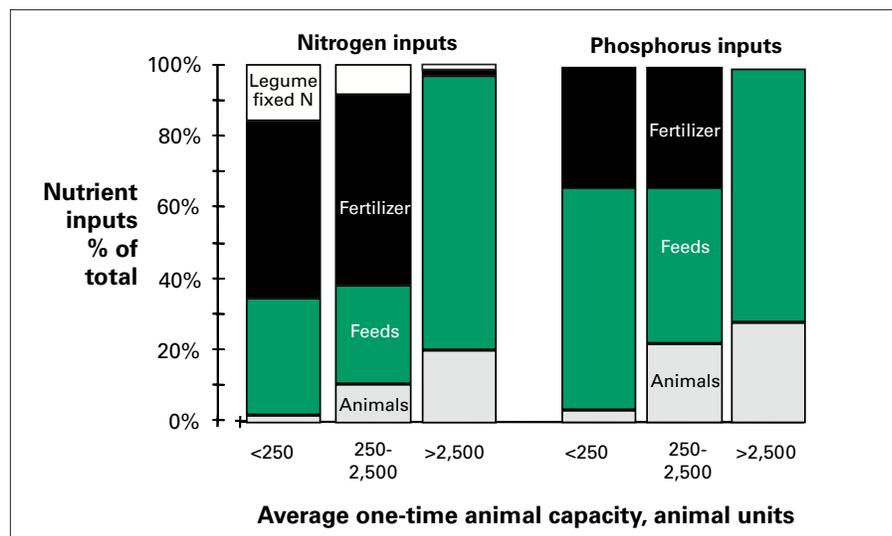


Figure 2-6. Relative sources of N and P inputs with different-sized Nebraska livestock operations (Koelsch and Lesoing 1999).