

## Success story of Biopolymer in Farmers Fields

Proud to share a meaningful milestone from our field work at ICAR-IIOR

In Kharif 2025 ICAR-IIOR implemented a biopolymer-based multilayer seed-coating technique for groundnut across tribal farmer fields under open-field conditions. Working closely with local farmer groups and partners, we translated lab-scale layer-by-layer seed technology into on-farm practice — and the results are very encouraging.

Key outcomes:

- Improved seed handling and sowing uniformity in low-input, smallholder conditions.
- Faster and more uniform emergence, with measurable improvements in early vigour.
- Enhanced protection of seed-applied biologicals and crop inputs, reducing the need for repeated prophylactic sprays.
- Lowered disease and insect incidence during early crop growth (better crop stand health).
- Substantial yield gains observed in participating plots (field observations consistent with our prior controlled studies showing ~30–40% yield uplift under optimized conditions).

Eco-friendly profile: biodegradable biopolymers reduced pesticide load and simplified multi-input delivery.



Why this matters: tribal and smallholder farmers face constraints of labour, input access and variable seed quality. The multilayer biopolymer approach packages multiple crop inputs (bioagents, nutrients, protectants) into a single, field-ready seed treatment — improving resilience, cutting costs, and supporting sustainable intensification.

Huge thanks to our farmers for their trust, and to all collaborating teams and technicians who made on-farm scaling possible. We are excited to expand these trials and explore commercialization pathways that keep costs affordable and benefits local.

If interested in collaboration, technology transfer, or pilot testing in new regions, please get in touch — happy to connect and share data and protocols.

#SeedTech #Biopolymers #SustainableAg #Groundnut #SmallholderFarming #ICAR #AgriInnovation