



Pulse Canada

REQUEST FOR PROPOSAL

RFP No. 2021-MODIFICATIONS

Technical Guide to Starch Modifications

August 24th, 2021

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Technical Guide to Starch Modifications

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SECTION I – GENERAL INFORMATION

Introduction

Pulse Canada is commissioning a white paper to provide an overview of existing starch modification research and technologies that will highlight their relevance in food, cosmetic and industrial applications. This report will be communicated to industry stakeholders in an effort to leverage existing knowledge in this field and highlight where successful modification of pulse starches has already been achieved or may be applied in order to increase global utilization.

Background

Pulse Canada has set a '25 by 2025' target for achieving incremental use of 25% of Canadian pulse production (2 million tonnes) in non-traditional markets or end-use applications by 2025. Pulse specific strategies were developed to meet the 2 million tonne target based on current production levels in Canada, available ingredient formats, processing capacity and projected growth. For peas, the strategy is focused on increasing domestic processing by 500,000 tonnes by 2025. Given the high demand for plant-based proteins, the ability to achieve this target relies on the identification of new and upcoming markets for the remaining coproducts, specifically starch. Pulse Canada also acknowledges the increased interest in value-added processing of other pulses and therefore would like to ensure and be able to develop the full market potential of starches across all pulse types (i.e peas, lentils, beans and chickpeas).

Pulse Canada Profile

Pulse Canada is the national association representing Canadian growers, processors and exporters of pulse crops – peas, beans, lentils and chickpeas. Pulse Canada works to improve the profitability, and thus the viability, of the industry by enhancing value and reducing costs.

Pulse Canada works under the leadership and direction of four provincial grower associations (Alberta Pulse Growers Commission, Manitoba Pulse & Soybean Growers, Ontario Bean Growers, and Saskatchewan Pulse Growers) and the processors and exporters of Canadian pulses that are members of the Canadian Special Crops Association (CSCA).

Pulse Canada works to enhance value by developing new market opportunities for Canadian pulses and creating efficiencies for trade and transportation of pulse crops.

SECTION II – TERMS & CONDITIONS

1. Statement of Confidentiality and Non-Disclosure

Bidders agree to standard business practice related to the confidential treatment of information provided by the Pulse Canada while this agreement is in effect, and at all times thereafter, the successful Bidder and any officers, employees or agents of the successful Bidder will:

- Treat as confidential all information, data, documents and materials acquired or to which access has been given in the course of, or incidental to, the performance of the agreement,

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- Not disclose or permit to be disclosed, to any person, corporation or organization such information, data, documents or materials without first obtaining written permission from Pulse Canada; and
- Comply with any rules or directions made or given by Pulse Canada with respect to safeguarding or ensuring the confidentiality of such information, data, documents or materials.

This document must not be copied in whole or in part for any reason other than in the course of providing the information requested, without the express written permission of Pulse Canada.

2. Proposal

The Bidder offers to provide to Pulse Canada, upon the terms and conditions set out in this RFP, the services detailed herein and at the price set out in the proposal (The “Proposal”) or otherwise agreed to by the parties.

3. Price Quotation/Evaluation Period

The Bidder agrees that the prices quote in its Proposal are firm and must be valid for acceptance by Pulse Canada for 60 days from the RFP submission closing date. All prices must be quoted in Canadian dollars.

4. Schedule of Events – Criteria Dates

Availability of RFP	August 24, 2021
Deadline for submission of responses	September 17, 2021 no later than 4:00pm CDT
Anticipated notice of intent to award	September 24, 2021
Anticipated contract start date	October 1, 2021
Final Report Due	January 31, 2022

5. Proposal Acceptance

Pulse Canada reserves the right to award the RFP in whole or in part to the best interest of Pulse Canada. The successful Bidder’s project team or resource will report to the Senior Manager, Food Innovation and Marketing at Pulse Canada. The Bidder, if successful, agrees by submitting a proposal to abide by the terms and conditions of the RFP as specified.

6. Response Disqualification

Proposals received from a Bidder after the closing deadline WILL NOT BE ACCEPTED. Pulse Canada reserves the right to reject any and all response, and the lowest or any bid will not necessarily be accepted.

7. Evaluation of Responses

All responses to this RFP will be evaluated on the basis of the following factors:

- Bidder’s understanding of the Statement of Work as stated in Section IV and ability to meet the specifications stated in this section
- Bidder’s reputation and experience

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- Cost competitiveness

8. Proposal Costs and Expense

This RFP does not commit Pulse Canada to pay any cost incurred in the submission of proposals or to contract for any services.

9. Publicity and Corporate Identification

A Bidder shall not use Pulse Canada identification or name in any advertisement, promotion or otherwise without the prior written consent of Pulse Canada, which may be delayed or withheld without explanation.

10. Governing Laws

This RFP is governed and interpreted in accordance with the laws of the Province of Manitoba and the federal laws of Canada applicable therein.

11. Contact

If you have any questions regarding his RFP, please contact:

Janelle Courcelles
Director, Quality & Processing
Pulse Canada
Telephone: 204-297-5907
Email: jcourcelles@pulsecanada.com

12. Right to Approve Subcontractors

Pulse Canada reserves the right to approve any subcontractors used by the Bidder and the Bidder must have the prior written approval of Pulse Canada prior to contracting any subcontractor for goods or services related to this RFP or the subsequent agreement.

SECTION III – INSTRUCTIONS TO BIDDERS

This section describes the Proposal requirements.

1. Submission of Proposals

All proposals must be submitted via email, be clearly identified and **submitted no later than 4:00PM CDT on September 17, 2021** to:

Janelle Courcelles
Director, Quality & Processing
Pulse Canada
Email: jcourcelles@pulsecanada.com

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Bidders should make sure they receive confirmation of the successful receipt of their submission. Bidders must address the requirements described in Section IV – Statement of Work. They must also provide cost information as it is described in Section VI- RFP Response requirements.

All proposals received by Pulse Canada will then be the custody of Pulse Canada. Therefore, proposals shall not be returned to Bidders.

The successful candidate will be chosen by September 24, 2021 and all vendors will be notified of Pulse Canada's decision.

2. Responding to RFP Items

2.1 Complete Proposals

Submissions must propose full specifications for all of the relevant requirements detailed in Section IV – Statement of Work of the RFP. Submissions that do not present complete proposals may be at a disadvantage or may be disqualified.

2.2 Additional Specifications/Alternative Approaches

Submissions may include additional specifications for items not covered by the RFP that the Bidder considers necessary and integral to its proposal. Please include a detailed rationale as to why these specifications should also be considered for adoption.

SECTION IV – STATEMENT OF WORK

Background

Canada is a global leader in the production and exportation of peas. In recent years, there have been significant investments to expand the value-added processing of peas into ingredients such as flour, protein, starch and fibre. It follows that the Canadian pulse industry has an opportunity to increase global utilization of these derived ingredients given the current consumer interest in plant-based products and the increasing recognition that purchasing decisions are linked to environmental sustainability. However, a heavy focus has been placed upon the utilization of pea proteins, with less attention given to other co-products of fractionation such as starches and fibres. As starch represents the majority proportion of the seed, an increased production of protein has emphasized a need for the industry to identify new and potential markets for pea starches.

Starches can either be isolated from pulses using wet processing techniques, or concentrated during air classification to produce a starch-rich product. Wet methods to isolate starch are able to achieve much higher levels of purity (a.k.a “isolates” >90%) compared to air classified products (a.k.a “concentrates”) which will typically range from 65-80% starch and contain anywhere from 8-20% of the remaining seed constituents such as protein and fibres. Typically, wet produced starches are used in the production of ethanol where dry produced starches are sold to animal feed, desirable because of the residual protein levels. Although these applications can move high volumes of starch, they typically provide a low value back to the processor. However, transition away from these low value applications of pulse starches is difficult due the distinct functional performance of pulse starches versus competing, more traditional starches (i.e corn, etc.) and cost constraints.

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Physical, enzymatic and chemical modifications are used to alter the performance of starches in desired end-use applications, however research evaluating the modification of pulse starches is limited. This white paper is intended therefore to leverage the existing knowledge on the modification of starches from all sources while providing an overview of technologies that may be applied to pulses in order to improve their performance in food, cosmetic and industrial applications. The following report should:

1. Provide a clear overview of existing physical, enzymatic and chemical modification technologies
2. Highlight the relevance of each modification in food, cosmetic and industrial application
3. Highlight successful areas of pulse starch modification and identify areas of further research

SECTION V – EVALUATION CRITERIA

Proposals will be evaluated based on the following criteria:

- Bidder's understanding of the terms set out in Section III and ability to meet the specifications states in this section
- Bidder's demonstrated skills, reputation and experience
- Cost competitiveness

SECTION VI – BIDDER'S RESPONSE

RFP responses must include the following:

- Description of proposed approach to the services requested in Section IV - Statement of Work
- If Bidder is subcontracting any portion of deployment, the Bidder must provide the name and contact information of subcontractor
- Itemized costs of the services you will be providing to Pulse Canada