Revised methods for biomass harvest:

Materials:

Art’s tree-pulling winch

Chainsaw + supplies

Pressure washer

Pulaski

Transect tape or meter stick.

Loppers and/or handsaw

calipers

Labelling

Burlap sacks (4 per tree)

Paper sacks

Imprinting metal labels

Writing utensil

PPE:

Work gloves

Work boots

Safety glasses

Ear protection

Procedure

Step 1.

* Identify tree. Complete pink flagged trees first. Then move on to blue.
* Verify tree ID and write on four separate metal labels.

Step 2.

* Take a picture of the tree. Include whole plant in picture.

Step 3

* Is stem standing?
* Yes. Go to step 4.
* No: go to step 8.

Step 4.

* Cut stem at 1 ft above ground.

Step 4.

* De-limb tree and make two piles.
* 1 pile for branches that were formed from winter buds (proleptic) (they will have a bud scar and there will be a short distance to the first lateral bud).
* 1 pile for branches that were not formed from preformed buds (sylleptic). (they will not have a bud scar and there will be a longer distance to the first lateral bud)
* Put branches into separate burlap sacks or paper sacks. Each with tree label. Label the sacks as. LCOR ### p. branches & LCOR ### s. branches for proleptic and sylleptic branches respectively.

Step 5.

* Cut ~1 inch disk from base of felled stem.
* From this disk, measure radius at top end, radius at bottom end and length from top end to bottom end.
* Record measurements in datasheet
* Place disk in bag. Label LCOR ### SG disk

Step 6.

* Cut main stem into chunks so that it fits into burlap sack
* Label burlap sack with stem as LCOR ### stem

Step 7.

* Position tree winch around base of tree and tightly double wrap chain around tree with one anchor point as close to base of tree as possible and one higher

Step 8.

* Pull slack in long, thin chain until the tree begins to pull upwards from ground. Use pressure washer to clear dirt from roots.

Step 9.

* Once tree has broken through the top layer of the soil, and is raised around 1-2 ft. in the air, identify lateral roots and use Pulaski/hands to free lateral root from the soil.
* Only chase any lateral root 6 feet away from the center of the tree. Measure this with transect tape or meter stick. Cut root at 6 feet point.
* Keep cleaning off roots with pressure washer

Step 10.

* Continue to pull up tree until it is free from the soil. The taproot may break.

Step 11

* Cut off remainder of the stem from the root ball (place this section in the stem bag if it is in the field or keep it in the root bag and then put the stem section in the stem bag for that tree back in the lab if stem has already been harvested.)

Step 12:

* Label root bag LCOR ### roots