

R&D Manager

Summary of the Organization

Malnutrition is one of the greatest barriers to the world's poorest escaping poverty. The 900 million people in Africa and Central America who eat corn daily are some of the most affected, with nearly half of Guatemala's children suffering from stunted growth. Semilla Nueva launched the world's first social enterprise dedicated to the development, production, and sale of more nutritious, biofortified corn seed directly to small farming families. Farmers buying our seed increase their yields and incomes, while improving the diets of hundreds of thousands— and someday millions—of the world's poorest consumers. It's a scalable, sustainable way to give farming families what they most want, while providing malnourished children with what they most need. Our goal is to prove this model in Guatemala while improving the incomes of tens of thousands of families and the diets of millions of Guatemala's poorest, before expanding the model through Central America and Sub-Saharan Africa. At Semilla Nueva, we're obsessed with impact at scale.

In 2018, our first year of sales, our seed took 1.3% of the Guatemalan seed market with nearly 2,000 families purchasing. By 2019 we reached nearly 5,000 families — covering more of our organization's costs through sales, while we deeply invest in impact evaluation, new seed development, and collaborations to scale our seeds internationally.

We're a hybrid social enterprise (non-profit owns a for-profit company) of 23, mostly Guatemalan, staff. We work with some of the world's leading scientists at organizations such as CIMMYT, Harvest Plus, and universities like Purdue, Iowa State, Tufts, and Harvard. Our donors include some of the most prestigious in the space of impact philanthropy, including Cartier Philanthropy, Mulago and the U.S. Government. Our seeds are based on conventional breeding (non-GMO), although we are not opposed to well-tested biotechnology. Our work has led to rapid growth and international recognition, including an Ashoka fellowship, Mulago fellowship, and Forbes 30 under 30 for our founder.

Our team shares a common background. Whether from the private sector or NGO world, we have seen that most international development projects fail because they don't focus on finding the intersection of what the world's poorest want and what they most need. We're looking for new team members who are smart, hungry, and humble—and who are just as obsessed with innovative ways to end world poverty as we are.

Summary of the Position

We are currently seeking a R&D Manager to lead the development of new seeds and new technologies to improve the economic and health impacts we deliver to rural populations. This individual will be based full-time in Guatemala City, with up to 50% travel to the field. Semilla Nueva maintains a basic seed evaluation program which evaluated new hybrid seeds annually from research partner CIMMYT. We have recently begun a backcross breeding program, which introgresses biofortified genetics into high yielding, conventional materials and has required the launch of a high throughput nutrition lab with partners in Guatemala. We have also begun initial research into the use of zinc fertilizers for agronomic Biofortification and hope to explore biological control mechanisms to reduce aflatoxins. All of these efforts are designed to create new products which can increase farmer incomes and improve health outcomes at scale.

These efforts, up until now, have been spread out in various departments of the organization with technical assistance from experts from several international organizations. Semilla Nueva is now moving to formalize these various elements in a single R&D program. This position will be in charge of leading this program.

We are looking for a highly innovative and experienced individual who can balance multiple priorities, simultaneously working with experts on difficult technical problems as well as managing field trials and field staff. Semilla Nueva is highly prioritizing technical abilities related to marker development and selection for this position. This position will directly supervise a field team of three Guatemalan staff and research in diverse geographical conditions.

Qualifications

Required:

- M.S. in crop breeding, agronomy or an associated field
- Proven experience conducting field research (protocol design, trial management, data collection)
- People and resources management: ability to coordinate, manage, and prioritize workload to meet objectives and timelines
- Excellent data analysis using statistical packages and data presentation skills
- Academic research abilities
- Strong networking and inter-organizational collaboration skills
- Advanced Spanish and fluent English or fluent Spanish and advanced English

Desired:

- PhD in crop breeding
- Hybrid corn breeding experience
- Experience in genomic selection

Expectations

- Minimum commitment two years
- Ability to work independently, proactively, and prioritize/coordinate a variety of activities
- Ability to work effectively in a multicultural team
- Comfortable working in a fast-paced, constantly evolving work environment
- Must be comfortable driving in Guatemala and have a valid Driver's License from home country

Specific Tasks

- 1. Manage field research program** – This position will lead a Guatemalan field research team with a diverse set of projects as detailed below. The R&D manager will thus need to work with Guatemalan field staff to balance multiple field projects, train staff, and ensure research trial quality, data collection, overall departmental organization.
- 2. Develop a biofortified backcross program** – This position will work to develop and then expand a backcross program in Guatemala. This will first involve overseeing the use of well-established methodologies to introgress QPM, high zinc, and high iron genetics into new conventional materials on an annual basis. As the program develops, focus will move to developing molecular markers for these traits and potentially combining the backcross program with a DH breeding program. Strategic decisions in pipeline development and management will require familiarization with the literature on QPM and

high zinc QPM breeding, as well as consultation of our technical partners at CIMMYT and other institutions.

- 3. Oversee expansion of nutrition lab** – Semilla Nueva is collaborating with a local nutrition center to construct a high throughput nutrition lab. While this position will not run the lab directly, it will be responsible for supervising protocol development, problem solving, and the relationship with partner scientists. This laboratory currently is working with bacterial assays and will expand to incorporate XRF analysis.
- 4. New technologies** –This position will evaluate new technologies that could provide additional health impacts to small farmers. This will include the proof of concept testing on new technologies such as agronomic biofortification, biological control for aflatoxins, and others. This will lead to the opportunity for publications. After proof of concept has been realized, this position will collaborate directly with Semilla Nueva’s operations department for preparation of go to market strategies with these new technologies.
- 5. Representation of Semilla Nueva in the scientific community and in proposal development** – This position will attend conferences, workshops, and workgroups on biofortification and will be part of the Semilla Nueva team interfacing with CIMMYT, Harvest Plus, and other technical partners. It will also lead the development of new proposals for partnership and funding to further develop the program.

Before applying, please review our website: www.semillanueva.org, including blogs and annual reports.

To apply please send your cover letter and CV to trabajo@semillanueva.org. Please note “R&D Manager” in the subject line of your email.