

## Call for Letters of Intent

Released – February 7, 2025

Manitoba Pulse & Soybean Growers makes an annual investment in pulse and soybean research to address production challenges and market opportunities. Our vision is *Manitoba farms sustainably producing profitable, quality pulse and soybean crops*. To achieve this, our investments focus on 1) improving yield and capturing new markets, 2) reducing losses from pests and 3) improving soil quality and agri-ecosystem health.

MPSG supports research at scales from the lab bench through small field plots to commercial scale on-farm tests. Research in the fields of economics and market analysis may also receive support. Letters of intent and full proposals must demonstrate how project results would improve farm gate returns from pulse and soybean production.

MPSG is seeking discussions with researchers on the following research priority areas for *projects starting in 2026*:

### ***Showcasing the environmental benefits of annual legumes in a cropping system***

Due to the inherent environmental benefit of biological nitrogen (N) fixation capability in annual legumes, these crops play a significant role in reducing greenhouse gas emissions (GHG) when incorporated in cropping systems. Expansion of our dataset and knowledge of GHG emissions and carbon sequestration in Manitoba will help promote the benefit of growing pulses and soybeans.

### ***Abiotic stress management for soybeans***

Abiotic stressors like drought, salinity and frost remain obstacles to soybean production in Manitoba, though not always on a consistent basis. Both innovative and practical solutions (e.g., field zone management, genetic resistance) are needed to improve the resilience of soybeans to these factors when they occur, to continue positioning this crop as a mainstay in the province.

### ***Improving agri-ecosystem and soil health related to soybeans and pulses***

To build a comprehensive story on annual legumes in rotation from a soil health perspective. Possible research areas may include exploring tillage impacts further, re-visiting residual N-credits at various sites across Manitoba, continuing to explore microbial activity dynamics or other novel questions in this space.

### ***Prevention and management of top pests in soybeans, peas and dry beans***

Find solutions to prevent and manage the top pests affecting soybean, pea and dry bean crops in Manitoba. Root rots like *Aphanomyces euteiches* or *Fusarium spp.* in field peas or *Phytophthora sojae* in soybeans are among the top concerns.

Which management techniques can be used in an integrated approach to minimize pest risks? How can we identify and reduce the spread of pesticide resistance (e.g., broader scale testing for *Mycosphaerella* blight group 11 resistance)? Can we revisit outdated pest assessment techniques for more accurate results (e.g., updated pea aphid thresholds for Western Canada for current pea varieties)?



### ***Fine tuning production practices for dry beans, soybeans and field peas***

With basic agronomic practices now established for pulses and soybeans in Manitoba, there is a need to take our knowledge to the next level to improve production potential and to answer new and outstanding questions. Examples of current unknowns identified by Manitoba farmers:

*Dry beans* – How different seed handling systems impact seed damage, ideal seed depth range, replanting thresholds and replant seeding rates, land rolling, early seeding dates in central Manitoba, late seeding dates in southwestern Manitoba, expanded investigation of integrated weed management techniques

*Soybeans* – Assessment of pre-seed rolling in Manitoba on fields without previous corn residue, rolling to cause damage that induces branching and blooming

*Field peas* – Validation of starter N practices in Manitoba, rescue N treatments

### ***Value-added research on soybeans to improve market quality and capture new markets***

Research focused on soybean qualities that enhance demand in feed and human food markets. For example, studies on soybean crude protein content, seed size and nutritional value in various animal diets.

### ***Elevating “alternative” annual legume crops (e.g., non-GM soybeans, faba beans, lupins, adzuki beans) by filling research gaps***

Do one or more of these “alternative” legume crops have potential for a significant foothold in Manitoba if supported by additional research? For example, a lack of cost-effective, selective weed control options for non-GM/conventional soybeans has been identified as a major production obstacle. Beyond agronomic practices, what other focus areas along the production chain might elevate one of these lower-acre legume crops in Manitoba?

### ***Verifying small-plot research results using commercial scale on-farm testing methods***

Given the established awareness of on-farm testing in Manitoba, MPSG is encouraging researchers to explore opportunities to test practices and principles at the farm level for validation and better uptake of research. Projects suited to this level of testing would include two to three treatments, pared down from the small-plot level.

### ***Optimizing equipment selection***

Advances in equipment are offering improved efficiency on the farm. Basic pulse and soybean practices may be enhanced by the right choice of equipment. However, farmers must be able to sift through equipment choices with confidence in the functionality and to justify the cost. MPSG is seeking research to assist farmers through this changing landscape.

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Researchers interested in collaborating on a project in the above areas should contact Daryl Domitruk by **March 21, 2025**. Please be prepared to state the objective, relevance, partners and estimated total cost of the project.

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