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- **For Immediate Release**

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Guest Writer Explains Economic and Environmental Importance of Producing Animal Feed and Biofuel from Biomass at Advanced Biofuels USA

Frederick, MD April 17, 2011. Robert Kozak, president of Atlantic Biomass Conversions, Inc., explains in a guest article published today at Advanced Biofuels USA the importance of producing both animal feed and biofuel from biomass. From increased demand for meat in countries such as China to addressing loss of fish-meal producing fisheries, Kozak describes the need for most efficient use of bio-resources in economic and environmental terms.

Unlike others who are content to just describe the problem, Kozak also describes a solution: using biofuels production processes to create animal feed as co-products. He emphasizes that these so-called co-products can earn the producer more on a pound-for-pound basis than corn ethanol.

The problem. *First*, as the standard of living improves in countries, including China, world demand for meat has increased significantly, meaning the demand for animal feed has increased. *Second*, animal diets higher in protein have been found by university and extension service studies to reduce indigestion caused by high carbohydrate loading and to improve meat quality since food additives can be reduced. *Third*, much high protein animal feed is based on "rough" or bait fish such as menhaden. Because of the high demand for this fish protein, many of the "protein meal" fisheries have been fished out or are on the edge of crashing.

Comparing high protein animal feed prices to ethanol spot prices, the high protein animal feeds are more expensive than ethanol. From a grower or processor's standpoint, these prices say that not recovering biofuel biomass proteins is like throwing money away.

A Solution. Referencing studies by Oak Ridge National Laboratory and using Atlantic Biomass Conversions sugar beet pulp examples, Kozak notes that by retaining plant amino acids, the income from the feedstock used for high protein animal feed would increase per ton revenue. This additional revenue would allow growers to offer biofuel sugars at a competitive price while continuing to practice good soil and nutrient retention techniques.

Jonathan Mielenz of the Oak Ridge National Lab calculated that a process that retains biomass proteins while producing ethanol from soybean hulls, which are also non-food agricultural residues, could produce 1.5 million tons/year of protein feed from the US soybean crop.

In essence, by retaining the plant proteins for animal feed, most of the "food" portion of biofuel crops or agricultural residue is retained. Only the plant sugars, are used for fuel. By following this path, biofuel production will actually add to the sustainability of worldwide agriculture. Kozak points out that not all current conversion technologies are able to produce biofuels while retaining proteins. Among those are gasification, pyrolysis and harsh pretreatments.

Kozak concludes that implementation of biofuel production systems that retain most of the "food" portion of biofuel crops or agricultural residue would add to the sustainability of worldwide agriculture while reducing the need for non-renewable petroleum. He compares these technologies to ones that, as part of the process, lose or damage these proteins preventing them from being used for animal feed. Kozak encourages all nations producing biofuels from crops and agricultural/food processing residues to make co-producing animal feed and biofuels a top priority. And urges investors to consider lost or damaged proteins as lost revenues when assessing investment opportunities in this space.

The opinions expressed are those of the author and should not be attributed to Advanced Biofuels USA,a nonprofit educational organization which advocates for the adoption of advanced biofuels as an energy security, military flexibility, economic development and climate change mitigation/pollution control solution. Our key tool for accomplishing this is our web site, www.AdvancedBiofuelsUSA.org, a one-stop-shop library for everyone from opinion-leaders, decision-makers and legislators to industry professionals, investors, feedstock growers and researchers; as well as teachers and students.

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