

# SEMINARS



## Cultivating Opportunities in the Biobased Marketplace

**Instructors:** Ron Buckhalt    USDA BioPreferred® Program  
Bill Wiley    Manufacturing Extension Partnerships  
Edsel Brown    Small Business Administration  
Lisa Wood    Procurement Technical Assistance Centers



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# Agenda

- The U.S. BioPreferred® Program
- The market for biobased products
- Federal resources to support business
  - GSA
  - PTACs
  - MEP
  - SBA



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# The What and Why of Biobased Products





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### Legislative Definition of a Biobased Product

A product composed of recent biological components

Agricultural, forestry, and marine materials



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### Why New Biobased Products?

- Reduce use of fossil fuels
- Reduce climate change impacts
- Create new uses for agricultural products
- Foster economic development
  - Agricultural jobs
  - Small business growth



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Businesses with biobased products registered with USDA BioPreferred® program



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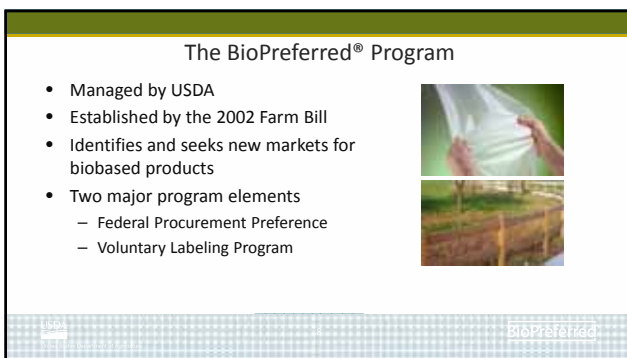
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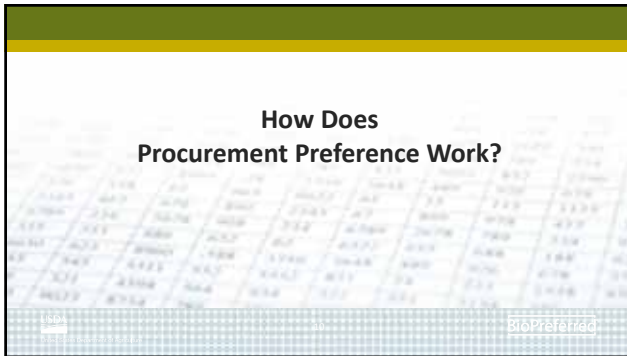
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## How Does Procurement Preference Work?



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### The Federal Procurement Preference program for biobased products *currently*

- Stipulates that Federal agencies and contractors **must** give preference to products in “designated categories”
- Includes 77 designated, diverse categories – and more are on the way!



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### The Federal Procurement Preference at Work

- Image Group of Georgia is selling bioplastic bins to many agencies
- Navy Gateway Inn and Suites buying biobased bedding and linens
- Defense Logistics Agency (DLA) offering soy-biobased penetrating lubricants and a spill biobased sorbent
- Fort Belvoir Army Base using biobased foam insulation
- Statue of Liberty uses biobased hydraulic fluid for elevators
- Fort Lee using biobased paint strippers

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### What is the Voluntary Labeling Program?



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### The USDA Certified Biobased Label



- Launched February, 2011
- Unbiased indicator of biobased content
- Independent third party certification partnership with ASTM International
- FP on label indicates Federal Procurement Preference



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### Growing Markets for Biobased Products



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### Some Growing Markets for Biobased Products

- Fiber based materials
- Bio-plastics
- Surfactants/Cleaning
- Bio-solvents
- Bio-lubricants
- Bio-chemicals
- Inks
- Enzymes
- Cosmetics



Biobased oils, lubricants, greases



Biobased "white" roof coating at USDA



Biobased cleaning products



Biobased agricultural panels

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### Chemicals

Increasing environmental awareness on the part of product manufacturers and the desire to reduce dependency on oil are the leading drivers behind the \$2.4 billion global market for biorenewable chemicals in 2010.

*SPI Energy Research*



Products made from PLA

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### BioPlastics

- The U.S. plastics industry had a \$16.2 billion trade surplus in 2010  
*SPI The Plastics Industry*
- "Biobased chemicals and plastics represent a historic opportunity to reverse (U.S. job outsourcing) through the creation of a new generation of renewable, sustainable products developed and produced in the United States."  
*(Bio 2012)*



Bioplastic agricultural film



BASF bioplastic

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### Biobased Composites

- Biobased composites consist of resin and fibers made from agricultural and forestry products
- The global composite materials industry reached a total value of \$17.7B (USD) in 2010 and, despite a still-sluggish world economy, its growth rate was 10.3%

*Norm Timmins, Lucintel*



*John Deere tractor with bio-composite panels*

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### Biobased Cleaning Products

World market of surfactants reached US \$24.33B in 2009

*Acmite Market Intelligence*

Biobased Products gaining traction in both consumer and commercial markets

*According to ISSA – the Worldwide Cleaning Industry Association*



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### Biobased Lubricants

The world annual consumption of lubricants is 40 million tons and is projected to continue to rise by 1.6% annually

*TransWorldNews*

With the government's lead-by-example initiative, advocacy by growers associations, and advances in lubricant research and biotechnology of oilseeds, the U.S. market will progressively see more biobased lubricants

*Machinery Lubrication website*



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### Resources for Marketing Biobased in the Federal Sector

- **GSA Schedules and GSA Advantage!®**
- GSA establishes long-term **government-wide** contracts to provide access to commercial products
- Can be ordered directly from GSA Schedule contractors or through the [GSA Advantage!®](#) online shopping and ordering system
- State and local governments can now use [GSA Advantage!®](#)
- Biobased products flagged for easy recognition


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### Federal Support to Small Businesses

- The Small Business Act established the Office of Small and Disadvantaged Business (OSDBU) in each Federal Executive Agency
- Goal of each OSDBU is to advocate for and manage the small business utilization programs





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**Lisa Wood**  
**Director**  
**Ohio PTAC**

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**Buy BioOhio**

- Ohio Biobased Products Preference
- Ohio Senate Bill 131 was signed into law May 2010
- Mandates state purchasing preferences for bioproducts
- Includes state government agencies and state colleges and universities
- Followed the guidelines of USDA BioPreferred Program



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**Buy BioOhio**

- Criteria for procurement preference
- Must be equal in quality, similar in price
- 5% price preference



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FromTheEarth-Bioproducts.com

Developed to support  
Ohio Senate Bill 131  
Structured after the  
USDA BioPreferred® Program



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Examples of Bioproducts Produced in Ohio

GoJo Industries	Purell Hand Sanitizer
Green Paper Products	Disposable Tableware
Renewable Lubricants	Degreasers and Lubricants
USA Soy Solutions	Road Maintenance
Spartan Chemical	Janitorial Cleaners
Sherwin Williams	Paints



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**A|PTAC**

Authorized by Congress in 1985

Provides technical assistance to  
businesses wishing participate  
in government marketplace

Administered by DoD's  
Defense Logistics Agency



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90+ PTACs operate in more than 275 locations across the U.S. in partnership with:

- state and local governments
- economic development organizations,
- other non-profit organizations
- SBA/SBDCs

To help businesses – especially small businesses – pursue government contracting






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**PTACs serve Small Business**


- 185,000 Counseling sessions
- 75,000 active small businesses clients each year
- Over \$13.5 billion in contract awards to PTAC clients annually


**PTACs serve Prime Contractors**

- Assistance in locating viable subcontractors
- Provide timely training on specific topics

**PTACs serve the Federal Government**

- SAM transition outreach
- VA verification outreach
- Work with FEMA to identify local contractors in disaster areas
- RFID/UID/WAWF



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PTACs offer a wide range of services, including:

- One-on-one procurement counseling
- Training and outreach on a variety of procurement related topics
- RFID (Radio Frequency Identification)
- Basics of government contracting & payment
- Military packaging
- Proposal preparation and review
- Developing quality plans
- Bidder registrations and certifications
- Computerized bid-match service
- Technical specifications and procurement histories






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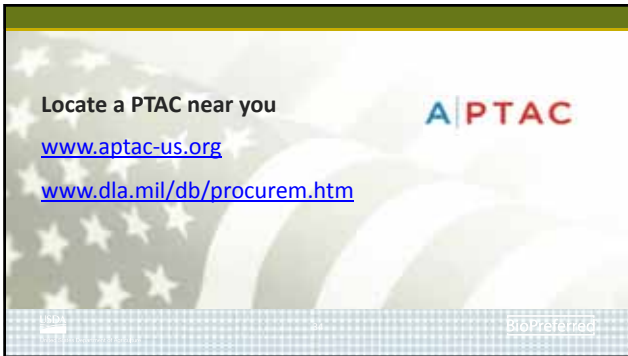
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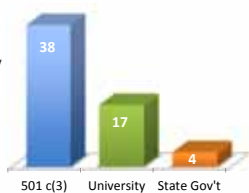
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## Partnership Model – Federal/State/Industry

Serving small and mid-sized U.S. manufacturers  
to help them create and retain jobs, increase  
profits, and save time and money

Program started because of “market failures”  
in terms of access to information,  
technical expertise, and cost




• Customers

• Integration, Knowledge Sharing, & Evaluation

Strategy	Percentage of Respondents
Shaping continuous improvement/cost reduction strategies	32%
Identifying growth opportunities	27%
Product innovation/development	21%
Sustainability in products and processes	13%
Employee recruitment and retention	10%
Financing	8%
Managing partners and suppliers	7%
Technology trends	5%
Exporting/global engagement	4%

### What NIST MEP Does

- Focus on meeting manufacturers' short term needs, but in context of overall company strategy
- NIST MEP Center areas of common strength:
  - Engineering Services for products and processes
  - Growth Services – new or expanded market opportunities
  - Lean Manufacturing
  - Quality Systems
  - Environmental Services
  - Workforce Development
- nearly 33,000 firms and over 10,000 projects per year



NIST  
National Institute of Standards and Technology BioPreferred

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### How Centers Work with Manufacturers

- **Initial contact** – group sessions, referral
- **Assessment** – informal walk-through, detailed company analysis
- **Identify** potential issues, define proposed project and approach for solving it
- **Negotiate** with company and sign project contract with fee paid to center
- **Project execution** – center staff, partner organization, and/or third party consultants
- After completion, project follow-up by center to assure customer satisfaction and explore further project opportunities

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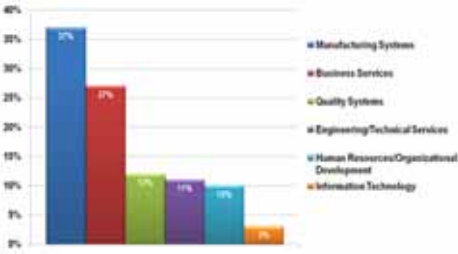
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### Service Characteristics by Type of Assistance



Type of Assistance	Percentage
Manufacturing Systems	32%
Business Services	27%
Quality Systems	15%
Engineering/Technical Services	11%
Human Resources/Organizational Development	10%
Information Technology	5%

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## Where We Are Headed


## Innovation




## Connect with NIST MEPs



**Edsel Brown**  
**Small Business Administration**



- R&D in the bioscience field is high-risk and expensive in nature
- SBA recognizes the integral role that start-ups and small firms play in the bioeconomy
- Small businesses in the bioscience industry should take advantage of the core SBA programs:
  - Capital Access
  - Counseling Services
  - Government Contracting



U.S. Small Business Administration

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SBA's mission is to help U.S. small businesses start, grow, and succeed

- \$90B portfolio of loan guarantees; 5000 lenders
- \$2.6B in growth capital through Small Business Investment Companies (SBIC)
- Ensure 23% of federal contracts go to small firms
- Free counseling
  - 78 field and regional offices
  - 1,000 Small Business Development Centers
  - 110 Women's Business Centers
  - 12,000 SCORE volunteers



U.S. Small Business Administration

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SBA programs support small businesses seeking to research, develop, and commercialize new technologies

**SBIR/STTR Programs**

- 3-Phase program providing funding to small businesses for R&D leading to commercialization
- Through FY2009, over 112,500 awards have been made totaling more than \$26.9B

U.S. Small Business Administration

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SBA programs support small businesses seeking to research, develop, and commercialize new technologies

Cluster Initiative

- 33 clusters in a variety of industries
- Linking research institutions, large organizations, and small business to foster innovation and spur commercialization




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SBA guarantees loans on reasonable terms through financing partners to small businesses that are unable to obtain funding from conventional lenders

**SBA 504 Loan Program**

- Provides small businesses with long-term, fixed rate financing
- Used to acquire fixed assets for expansion or modernization
- The maximum 504 loan size is \$5 million

**SBA 7(a) Loan Program**

- Provides financial help to small businesses with specific requirements
- These include loans to businesses in underserved communities, rural areas, and loans for businesses developing export programs




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- SBA's Office of Business Development and Government Contracting is responsible for getting federal contracting dollars into the hands of small and disadvantaged businesses
- By statute, 23% of all federal government prime contracting dollars must go to small businesses





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The Office of Entrepreneurial Development manages national networks of well respected small business assistance service providers:

- Small Business Development Centers (SBDC)
- Women's Business Centers (WBC)
- SCORE

In addition, SBA has free online training courses on many topics at [www.sba.gov](http://www.sba.gov)





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SBIR represents the single largest early stage investment tool in the government, and involves funding from 11 Federal agencies

PHASE I	PHASE II	PHASE III
Awards \$150,000 for approximately 6 months to explore the technical merit or viability of an idea or technology	Awards up to \$1,000,000 for as many as two years in order to commercialize Phase I results	In Phase III, small businesses pursue commercialization objectives resulting from R&D activities in Phases I/II




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**Small Business Technology Transfer Program**

- STTR requires the small business to formally collaborate with a research institution in Phase I and II
- Include joint venture opportunities for small businesses and non-profit research institutions
- Bridges the gap between basic research and science and commercialization of resulting innovation
- Five Federal agencies provide funds





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## Clusters

- Geographic concentrations of interconnected companies and institutions in a field
- Foster a synergistic network of businesses, university researchers, regional economic organizations, stakeholders, and investors – to develop and grow a particular industry or set of industries
- Provide targeted matchmaking, business training, counseling, and mentoring, among other industry-specific services






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- SBA Direct is a helpful first resource
- SBA.gov also has industry-specific sites dedicated to the Biotechnology, Pharmaceuticals, and Agriculture industries

<http://www.sba.gov/content/pharmaceuticals-biotechnology>

<http://www.sba.gov/content/agriculture>



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## Biopreferred.gov

Contains business resources

Guide to working with the Federal Government

Label application and resources






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