MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2025-192
Item to be Scouted	Biodegradability-Enhancing Additive for Bioplastics
Days to be scouted	30
Response Due By	07/11/2025
Description	The item is a proprietary, bio-based additive designed to accelerate the breakdown of bioplastics in natural environments (soil, marine, and industrial composting). It is intended for use in single-use plastic alternatives, especially

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)	Blending of enzyme and polymeric compounds under low-heat conditions Microencapsulation (if needed) to improve thermal stability during plastic extrusion Milling and sieving for consistency Final product tested for performance in standard biopolymer blends (e.g., PLA, PBAT, PBS)
Provide dimensions / size / tolerances / performance specifications for the item	Physical Form: Fine powder or pellet Particle Size: =500 microns (for powder form) Thermal Stability: Up to 200°C Dosage: Effective at 1–5% weight ratio when blended with base bioplastic resin Shelf Life: Minimum 12 months in dry, ambient storage conditions Performance: Increases rate of biodegradation by >30% under ASTM D5988 and D5338 standards
List required materials needed to make the product, including materials of product components	Proprietary mix of plant-derived enzymes Agricultural waste-derived polysaccharides Optional: Natural binders (e.g., starch, dextrin) Additives may be encapsulated in a biodegradable carrier (e.g., PLA, PBAT, PBS)
Are there applicable certification requirements?	No
Are there applicable regulations?	No
Are there any other stndards, requirements, etc.?	Yes
Details	Compliance with ASTM D6400 and EN 13432 (industrial compostability) Optional future compliance: BPI certification, TÜV Austria OK biodegradable soil certification Production must comply with EPA chemical safety regulations ISO 9001 and ISO 14001 (preferred for manufacturing partners)
Additional Technical Comments	This additive is in early-stage development (Technology Readiness Level 4–5). We are seeking partners with experience in enzyme formulation, dry blending, and biopolymer compounding for pilot-scale production. Shelf-life stability and performance in various polymer systems are being tested.

Section 4: Business Information

Estimated potential business volume	Pilot Phase (2025): 100–200 kg per month Year 1 Commercial Rollout (2026): 1–2 metric tons/month Year 2 Growth (2027): Up to 10 metric tons/month (based on demand from packaging & agri-plastics sectors)
Estimated target price / unit cost information (if unavailable explain)	Pilot production target: $25–40 per kg Long-term (scaled) production goal: $8–12 per kg depending on volume and material sourcing
When is it needed by?	Initial pilot batches needed within 6 months. Scale-up delivery within 12–18 months.
Describe packaging requirements	25 kg bags or drums; moisture-resistant, biodegradable inner lining preferred for alignment with sustainability goals.
Where will this item be shipped?	Rhode Island, USA. Proximity to East Coast preferred but not required. Open to national suppliers with sustainable logistics practices.

Additional Comments

Is there other information you would like to include?	Diagrams and chemical schematics available upon request under NDA We are prioritizing suppliers with experience in natural/biodegradable additives and bio-based materials Looking for co-development or pilot production partners