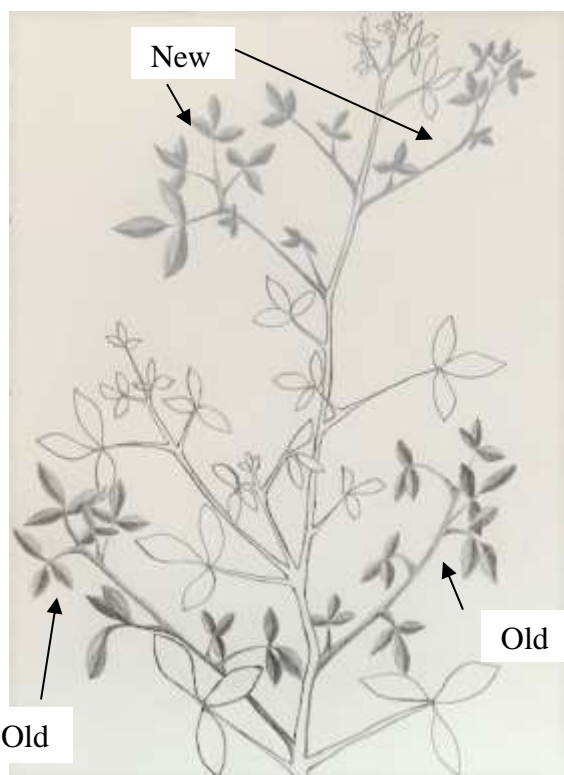


Alfalfa - Leaf Sap Sampling Guide

Time of sampling: Take samples in the morning before 11 am and temperatures less than 80°F to ensure adequate leaf tension and moisture. Avoid sampling in the rain. Store samples in a cooler.

Sample Size: Collect 90 grams of both new (young) and old compound leaves for a collected total of 180 grams per sample set. Fill sample bag $\frac{3}{4}$ full or more. Collect new and old leaves separately. Use quart zip lock bags.



New Stands: For new stands begin sampling when plants are 10 inches tall. Sample the entire plant EXCEPT the roots and place in quart zip lock bag.

Established Stands Consecutive Samples: Wait until new shoots are 10" (sample entire new shoot) the New and Old leaf set every 2 weeks.

NEW: sample youngest fully expanded compound leaves from the growing part of the plant. (Sample complete new shaded compound leaves in picture). Place leaves in quart zip lock bag labeled NEW.

New leaf = newest yet fully developed COMPOUND leaf

OLD: farthest fully expanded compound leaves from the growing point that is still functional. (Sample complete old shaded compound leaves in picture). Place leaves in separate quart zip lock bag labeled OLD.

Old leaf = oldest yet still viable COMPOUND leaf.

****Do not mix varieties when sampling as may cause variation in analyses**

General:

1. Avoid outer rows and 1st 20 feet of a row.
2. Sample leaves with average leaf quality. Sample plants of abnormal growth separately.
3. Sample consistently (avoid extreme weather etc.)
4. If leaves are wet at sampling lightly pat dry before shipping (moisture can influence results).
5. Sap analysis data works best when used in progression. The more samples the better crop nutrient uptake can be illustrated and understood.
6. Sample either before or 3+ days after fertilizer/pesticides have been applied.
7. **Keep samples cool.** Bring cooler to fields to store samples. **Ship 2-day or overnight on M/T/W (morning arrival time) with ice packs. Samples should not come into direct contact with ice packs.**
8. Sampling & sap analysis questions: contact your distributor or NEWAGE Labs (269) 637-5658