

Alberta Pulse Growers

Request for Proposal

Evaluation of Emission Reductions and Cost Savings in Sectional Control Air Seeders, Drills and Sowing Equipment across the Canadian Prairies.

October 7th, 2019

Introduction

Alberta Pulse Growers is issuing this Request for Proposal (RFP) to acquire the services required to complete the evaluation of emission reduction and cost savings in sectional control air seeders, drills and sowing equipment in the Canadian prairies.

Background

Sectional control technologies are currently available for modern day sowing, seeding and planting equipment. There exist many factory models and after market add-on technologies with variable rate by section including various widths and even individual seed openers. These technologies have cost savings and environmental savings including emission reduction.

Purpose

This project will provide proof of statement through literature review of manufacturer specifications, through calculations based on various field shapes. This project aims to enhance the understanding of the overall emission savings and climate change mitigation these technologies may afford.

This RFP is for two Phases: Phases One and Two.

Phase One: Phase One will enumerate the sectional control technologies that exist currently on the prairies along with manufacturers technical specifications and estimations.

Phase Two: Phase Two will evaluate each technology for differences in average overlap by collecting measurable data to give an estimation of costs savings and climate savings (due to elimination of double fertilization and NOx emission mitigation) as well as reduction in draft from openers lifting and fuel/horse power requirements and other quantifiable metrics.

Phase two may include software that estimates field efficiencies with boundary mapping as well as obstacles, misshapen fields and headland angles to estimate climate and cost savings between the different technologies and section widths.

Upon completion of Phase Two, further work will include exploring a potential carbon offset through protocol development to encourage the adoption of these nascent and expensive equipment technologies. Biological Carbon Canada, as an anchoring partner, can facilitate the exploration further.

The accelerated adoption of these technologies has the potential to bend emission curves in the ag sector as well as mitigate further removal of biodiversity hotspots that provide ecosystem services while not sacrificing field logistical efficiency. The program outcome aims for the enhancement of vegetative buffer strips and biodiversity hotspots such as fence-lines and stone-piles that provide ecosystem services, mitigate the overlap of nitrogen and other conventional fertilizers, save producers money and support the more rapid adoption of innovative technologies manufactured, assembled and mass produced in rural communities across the Canadian prairies.

Fuel use may be reduced with some technologies which lift openers via GPS and software when not needed. Avoiding overlap of nitrogen, phosphorous and other fertilizers allows emission savings as well as excessive nutrients that are prone to runoff and potential downstream impacts including

eutrophication. Reduced fertilizers by eliminating overlap also reduce NOx gas emissions through volatilization and de-nitrification further reducing GHG emissions.

The collection and analysis of data of the various sectional control technologies will allow researchers to better understand the precise emissions savings and nutrient loading in fields when planted. This information can also be converted into cost savings for growers.

This information will be used for grower extension and adult education including Return on Investment for the lifetime of the technology in terms of fuel/seed/fertilizer savings, and also GHG reductions and avoided eutrophication and nutrient loading.

Terms and Conditions

Statement of Confidentiality and Non-Disclosure

Bidders agree to standard business practice related to the confidential treatment of information provided by Alberta Pulse Growers 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;
- will 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 Alberta Pulse Growers; and
- will comply with any rules or directions made or given by Alberta Pulse Growers with respect to safeguarding or ensuring the confidentiality of such information, data, documents or materials.

1. 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 expressed written permission of Alberta Pulse Growers.

Bidder Information Usage

In completing and submitting this RFP the Bidder and Alberta Pulse Growers understand and agree to the following:

- Bidder's confidential information must be clearly identified as "Confidential Information". Subject to any rights of Alberta Pulse Growers pursuant to this document to release or disclose information, Alberta Pulse Growers will treat in a confidential manner any information submitted in the proposal which is clearly identified in writing by the Bidder as confidential.

Proposal

The Bidder offers to provide to Alberta Pulse Growers, 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.

Price Quotation/Evaluation Period

1. The Bidder agrees that the prices quoted in its Proposal are firm and must be valid for acceptance by Alberta Pulse Growers for sixty (60) days from the RFP submission closing date. All prices must be quoted in Canadian dollars.

Guidelines for Responses

1. We request Bidders to explicitly indicate whether their services meet our specific requirements.
2. To allow for greater ease in comparing and evaluating, your response must correspond with the structure and numbering convention of this document.
3. Bidders are cautioned to carefully read and follow the procedures required by this RFP, and to comply with all requirements. Deviation from these requirements may be cause for rejection.

Schedule of Events – Timeline

| | |
|--|--------------------------------|
| Availability of RFP | October 7 th , 2019 |
| Deadline for submission of responses | October 25 th 2019 |
| Anticipated evaluation of responses | November 1 st 2019 |
| Anticipated notice to reward via email | November 4 th 2019 |
| Anticipated contract start date | November 8 th 2019 |

Proposal Acceptance

Alberta Pulse Growers reserves the right to award the RFP in whole or in part to the best interest of Alberta Pulse Growers.

The successful Bidder's project team or resource will report to the project management team, led by Alberta Pulse Growers.

The Bidder, if successful, agrees by submitting a proposal to abide by the terms and conditions of the RFP as specified. Both the RFP and the Bidder's proposal form part of the contract.

Response Disqualification

Proposals received from a Bidder after the closing deadline WILL NOT BE ACCEPTED.

Alberta Pulse Growers reserves the right to reject any and all responses, and the lowest or any bid will not necessarily be accepted.

Proposals that are incomplete, conditional, illegible, obscure or that contain irregularities of any kind may be rejected.

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 and ability to meet the specifications stated in this section.
- Bidder's reputation, experience and financial stability.
- Cost competitiveness.
- Proposed benchmarking methodology for report.
- Alberta Pulse Growers reserves the right to interview potential resource(s) and reject or accept the Bidder's proposal based on the interview results.

Proposal Costs and Expense

This RFP does not commit Alberta Pulse Growers to pay any cost incurred in the submission of Proposals, or the cost incurred in making necessary studies for the preparation thereof, or to

contract for any services. A Bidder shall take into account that, in any Proposal and negotiations relating thereto for an agreement, all expenses including travel, living, incidental and other out-of-pocket expenses shall be borne solely by the Bidder.

Communication between Bidders

Bidders shall not discuss or communicate with any other Bidder or any employee, representative, or agent of any other Bidder about the preparation of its Proposal. Each Proposal shall be prepared without any connection, knowledge, comparison of information or arrangement with any other Bidder (or any employee, representative, or agent thereof) and each Bidder will be responsible to ensure that its participation in this RFP process is conducted in accordance with all applicable laws, fairly and without collusion or fraud.

Conditional Approval

The Agreement resulting from this RFP may be conditional to the approval of Alberta Pulse Growers assembled Team including Alberta Agriculture and Forestry, Alberta Wheat Commission and Canola Council of Canada staff.

Publicity and Corporate Identification

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

Governing Laws

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

Contact

Although we have tried to be as thorough as possible, we recognize that you may need clarification or additional information in certain areas. Therefore, we invite you contact the following person:

Nevin Rosaasen

Policy and Programs Specialist

Alberta Pulse Growers

#101, 4721 47 Ave.

Leduc, Alberta

Canada

T9E 7J4

Telephone: 780-986-9398 x 105

E-mail: nrosaasen@albertapulse.com

All queries will be requested in writing and will be responded to, via communication to all Bidders simultaneously.

Cancellation of RFP

Alberta Pulse Growers reserves the right to cancel the award of this RFP for any reason upon thirty (30) days written notice without liability to Bidders and reasons for cancellation need not be given.

Right to Approve Subcontractors

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

Statement of Work

Phase One: The initial Phase of this project and RFP is to identify and enumerate all of the original equipment manufacturer (OEM) and after market sectional control technologies for air seeders, drills and sowing equipment currently available in the Canadian Prairies. This initial phase is a relatively short exercise, amassing and enumerating the different technologies available, along with the manufacturer technical data sheets and specifications. Phase one will also aim to categorize the different technologies into three or four subsets based on similar specifications (i.e. Five-foot section, individual opener, etc.). Phase One is a general literature review of those technologies available, in order to set the stage for Phase Two.

Phase Two: The second Phase of the project will calculate and assess manufacturers claims using software to determine the emission and cost savings of the technologies. This testing will be done in the 2020 planting season, through ground truthing on select pieces of equipment. The data will be analyzed and calculations provided based on different scenarios (i.e. Fields with 5%,10% and 15% overlap depending on field shapes and obstacles). Phase Two will also include the preparation of preliminary extension and communications, targeted towards producers, to deliver messaging on the cost savings, as well as environmental savings from reduced fertilizer use, potential alleviation of eutrophication and greenhouse gas emission reductions (NOx from reduced fertilizer overlap and potentially, reduced fuel use for those technologies that lift individual openers). Phase Two will require reporting on the three or four general categories based on measurements in the field, with data and information submitted to Alberta Pulse Growers and the Project Team via Excel workbook, written report and/or maps of fields in PDF or other format. The Project Team will use the prepared extension materials in Regional and Zone meetings to increase the understanding of the cost, emission and environmental benefits of sectional control technologies.

Phase Three: The third Phase of this project is outside of the scope of this RFP and will be conducted following the completion of Phase Two. It includes the development of preliminary information for the creation of a greenhouse gas reduction protocol. All data and information generated from Phase One and Two will be the basis of the third phase. Requested Proposals will deal with only Phase One and Two of this project.

Timeline: The anticipated timelines are as follows:

| Phase | Draft Report to Project Team | Final Report due |
|-----------|----------------------------------|----------------------------------|
| Phase One | December 10 th , 2019 | January 17 th , 2020 |
| Phase Two | October 23 rd , 2020 | November 27 th , 2020 |

Alberta Pulse Growers and the Project Team reserve the right to award Phase One and Phase Two portions described above, to different Bidders based on the quality and cost of proposals. Phase One, the preliminary literature review should not exceed \$10,000.00. Phase Two proposals shall not exceed \$75,000.00.

Please also include CV's of the bidding team and references in the submission.

Please provide a response to this RFP with an attached document via email to nrosaasen@albertapulse.com and/or office@albertapulse.com with "**Attention Nevin; CAP Sectional Control Proposal**".