

Idaho Incubation Fund Program

Progress Report Form

Proposal No. IF16-006
Name: Matthew J. Morra
Name of Institution: University of Idaho
Project Title: Plant Extracts as Natural Pesticides and Potato Sprout Inhibitors
Reporting Period: July 1, 2015-January 2, 2016

Information to be reported in your progress report is as follows (attach additional information as needed):

1. Summary of project accomplishments for the period just completed and plans for the coming reporting period:

Sufficient amounts of our sprout inhibitor biopesticide have been produced such that our business partner the 1,4GROUP in Meridian, ID has been able to test efficacy on 20 pounds of potatoes, followed by a larger scale test on 200 pounds of potatoes. In both tests, our product has proven extremely effective. We have sent the 1,4GROUP three separate batches of our extract and each has proven efficacious. Plans are underway to test our product on a 2,000 pound lot of potatoes. Production of a sufficient quantity of product for such testing is ongoing.

Bioherbicidal formulations of our product are ready for shipment to our business partner in Californian, Farm Fuel Inc. Application procedures equivalent to a pesticide label have been drafted. Greenhouse tests of the product to be shipped have demonstrated that it will be phytotoxic to weeds and thus a viable bioherbicide.

We are continuing to scale up production based on positive results and successful testing.

2. Summary of budget expenditures for the period just completed (**include project burn rate**):

Equipment was purchased to dry the seed meal extracts as proposed. The cost of the equipment was \$43,309. Salary dollars in the amount of \$18,700 have not been expended, but a full-time employee has been hired and the burn rate for those dollars is approximately \$3,000 per month. Six months of salary will fully expend the budget by the project end date. We are on track with our spending and expect to expend the budget within the timeline as proposed.

3. Numbers of faculty and student participation resulting from the funding, including internships:

One staff person is supported by the dollars provided.

4. List patents, copyrights, plant variety protection certificates received or pending:

Provisional Patent – Mustard Meal Extracts as Biopesticides. Morra, M.J., I. Popova, and J. Dubie. US 62/190,552.

5. List technology licenses signed and start-up businesses created:

An Option Agreement for Product Evaluation was signed with the 1,4GROUP. An Option Agreement with Farm Fuel, Inc. is in review.

6. Status of private/industry partnerships (include enough information to judge level of engagement):

Both the 1,4GROUP and Farm Fuel, Inc. are fully engaged. A group of four representatives from the 1,4GROUP visited our facility here in Moscow. The General Manager for the Meridian location was present. I reciprocated by visiting the 1,4GROUP's testing laboratory in order to get a better view of how sprout inhibitor testing was conducted. Plans to utilize the University of Idaho Food Technology Center in Caldwell for scale-up activities were discussed. Discussions are ongoing about expanding testing on other stored products such as sweet potatoes.

Farm Fuel, Inc. is developing a contract to have mustard seed crushed in the Pacific Northwest. This will facilitate co-locating an extraction facility to meet larger production needs for the extracted bio pesticides.

Both companies remain fully engaged with our efforts. Positive testing results have improved and expanded our interaction.

7. Any other pertinent information that will indicate to the council that the project is meeting satisfactory progress.

The equipment necessary for our project was purchased, installed, and is now being used to produce our powdered product as proposed. Testing has shown that the products from our efforts are indeed effective. Business partners continue to be enthusiastic. The 1,4GROUP has been especially supportive and continues to test larger and larger lots of potatoes for sprout inhibition based on positive results. Farm Fuel is expanding their company's operations to the Pacific Northwest, an expansion that will improve our interaction and business connection. We are progressing well towards commercializing our products.