



2013 Wyoming Award Winners:

380	Feb 1, 2013	WyoComp Heath Van Eaton 307.432.4073 Cheyenne, WY 82001	Agricultural Biomass Classifier	DOE
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Abstract:

WyoComp's Phase I proposal is submitted to DOE under the Biofuels section and focuses on the feedstock development. Farmers considering the decision to remove important agricultural biomass residue from their fields currently face high risk tradeoffs. A percentage of the biomass needs returned to the field to offset wind and soil erosion issues while restoring soil nutrients and organic content levels. Currently, farmers can benefit substantially from the secondary income benefits of selling off their biomass residues, but many are hesitant to remove the biomass from the fields due to erosion and nutrient concerns. This research focuses on the development of a biomass classification system that will be installed in the combine and swathers used by farmers that monitors biomass yields in real-time and then processes the data in such a manner the operator can program how many tons per acre of biomass is being uniformly spread back onto the field while the excess biomass is discharged in a row for later stage baling of the biomass. One of our Nation's greatest challenges is to reduce our dependence on fossil fuels and lowering emissions. Bio-energy production from annually renewable agricultural waste and biomass can help reduce this dependence we have on fossil fuel energy and this research addresses the feedstock development component.