Corteva Call for Proposals: Novel solutions to enable intercropping practices for agricultural intensification

Sponsor

Corteva

Description

Most row crop systems in North America are currently grown as annual monocultures. Improving sustainability in these systems and meeting the growing world demand for food, fuel and fiber requires a new paradigm guided by sustainable intensification practices. Like adding additional work shifts at a manufacturing plant to leverage more of the total capacity, land use efficiency may be increased by leveraging unused light, soil, and water resources to yield more per acre.?

Innovative multi-cropping systems with reduced or removed fallow periods not only intensify agricultural output, but also protect the soil, keeping it covered throughout the year. However, logistical challenges of planting during the post-harvest period hinder adoption of these systems. Inter-seeding before harvest may lower the barrier, but requires addressing variables such as planting dates, time to maturity, and ability to inter-seed, germinate and establish seedlings within a standing crop before harvest. Furthermore, establishing new multi-cropping systems in a region will require new agronomic practices and?breeding efforts for optimized varieties.

Corteva believes innovation can have a positive impact on the adoption of multi-cropping systems and are specifically interested in collaborating with public and private sector scientists, organizations and farmers to enable inter-seeding and the establishment of seedlings within multi-cropping systems that include corn, soybean, canola or sorghum.

Eligibility

Solutions of interest include:

- Physical methods (equipment or hardware)
- Management practices applied to any crop in the system
- Seed treatments (chemical or physical)
- Breeding strategies
- Any other novel method or technology to address this challenge.

Corteva's must-have requirements are:

- The multi cropping system includes a minimum of one traditional commodity crop (corn, soybean, canola, or sorghum)
- Novel methods that enable inter-seeding into a standing crop, seed germination at a desired time, or seedling establishment in an intercropping environment
- Ability and willingness to carry out relevant field trials for the proposed system in small plot trials or on-farm
- Scalable application (e.g., path to use at 100+ acre scale must be clearly described if not demonstrated in the proposed solution).

Corteva's nice-to-have requirements are:

- Data supporting the proposed method (productivity, pest and weed impact, soil health impact, etc)
- Estimated and/or modeled value potential.

What’s out of scope:

- Intercropping systems and associated enabling technologies limited to tropical environments
- Inter-seeding systems that are widely known including:
    - Broadcast seeding untreated winter rye into corn/soybean
    - Relay cropping soybeans into wheat using established methods (e.g., row-skipping).

Funding Availability

Funding up to $50,000 USD?inclusive of?a maximum of 10% indirect costs

Special Notes

Additional details can be found on Halo's RFP website. [1]

Deadlines

If College-level review is required, your College will communicate its earlier internal deadlines.

Type	Date
External Deadline	Thursday, August 31, 2023 - 4:30pm

Alert Classifications**Category:**
Funding Opportunities and Sponsor News

Disciplines:
Health and Life Sciences
Physical Sciences and Engineering

Source
URL:https://www.uoguelph.ca/research/alerts/content/corteva-call-proposals-novel-solutions-enable-intercropping-practices-agricultural

Links
[1] https://www.halo.science/research/agriculture/novel-intercropping-practices-for-agricultural-intensification