



2013 Wyoming Award Winners:

389	Aug 1, 2013	WyoComp Heath Van Eaton 307.432.4073 Cheyenne, WY 82001	Advanced Natural Fiber Thermoplastics Filler Technologies	USDA
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Abstract:

WyoComp's Phase I performs a feasibility demonstration of its advanced natural fiber thermoplastics filler technologies, AgriFi™, and conducts testing to quantify the many benefits of it using it. AgriFi™ is biomass, derived from agricultural biomasses or wood that have underwent WyoComp's specialized thermal-mechanical process treatments prior to compounding with polymers. It's hydrophobic, stable in process temperatures up to 310C, better than carbon-neutral, half the density of mineral fillers (industry standard), provides physical property improvements and cost reductions while decreasing chemical usage. This research demonstrates the use of AgriFi™ in the following applications: Pet Products (Pet Carriers), Computer Products (Printer Cartridges). Reductions in production, product costs and chemical use will be estimated. Physical properties will be tested and compared to the base-standard products currently produced. Commercial potential of AgriFi™ is being driven by its feasibility of use, cost reduction and other benefits. WyoComp's proposal is supported by several letters of support from the plastics industry, which is the third largest in manufacturing, employing more than 1.1 million workers and generates \$379 billion in annual shipments. It has a presence in every State at some level whether it's as a refiner, processor, manufacturer, secondary user or recycler (Society of Plastics Industry, 2008).