Sip & Sprout: Native Seeds for Northern Virginia

Sip with Purpose. Plant for the Future. Help Pollinators Thrive!

McLean Robotics Team 71434 - Sigma7 | *FIRST* LEGO League Innovation Project

The Challenge & Solution

Urban development has fragmented pollinator pathways across Northern Virginia. **Sip & Sprout** transforms everyday coffee sleeves into biodegradable, seed-embedded planting mediums—restoring native biodiversity one cup at a time.

Team Sigma7

Veebhav Lanka • Aarav Puppala
Aarav Mishra • Aliyan Dawood

Northern Virginia Native Champions

Native Plant	Ecological Value & Pollinator Impact	Growing Tips
Clustered Mountain Mint *Pycnanthemum muticum*	Attracts **80%+ more pollinator diversity** than non-native plants; highly deer-resistant foliage.	Full sun / part shade; surface sow lightly.
Black-Eyed Susan *Rudbeckia hirta*	High-nectar powerhouse for native bees; seed heads feed goldfinches throughout winter.	Full sun; rapid, easy germination.
Wrinkle-Leaf Goldenrod *Solidago rugosa*	Critical late-season energy source for migrating Monarchs and overwintering bumblebee queens.	Sun to light shade; non-allergenic.
Smooth Blue Aster *Symphyotrichum laeve*	Vital larval host for Pearl Crescent caterpillars; provides late autumn nectar through October.	Well-drained soil; presses easily into dirt.

How to Plant Your Sleeve

1. **Separate:** Detach biodegradable sleeve from cup.
2. **Tear:** Tear seed area into small pieces.
3. **Sow:** Lightly press onto damp topsoil (do not bury deep).
4. **Water & Overwinter:** Plant in late fall; after winter cold stratification, seeds sprout in spring within 7–14 days of warm weather!

Field Proof & Community Impact

- **88% Drinkers** prefer cafes using Sip & Sprout sleeves.
- **74% Surveyed** committed to planting their sleeves.
- **5 Pilot Cafes** tested; generated $400 initial revenue.
- **500 Sleeves** launching at Vienna Farmers Market (2,000+ seeds).

Scientific Advisors & Industry Partners

- **Dr. Cynthia Huebner, PhD** – US Forest Service R&D (Seed Banks & Ecology)
- **Dr. Rebecca E. Hirsch** – Biologist & Author (Pollinator Habitat Research)
- **Margaret Fisher** – Plant NOVA Natives (Ecotypes & Invasive Prevention)
- **Jessica Frakes** – Meadowlark Botanical Gardens (Forb Propagation)
- **Sterling Askin** – Hill House Native Nursery (Pollinator Richness)
- **Mark Fiely** – Ernst Conservation Seeds (Commercial Processing)

Scan to Track Sprouts & Take the Poll!

Visit our interactive portal to verify your local zip code, log seedling germination, or partner with us:

https://www.roboticsmclean.org/stem-research/sip-and-sprout/

Email: roboticsmclean@gmail.com | McLean Robotics Team 71434 Sigma7