

Non-Woody Biomass – Brewery Spent Grains Report

June 2016

Brewery Spent Grain (BSG) is a byproduct in the beer fermentation process. According to the Zero Waste Research Institute, over 92% of brewing ingredients are wasted, the majority being the BSG. From a business perspective, the BSG can be potential revenue for breweries. One market that is growing from BSG is using this ingredient to synthesize biochemicals to use as a petrochemical substitute in food flavorings, coloring, and natural cosmetics.

FINDINGS:

Brewery Title	Quantity BSG Lbs/Week	Quantity BSG Tons/Year	Disposal Method	Costs Associated wih Disposal
Ale Apothecary	900	23.4	Rancher (unnamed)	Donation (sometimes exchange meat/beer)
Bend Brewing Company	17,600	457.6	Rancher (Unnamed)	Donation
Boneyard Beer	47,500	1,235	Borlen Farms (rancher)	Donation (farm gifts beef sometimes)
Bridge 99 Brewery	765	20	Rancher (ostrich)	Donation
Cascade Lakes Brewery	25,500	663	Rancher (Unnamed)	Donation
Crux Fermentation Project	12,240	318.24	Rancher ("Carl")	Donation
Deschutes Brewery	852,941	22,176	Distributor collects	Received ~\$14.00/ton
Goodlife Brewing	44,200	1,149.20	Rancher (Dave from Anchor Heart Ranch)	Donation (pub uses meat sometimes)
Kobold Brewing	340	8.84	Rancher (unnamed)	Donation
McMenamins Old St. Francis	22,950	596.7	Borlen Fams/small urban farmers/Village Baker	Donation
North Rim Brewing	1,100	28.6	Rancher (unnamed)	Donation
Sunriver Brewing	12,000	312	Rancher (from LaPine)	Donation
Three Creeks Brewery	15,725	408.8	Rancher/Cascade Disposal	Rancher pays per tote/Pays Disposal
Wild Ride Brew	2,975	77.4	Rancher (Piggyback Ranch)	Donation
SUM TOTAL:	1,055,836	27451.27		

RESULTS/DISCUSSION:

A manager of a biochemical company estimated that a biochemical plant would need about 100,000-250,000 pounds of BSG per year. In total from the breweries able to participate, Central Oregon produces more than one million pounds of BSG weekly. The quantity needed for a plant in Central Oregon is more than enough.

The market for BSG around the country varies dramatically, from a voluntary donation to selling BSG for \$250 per ton. In Central Oregon, donation to ranchers is by far the most common method for disposal of BSG.

With the data collected above, Central Oregon could potentially profit from a biochemical plant (who would pay for the BSG) as well as continue the reciprocal relationship between the brewery and local ranching community.