



October 10, 2012

The Honorable Lisa Jackson  
Administrator  
U.S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N. W.  
**Mail Code:** 1101A  
Washington, DC 20460

Mr. Boris Bershteyn  
Acting Administrator  
Office of Information and Regulatory Affairs  
White House Office of Management and Budget  
725 17<sup>th</sup> Street, NW  
Washington, DC 20503

Dear Administrator Jackson and Acting Administrator Bershteyn:

In August, Chemtex International (Chemtex) was awarded a \$99 million loan guarantee from the United States Department of Agriculture's (USDA) 9003 Advanced Biofuel/Bioprocess Loan Guarantee Program to build a commercial scale biofuel refinery in Clinton, NC. This project is expected to create over 65 new direct jobs and 240 indirect jobs in a new agriculture sector. In September 2011, the USDA issued a Findings of No Significant Impact (FONSI) for the project and the cultivation of its feedstocks -- particularly *Arundo donax*. Some are opposed to the use of this feedstock and we would like to take this opportunity to explain why it is not only an environmentally preferable feedstock but also highlight that when commercially cultivated, spread of *Arundo donax* has never been recorded. We believe that the U.S. Environmental Protection Agency (EPA) and the White House Office of Management and Budget (OMB) should weigh these issues as they finalize their proposed rule for the "Regulation of Fuels and Fuel Additives: Identification of Additional Qualifying Renewable Fuel Pathways Under the Renewable Fuel Standard Program," and approve *Arundo donax* as a qualified advanced biofuel feedstock.

**Success of *Arundo donax* in Europe**

In Europe, *Arundo donax* was commercially cultivated from 1937 to 1962. It was grown to produce chemical cellulose for a fiber plant in the Mediterranean coastal region in Tor Viscosa, Italy -- just outside of Venice. Since 1962, these properties have been converted to other crops. There have not been any instances of invasive spread nor did the rotation from *Arundo donax* to other crops interfere with new plant growth. Three years ago, Italy started growing *Arundo donax* commercially again, this time as a biofuel feedstock. It will be used as the primary feedstock for the largest cellulosic ethanol facility in the world located in Crescentino, Italy. This plant will be able to produce over 13 million gallons of cellulosic ethanol a year. Again, there have been no instances of spread on adjacent properties or watersheds.

From 1997 to 2000 the European Union studied *Arundo donax* across Europe -- in Central Greece, Northern Italy and Southern Italy, climates similar to the Southeastern United States.

**CHEMTEX INTERNATIONAL, INC.**

1979 EASTWOOD ROAD • WILMINGTON, NORTH CAROLINA 28403-7214  
TEL: (910) 509-4400 • FAX: (910) 509-4567 • E-mail: [inquiries@chemtex.com](mailto:inquiries@chemtex.com)



Although commercialization efforts are also taking place in Australia, Mexico, and Japan, to date, this has been the most extensive scientific study in the world on the commercial cultivation of *Arundo donax*. Their final report recommended *Arundo donax* as the most promising of all those grown in trial plots, harvested and then tested as a feedstock for a variety of commercial utilizations including biopower, biofuel, paper fiber, as well as the added benefit of phytoremediation. At no stage were there any instances of invasiveness and *Arundo donax* was stated as “environmentally friendly,” achieved “soil improvements,” viewed as “environmentally benign,” and considered the “champion of future bioenergy crops.”<sup>1 2</sup>

According to the South Australia Board of Water, Land and Biodeversity Conservation, *Arundo donax* planted in non riparian habitat, as would be the case for our North Carolina project, poses an extremely small risk of spread<sup>3</sup>. This coincides with the conclusions of other scientists.

### **Management of *Arundo donax* as a Biofuel Feedstock**

*Arundo donax*, produces a sterile seed and propagates through rhizomes. Due to outbreaks of *Arundo donax* in California and Texas there has been significant concern about its use as a biofuel feedstock in the United States. However, nearly all research on *Arundo donax* in the United States has been conducted in California and Texas, where the planting of *Arundo donax* along riparian corridors was intentional and past eradication efforts along riverbanks with bulldozers had the unintentional impact of spreading it further downstream. There have been no instances of invasive spread in Italy where it was grown commercially, and scientists do not believe *Arundo donax* will spread in the United States when cultivated for bioenergy far away from riparian areas. Conversely, they believe that commercial cultivation will actually reduce the probability of potential spread.<sup>4</sup>

In a letter written to the EPA in February 2012 by one of the preeminent invasive species experts in the United States, who is referenced frequently by environmental organizations, indicates that the active cultivation and management of *Arundo donax* within field boundaries will dramatically decrease the likelihood of unintentional escape<sup>5</sup>. He also notes that without rapidly flowing water to distribute stem and rhizome fragments, *Arundo donax* is limited in its natural dispersal ability.<sup>6</sup> *Arundo donax* is only likely to be invasive when planted in riparian systems.<sup>7</sup> Away from such aquatic systems, there is limited potential for rhizome and stem fragments to break off and spread.<sup>8</sup> Other than active waterways and the associated flood dispersal, *Arundo donax* has shown no examples of unwanted expansion or invasion. This is what we have seen in Europe, and what the European Union’s report concluded. This is primarily due to its non-

<sup>1</sup> <http://ec.europa.eu/research/agro/fair/en/gr2028.html>

<sup>2</sup> <http://www.biggreenenergy.com/default.aspx?tabid=4269>

<sup>3</sup> “Weed risk management of *Arundo donax* plantations”, 5<sup>th</sup> Australian Weed Risk Study Dr John Virtue, NRM Biosecurity Unit, DWLBC South Australia Board of Water, Land and Biodiversity Conservation

<sup>4</sup> Barney, Jacob, PhD., Assistant Professor of Invasive Plant Ecology, Department of Plant Pathology, Physiology and Weed Science, Virginia Tech University. February 12, 2012.

<sup>5</sup> Barney, Jacob, PhD., February 12, 2012.

<sup>6</sup> Barney, Jacob, PhD., February 12, 2012.

<sup>7</sup> C. Williams et al, “*Arundo Donax* in Australia and USA,” International Society for Horticultural Science, 2009

<sup>8</sup> “Use of poor quality water to produce high biomass yields of giant reed (*Arundo donax* L.) on marginal lands for biofuel or pulp/paper” C.M.J. Williams, T.K. Biswas and I.D. Black.



invasive characteristics including no airborne dispersal due to the lack of viable seed, pollen or spore, slow root expansion and no runner, vine or surface expansion.

Regardless, Chemtex has agreed to follow all the voluntary best management practices as outlined by the North Carolina Department of Agriculture and Consumer Services, the North Carolina State University and the Biofuels Center of North Carolina to prohibit any potential spread. This will require Chemtex to gather and share information with the government, manage and monitor the fields regularly, harvest the field in accordance to best management practices, and transport and store the harvested *Arundo donax* according to their safety regulations.<sup>9</sup> Scientists in the United States, who have grown *Arundo donax* on their fields for 12 years, 50 feet from a stream, have not observed any instances of spread, and suggest that the best management practices Chemtex would employ to cultivate *Arundo donax* poses little, if any, risk of spread to the surrounding environment.<sup>10</sup>

#### **Environmental Benefits of *Arundo donax***

Propagation of *Arundo donax* by Chemtex would conform within the approved Conservation Plan as outlined in the USDA's September 2011 FONSI and be grown on existing swine spray fields which are located far away from riparian areas. The use of *Arundo donax* in place of Bermuda grass – the existing crop used on these spray fields – will benefit spray field land managers in North Carolina because it will remediate unwanted nutrients while providing a new market non-existent today for the remediation crops.

*Arundo Donax* has great biofuel potential in the United States because of the potential farm income the crop can generate on traditionally poor yielding lands and the environmental benefits it provides compared to other biofuel feedstocks. *Arundo donax* is the winner with respect to yield, which translates directly into land use and farm profit. *Arundo donax* produces 18 – 20 dry tons/acre and has an energy yield content of 8,000–8,400 Btu/lb, compared to Bermuda grass which produces 6–10 dry tons/ acre and a much lower Btu/lb. Large amounts of fertilizer are not needed to grow this plant, and it is also resistant to biotic and abiotic stresses. In addition, *Arundo donax* requires the least amount of land to meet the 300,000 dry ton feedstock requirements identified in the USDA loan guarantee. *Arundo donax* requires 15,000– 17,000 acres whereas Bermuda grass would require 50,000 – 100,000 acres, switch grass, 30,000 – 50,000 acres. If you were to grow corn for the same level of biofuel production, one would need to use 40,000 acres to achieve the same amount of fuel as *Arundo donax*. The use of *Arundo donax* in place of Bermuda grass, switch grass or corn, clearly helps increase biofuel feed stock productivity while impacting far fewer, in many cases less than 50%, of the land.

*Arundo Donax* also has excellent secondary environmental benefits that will help not only reduce harmful green house gas emissions, but also reduces nitrogen pollution from our watersheds. The life-cycle assessment savings with this crop and the Chemtex process, allows a savings of 90% of greenhouse gas emission compared to traditional fuels. The high level of green house gas savings is directly contributable to the high yield specific to *Arundo donax*, which is not matched

<sup>9</sup> <http://www.ppws.vt.edu/~jnbarney/publications/doc/Biofuels%20Center-Energy%20Grasses%20Invasiveness.pdf>

<sup>10</sup> Baker, David, PhD. Professor, Ohio State University Department of Horticulture and Crop Sciences. Letter to Chemtex. February 9, 2012.



or even approached by any other plant species evaluated for commercial biomass supply, demonstrated to thrive in the non-tropical United States. The use of *Arundo donax* guarantees the most efficient use of resources and guarantees minimum land impact for the potential volume of biofuel produced. Allowing the use of *Arundo donax* in the US guarantees the US farmer will remain competitive with farmers from around the world, as the crop is finding commercial pathways in other countries, where it will compete with US grown feedstocks and biofuels.

Because of *Arundo donax*'s clear environmental benefits as an alternative biofuel feedstock, and that scientific experts on invasive species believe its ability to spread is severely limited when it is appropriately grown as a commercial biofuel feedstock, we strongly believe that *Arundo donax* should be an approved biofuel feedstock under the EPA's "Regulation of Fuels and Fuel Additives: Identification of Additional Qualifying Renewable Fuel Pathways Under the Renewable Fuel Standard Program." As Chemtex has committed to provide cellulosic ethanol to the US market via our plant in Crescentino, Italy this year, it is urgent a decision is made quickly. A delay in this decision after October 2012 will negatively impact the establishment of the feedstock supply chain by a year because we won't be able to plant this season.

Thank you for your time and consideration. We would welcome the opportunity to discuss this in person or over the phone with you and your staff at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Pedro Losa".

Pedro Losa  
Chief Executive Officer  
Chemtex International

Cc: Secretary Tom Vilsack – U.S. Department of Agriculture