

# MEPNN Supplier Scouting Opportunity Synopsis

## Section 1: General Information

Scouting Number	2024-405
Item to be Scouted	Biodegradable Plastic Film
Days to be scouted	30
Response Due By	01/19/2025
Description	Biodegradable plastic film for agricultural mulch and packaging.
Notify Requester Immediately	No
State item to be used in	Rhode Island

## Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	New product startup
Describe the manufacturing processes (elaborate to provide as much detail as possible)	<ol style="list-style-type: none"><li>1. Material Preparation: Gelatinization of starch with additives; microorganism addition.</li><li>2. Film Formation: Solvent casting or film extrusion for thin, uniform layers.</li><li>3. Drying &amp; Conditioning: Controlled drying (~40–60°C) for stabilization.</li><li>4. Final Processing: Cutting and rolling as per specifications.</li></ol>
Provide dimensions / size / tolerances / performance specifications for the item	Thickness: 0.05–0.2 mm; Width: 1–1.5 meters (customizable), Tensile Strength: 8–12 MPa; Elongation at Break: 0.03–0.08 mm., Elastic Modulus: ~350 MPa., Degradation Time: 60–180 days in soil or compost environments.
List required materials needed to make the product, including materials of product components	Corn Starch: 2% w/v (weight/volume) in bioplastic matrix with other proprietary elements that can be disclosed with an NDA.
Are there applicable certification requirements?	Yes
Certification(s) required	ISO
Details	ISO 17033: Biodegradable material compliance.
Are there applicable regulations?	No
Are there any other standards, requirements, etc.?	Yes
Details	ASTM D6400 & EN 13432: Compost standards.
NAICS 1	
NAICS 2	
Additional Technical Comments	

## Section 4: Business Information

Estimated potential business volume	<ul style="list-style-type: none"><li>- Initial Scale: 10,000–20,000 units/month.</li><li>- Projected Annual Production: 120,000–240,000 units/year.</li></ul>
Estimated target price / unit cost information (if unavailable explain)	<ul style="list-style-type: none"><li>- Agricultural Mulch Film: \$3.50–\$4.50 per square meter.</li><li>- Packaging Film: \$5.00–\$6.00 per square meter.</li></ul>

When is it needed by?	In the next 3 to 6 months. Immediate production for pilot-scale testing is ideal.
Describe packaging requirements	<ul style="list-style-type: none"> <li>- Agricultural Mulch Film: Rolls for easy installation, customizable width (1–1.5 meters).</li> <li>- Packaging Film: Sheets or rolls, suitable for handling and transport in bulk.</li> </ul>
Where will this item be shipped?	We are a Rhode Island based company, but we are open to any facilities that are able to adopt our technology. The technology is designed to integrate into existing plastic manufacturing.

## Additional Comments

Is there other information you would like to include?	<p>The biodegradable plastic films, encompassing both agricultural mulch films and packaging solutions, are required within a six-month timeframe to align with critical project milestones. Immediate production for pilot-scale testing is strongly preferred, as it will allow for the validation of material formulations, encapsulation processes, and manufacturing methods. This testing phase will ensure that the films meet mechanical performance, biodegradability, and functional standards before scaling to commercial production.</p> <p>Packaging requirements are tailored to the specific applications. For agricultural mulch films, the preferred packaging format involves rolls with customizable widths ranging from 1 to 1.5 meters. This format supports seamless deployment in farming operations, ensuring ease of use during field application. For packaging films, the material should be delivered in either sheets or rolls, depending on customer specifications. Rolls are ideal for large-scale operations, while sheets may be more appropriate for individual or smaller-scale packaging needs. In all cases, the packaging must protect the integrity of the films during transport and storage, ensuring they retain their mechanical properties and do not degrade prematurely.</p>
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