Energy Enhancement Activity—ENR10
Using nitrogen provided by legumes, animal manure, and compost to supply 90 to 100% of the nitrogen needs

Kansas Criteria for National Energy Enhancement Activity—ENR10

Refer to Conservation Practice 340, Cover Crop, to select legume cover crops as a nitrogen source.

The following method can be used to estimate the amount of nitrogen (N) to be credited to the next crop:

To estimate yield, take cuttings from several areas in the field then dry and weigh them. Using a yardstick or metal frame, measure 2 sq ft and clip the plants at ground level within the known area. Dry them in the sun for a few consecutive days, or use an oven at about 140° F for 24 to 48 hours until they are "crunchy" dry. Use the following equation to determine per-acre yield of dry matter:

$$\text{Yield (lb.)/Acre} = \frac{\text{Total weight of dried samples (lb.)}}{\text{\# square feet you sampled}} \times \frac{43{,}560 \text{ sq. ft.}}{1 \text{ Acre}}$$

The following rule-of-thumb can be used to estimate total N contained within the dry matter:

Estimates of Percent N in Plant Tissue

Legumes: Non-woody		
Above ground	Pre-flowering	3.5 – 4.0
	Flowering	3.0 – 3.5
Below ground	Roots	2.0 – 2.5
Legumes: Woody		
Above ground	Leaves only	3.0 – 3.5
	Leaves + stems	2.0 – 3.0
Below ground	Roots	1.5 – 2.5

Total N in cover crop in (lb/acre) = yield (lb/acre) x $\frac{\text{\% N}}{100}$

Keep in mind that these are *rough estimates* to give you a quick guide for the productivity of your cover crop. To know the exact percent N in your plant tissue, you would have to send it to a lab for analysis.

To estimate the amount of N that will be available for your current crop, take the estimated total N in the cover crop times 30 to 50 percent to be used as credited N.