AUTM Partnering Forum

Crop Productivity Partnering Forum

Technologies represented: Updated on 8/17/18

High Value Seeds		
Technology Title	**Organization**	**Organization Contact**
High RebD/RebM Stevia varieties	Michigan State University	Thomas Herlache
Maria™ Linda Sweet Cherry	Michigan State University	Thomas Herlache
Redstart' Day-Neutral Strawberry	Michigan State University	Thomas Herlache
Wasatch' Day-Neutral Strawberry	Michigan State University	Thomas Herlache
Osorno Norther Highbush Blueberry	Michigan State University	Thomas Herlache
Potato tuber yield enhancement	Iowa State University	Dianah Ngonyama
Gene controlling spontaneous haploid genome doubling in maize	Iowa State University	Dianah Ngonyama
Haploid Inducing genotype for field and specialty Corn	Iowa State University	Dianah Ngonyama
QTL regulating ear productivity traits in maize	Iowa State University	Dianah Ngonyama
Disease resistant rice	Iowa State University	Dianah Ngonyama
Non-GMO soybean varieties (traits include disease resistance, high yielding, high protein tofu varieties)	Iowa State University	Dianah Ngonyama
Corn germplasm - Includes parent seed; genetic stocks and breeding populations	Iowa State University	Dianah Ngonyama
Popcorn germplasm - Include Inbredlines and populations	Iowa State University	Dianah Ngonyama
Innovative Chemical Pest Management Solution		
Technology Title	**Organization**	**Organization Contact**
Insecticidal Extracts from Hops and Other Plants	Michigan State University	Thomas Herlache
Anti-mycotoxin compounds	Michigan State University	Thomas Herlache
Medicinal Plant Compound Reduces Mycotoxins and Sporulation	Michigan State University	Thomas Herlache
Lignin-Derived Aldehydes as Antifungal Agents	Wisconsin Alumni Research Foundation	Emily Bauer

Innovative Biological Pest Management Solution		
Technology Title	**Organization**	**Organization Contact**
Method and Plants for Improved Production of Terpenoids	Michigan State University	Thomas Herlache
Increasing Resistance to Soybean Cyst Nematode	Wisconsin Alumni Research Foundation	Emily Bauer
Modulation of NADPH oxidases to confer biotic and abiotic stress tolerance in soybean	Wisconsin Alumni Research Foundation	Emily Bauer
Use of the XA1 rice gene to confer broad Xanthomonas resistance in plants	Iowa State University	Dianah Ngonyama
Insect toxin delivery mediated by a densovirus coat protein	Iowa State University	Dianah Ngonyama
Identification of Bt toxins to target Asian Citrus Psyllid for HLB treatment in citrus	Iowa State University	Dianah Ngonyama
Foxtail mosaic virus transient gene silencing vector for maize & other monocots	Iowa State University	Dianah Ngonyama
miRNA396 as a tool to control cyst nematodes	Iowa State University	Dianah Ngonyama
Arabidopsis nonhost resistance genes(s) for engineering soybeans resistant to Sudden Death Syndrome	Iowa State University	Dianah Ngonyama
Soybean genes for enhanced Sudden Death Syndrome resistance	Iowa State University	Dianah Ngonyama
Modification of the nodulating, nitrogen-fixing soybean symbiont Bradyrhizobium japonicum to increase plant disease resistance	Iowa State University	Dianah Ngonyama
Identification and application Arabidopsis nonhost resistance gene(s) in creating disease resistant soybean cultivars	Iowa State University	Dianah Ngonyama
Cry3Bb1-resistant strains of western corn rootworm - Hopkinton strain	Iowa State University	Dianah Ngonyama
Stress Tolerance Solution		
Technology Title	**Organization**	**Organization Contact**
"Xerico" drought tolerance gene	Michigan State University	Thomas Herlache
Drought tolerance promoters	Michigan State University	Thomas Herlache
“Relief of Repression” Strategy to Improve Plant Pest Resistance and Maintain Growth Rate	Michigan State University	Thomas Herlache
Use of Arginase or Threonine Deaminase in Plant Protection Against Insects	Michigan State University	Thomas Herlache
Targeted Modification of Maize Roots to Enhance Abiotic Stress Tolerance	Wisconsin Alumni Research Foundation	Emily Bauer

Plant Growth Regulators and Biostimulants		
Technology Title	**Organization**	**Organization Contact**
Natural Biostimulant/Adjuvant Compositions for Increased Plant Growth/Biomass, Improved Fungicide and Fertilizer Efficacy, Dew Suppression, and Dormancy-Breaking in Cultivated Turfgrasses	Michigan State University	Thomas Herlache
Smarter Phytochrome Engineering for Smaller, Denser Crops	Wisconsin Alumni Research Foundation	Emily Bauer
Extending Juvenile Stage of Plants for Biofuels and Feedstock	Wisconsin Alumni Research Foundation	Emily Bauer
Plant protein and biochar fertilizer	Iowa State University	Dianah Ngonyama
Genes controlling plant growth	Iowa State University	Dianah Ngonyama
Enhanced plant growth through mobile RNA signals	Iowa State University	Dianah Ngonyama
Precision Agriculture		
Technology Title	**Organization**	**Organization Contact**
New imaging software algorithm for fast measurement of yield and quality of corn and other commercially valuable crops	Wisconsin Alumni Research Foundation	Emily Bauer
Hyperspectral reflectance-based models for early disease detection in potato	Wisconsin Alumni Research Foundation	Emily Bauer
Electrophoretic soil nutrient sensor for agriculture	Iowa State University	Dianah Ngonyama
Soil nitrate system for precision management of nitrogen fertilizer applications	Iowa State University	Dianah Ngonyama
Sensor for in-situ, wireless soil sensing	Iowa State University	Dianah Ngonyama
Device to determine susceptibility to root lodging	Iowa State University	Dianah Ngonyama
Food and Feed Processing Technology		
Technology Title	**Organization**	**Organization Contact**
Lignocellulosic Biomass Pretreatment Using Gaseous Ammonia (AFEX)	Michigan State University	Thomas Herlache
Ammonia-based biomass processing (AFEX) to produce highly digestible biomass	Michigan State University	Thomas Herlache
AFEX pellets for feed and biofuels	Michigan State University	Thomas Herlache
Improved Methods for Producing Low-Cost Protein-Polysaccharide Conjugates for Use in Foods and Beverages	Wisconsin Alumni Research Foundation	Emily Bauer

A novel vegetable oil-based material as substitute for carnauba wax	Iowa State University	Dianah Ngonyama

Other Enabling Technology

Technology Title	Organization	Organization Contact
Plants over-producing mixed-linkage glucans for forage and biomass feedstock applications	Michigan State University	Thomas Herlache
Self-compatible diploid potato lines	Michigan State University	Thomas Herlache
Method and Plants for Improved Production of Terpenoids	Michigan State University	Thomas Herlache
Diterpene syntesis platform for flavoring and insect repellents	Michigan State University	Thomas Herlache
FMT Enzyme Enabling Simplified Plant Processing	Michigan State University	Thomas Herlache
Identification of A Grass-Specific Enzyme That Acylates Monolignols with P-Coumarate (PMT)	Michigan State University	Thomas Herlache
Enhanced Stability Wrinkled1 For High Oil Production	Michigan State University	Thomas Herlache
Wrinkled 1 (wri1) Seed-Oil-Increasing Transcription Factor	Michigan State University	Thomas Herlache
Use of Plants with Increased Level of Highly Methylesterified Homogalacturonan for Increased Yield or Improving Digestibility of Plant Biomasses	Michigan State University	Thomas Herlache
Control of Cellulose Biosynthesis	Michigan State University	Thomas Herlache
A Source and Production Method for Acetyl-Triacylglycerols (ac-TAG synthase gene)	Michigan State University	Thomas Herlache
Improved Alkaline Hydrogen Peroxide Pretreatment of Biomass	Michigan State University	Thomas Herlache
Dynamic Environmental Photosynthetic Imaging Apparatus and Methods	Michigan State University	Thomas Herlache
OLIVER: A Platform for Visualization and Mining of High-Resolution and High-Throughput Data	Michigan State University	Thomas Herlache

Method for Creating High Yield Plants Using the K-Domain of a MIKC Type MADS-Box Gene	Michigan State University	Thomas Herlache
Subsurface Water Retention Barrier Installation Device (BID) for Installing Contoured Engineered Polyethylene Membranes (CEPEM) in Excessively Drained Soils	Michigan State University	Thomas Herlache
Transparent soil made by gel beads	Iowa State University	Dianah Ngonyama
SSM sequence models	Iowa State University	Dianah Ngonyama
Soybean Mosaic Virus as a transient expression vector for soybeans	Iowa State University	Dianah Ngonyama
Foxtail Mosaic Virus Transient Gene Silencing Vector for maize & other monocots	Iowa State University	Dianah Ngonyama
An efficient DNA-Based Viral Gene Silencing Vector system for soybean functional genomics	Iowa State University	Dianah Ngonyama
Metacaspase II for engineering soybean for disease resistance	Iowa State University	Dianah Ngonyama
Soybean transformation and regeneration using half-seed explants	Iowa State University	Dianah Ngonyama
Midwest adapted haploid inducer for maize	Iowa State University	Dianah Ngonyama