DEDICATED TO SUSTAINABILITY

SOP-AGR-02
Rev: Dec 14

Biomass Harvest Protocol for Small Plots

Or Collecting Subsamples from Large Strip Trials

Biomass harvest consist of first determining wet (fresh) weight to determine wet yield and second determining percent moisture of the harvested sample to determine yield on a dry matter basis.

1. Identify a place in the field or plot where plant distribution is most uniform.
2. Repeat at least three times in field or large strip plot.
3. Record crop stage for each plot or field– flowering, milk, soft dough (маса), hard dough.
4. Harvest sample size: A minimum of 3linear meters of a single row.
5. Record harvested area size.
6. Harvest whole plant approximately 10 cm from ground.
    a. Measure width (cm or mm) of 5 random stalks – record the average of all 5.
7. Samples harvested can be carried out of the field and processed immediately or bundled together with a plastic belt (пластична врвка) (zip tie) or twine (јаже) and processed (weighed and chipped) after all samples have been collected from the field. Processing should take place within 1 hour of harvesting. Keep samples stored in the shade (под сенка) if at all possible prior to processing. Large sample sizes will need to be divided into two or three subsamples to carry out of the field.
8. Try to avoid laying the samples on ground.**Примероците не се оставаат на земја**. Samples can be laid on other plants or on a tarp.
9. Weigh sample and record weight for wet (fresh) yield determination.
10. Determine dry weight and % moisture.
    a. Select 3 or 4 random stalks from the sample collected for wet weight.
        i. Run through tree limbchipper or other grinding machine.
        ii. Mix sample in a large bucket or on the tailgate of the pickup. It is important that the sample is well mixed.
        iii. Collect approximately 400 to 600 grams in a paper or cloth bag and weigh.
        iv. Record wet weight (don't forget to subtract out the weight of the bag)
        v. Dry sample. Sample MUST be thoroughly dried. It is best to place paper or cloth bag with sample in a drying oven for 3 to 4 days at a temperature of 50 C and record dry weight. The first time you use an oven you should make sure the samples are completely dry by placing samples back in the oven and drying for another 24 hours.
            - If an oven is unavailable there are other methods for drying the sample. See '*Measuring Moisture in Hay'* in SOP-AGR-03. Доколку нема сушара,
        vi. Calculate % moisture based on the wet and dry weights.

vii. **If a tree limb chipper is unavailable**, collect 2 plants and cut up into 20 cm sections and place in a bag. Record wet weight. Store sample until it can be dried for dry weight.

EQUIPMENT AND SUPPLIES NEEDED

b. Tape measure or measuring stick
c. Large knife or good clippers for harvesting stalks
d. Plastic belts (zip ties) or twine for bundling harvested stalks
e. Tags for ID of samples
f. Scale for weighing samples
g. Heavy paper or cloth bags for drying approximately 500 g sample to determine % moisture. May need large bags if a chipper in unavailable.
h. Marker for labeling bags, etc.
i. Dryer