

Horticultural Research Institute, Inc.

Unique Collaborations

**2010 FLC Mid-Atlantic Regional
Meeting, October 5-7, 2010,
Richmond, Virginia**

**Marc Tefteau, Director of Research HRI
Director of Research and Regulatory Affairs – ANLA**



Who is HRI?

HRI is the 501(c)(3) non-profit, industry supported research and development corporation of the American Nursery & Landscape Association (ANLA), the national trade association for the nursery and landscaping industry





HRI's Vision

To be the premier horticultural research and development institution for the nursery and landscape industry



HRI Mission Statement

To direct, fund, promote and communicate horticultural research, which increases the quality and value of ornamental plants, improves the productivity and profitability of the nursery and landscape industry, and protects and enhances the environment.



HRI Research

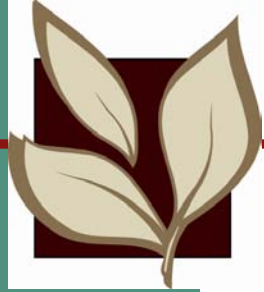
Competitive Grants Program – HRI Endowment Fund

USDA Funding

- USDA FAS TASC grant
- USDA APHIS 10201
- Specialty Crops – MD. Dept. Agri. through USDA

Partnerships

- USDA – Agricultural Research Service
Floriculture and Nursery Research Initiative
- Cooperative Research and Development Agreement
(CRADA) – USDA ARS



Transforming Towards a Sustainable Green Industry



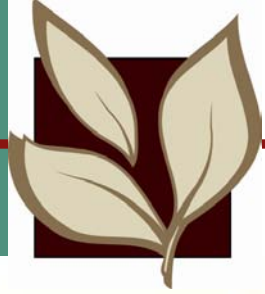
HRI recognizes the changing conditions and market demands of our customer base and within the economic and global environment to develop and implement sustainable production systems at all levels of the Green Industry.



What is the Industry Issue?

Black Pots Giving
a Black Eye to the
“Green Industry”





Agricultural Plastics in the Industry





Plastic Use within the Nursery and Floricultural Industry



Floriculture Crops

Short term production

Nursery Crops

Longer term
production – woody
ornamentals

A 14.5\$ Billion Dollar Agricultural Industry

Over a billion pots and related plastics produced
each year for the industry – est. \$730 M market



HRI Goals

- To bring to the horticultural marketplace biodegradable plastic resins to reduce the dependence on petroleum based feedstocks
- To develop a revenue stream from licensing and royalty fees to provide additional support for horticultural research for the industry.

(HRI, Inc. moving from an philanthropic model to a business model)



The HRI and USDA-ARS Partnership



- In 2006, HRI signed a Cooperative Research and Development Agreement (CRADA) with the USDA Agricultural Research Service (ARS) to explore the use of biodegradable animal and plant by-products for the production of biodegradable nursery containers and plastics.



Unique Collaboration

- **HRI, Inc.** – national non profit corporation that represents an **entire industry.**
- Access to a national market place for product development
- Product development and testing for end products
- National industry reputation
- Licensing for an entire industry and not just one company
- HRI's ability to bring on additional partners in the r & d process and commercialization
- HRI research associate – Dr. Masud Huda
- **USDA ARS** – basic patents and technical expertise
- USDA BARC Laboratory facilities for research and development – Dr. Walter Schmidt
- USDA ARS OTT assistance in patent application & licensing
- Co-patenting opportunity and protection of IP
- Additional USDA ARS research facilities for R & D.
- Ability to research additional uses of proprietary materials and agricultural waste products in bioresins development



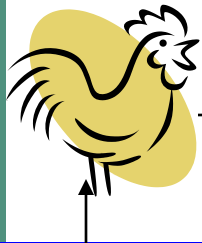
Commercialization Efforts

- Filing of a co inventor patent – HRI/USDA ARS – October, 2009
- Negotiation of exclusive license agreement with USDA ARS OTT for base patent and co-filed patent
- Incorporation of a for profit LLC for HRI to handle commercialization efforts – October 2010.
- Assignment of license to LLC by HRI, Inc.



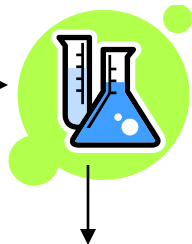
Steps in the Production of a Nursery Pot (bringing a new chemistry to market)

**Feather
Source and
Processing**



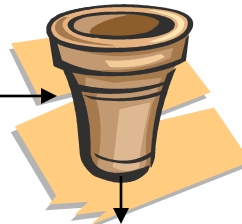
*Poultry
Integrator*
*Start up tech-
transfer
company –
SBIR &
TEDCO*

**Resin
Compounders**



*Local toll
compounders*

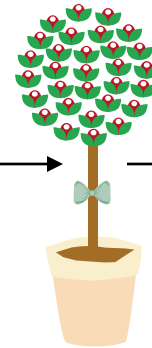
**Pot
Manufacturers**



*Collaborating
Pot
manufacturer*

*Ongoing
research
evaluations
– ARS*

Growers



*Tried by
select
ANLA/HRI
member
growers*

**Final
Consumers**



*Retail - Indept.
Garden Centers*
*Big Box – Home
Depot*
*Rewholesale/
Landscapers*



Moving Forward



Agricultural waste material in plant pot



Formulation no. 29 / Formulation no. 45



First industrial run of our degradable plant pot by using poultry feather



Questions?