

WSU PUYALLUP HIGHLIGHT

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Biomass for Bioenergy? It's all here in the Poplar Research Program.



There is one topic in America that most agree on: ENERGY. Where will it come from? How can we change our resource mix? What can we do to meet the needs of future generations?

Like many programs at WSU Puyallup, work is underway to study and test new ideas to address these important questions by looking into physical and chemical traits of wood related to their energy content and potential ethanol conversion efficiency. Wood biomass currently satisfies 2.7 % of America's energy needs and has an input/output ratio of 1: 7. Research on the use of hybrid poplars as a feedstock for bioenergy applications began in Puyallup in the 1970's. Jon Johnson took over in 1997 and further developed the scope and partnerships necessary for both the growth and the implementation of this developing fuel

source. Hybrid poplars are the fastest growing temperate tree and are starting to be used to sequester atmospheric carbon dioxide to reduce this important greenhouse gas. Test plots are in place at WSU Puyallup Farm 5 (photo above left) and in Pullman as an ongoing partnership with Potlatch and Green Wood Resources.



Johnson's research on poplar wood energy content as it relates to chemical composition co-exists with his use of poplars in agriculture riparian buffer research to improve water quality and salmon habitat. He envisions closed-loop systems like the one constructed in Sweden that he visited (photo above right). The willow stands use wastewater from the municipal treatment plant and are harvested and burned at a local steam plant to provide heat. For more about the poplar program, access <http://www.puyallup.wsu.edu/poplar/> . To read more about Jon Johnson, see <http://www.naturalresources.wsu.edu/Staff/johnson1.htm>

WSU Puyallup: Solutions for the Region- Programs for Its People.

Weekly Highlights is provided by the people and programs of WSU Puyallup. To include a highlight in an upcoming announcement, please contact either Tanyalee Erwin, terwin@wsu.edu, 253-445-4504, or Jon Newkirk, jnewkirk@wsu.edu, 253-445-4568. If your email is set to text messages only and you wish to see the graphical version of this Highlight, please email Tanyalee and she will send this Highlight as an attachment.