

Markets for Residuals

The value-added opportunities discussed thus far are “stand-alone” enterprises, which would nevertheless benefit from the efficiencies generated by co-locating with each other and the proposed biomass-to-energy facility, through the sharing of equipment, infrastructure, and sorting operations, or through utilization of process heat from the facility. These enterprises would also generate residuals that could be further processed into value-added products. These opportunities are discussed in this section.

Soil Amendments/ Compost

In the Yuba County foothills, and in nearby western Nevada County, there is a significant demand for soil amendment products. An informal survey of local garden supply stores revealed that most, if not all, soil amendments currently being sold in the region are trucked in from other locales. There is potentially a niche market for locally produced compost or other soil amendments, provided that reliable sources of the necessary raw materials are secured.

Decomposed residual woody material, or humus, can be sold as a soil amendment or incorporated into more regulated compost mixtures. This business model necessitates a limited cost (or no cost) to acquiring material. All the costs are then in production. In order to create a profitable enterprise at the Forest Biomass Business Center, this example of a soil amendment business would need access to a stream of residuals (sawdust, bark, or other woody material) that is left over from other operations on site.

A more traditional thermal composting operation would require mixing woody feedstocks with some amount of more nitrogen-rich material. Purchasing green material such as alfalfa to add to wood chips in order to achieve the necessary carbon-to-nitrogen ratio for proper thermal composting may reduce the profitability of this type of operation.

Another possibility is the use of biochar from the biomass-to-energy facility, combined with other organic materials, to create a composted biochar product, which would have a higher value than the biochar alone.

Feedstock Specifications: Bark, sawdust, shavings. Also green waste (tree trimmings, grassing clippers). For thermal compost, a 50/50 mixture of woody material and green material is optimal.

Jobs (Full-time Equivalent): 2 – 6

Equipment Needed:

- Tub grinder
- Screen
- Windrow turner and tractor

Challenges: Soil amendment market is seasonal

Notes: Typically shares the same site with a mulch operation