



CALL for PROPOSALS (2019/2020)

One of Potatoes South Africa's (PSA) core mandates is to manage potato industry related research. Funding for research projects is approved by the Potato Industry Development Trust (PIDT). The operational model of PSA in terms of research makes provision that research can be outsourced. Research projects are needs driven, identified through consultation with various stakeholders and are prioritised by the PSA Research Committee.

The mission of the research core business of PSA is to provide knowledge to support sustainable potato production and our priority research fields for 2019-2022 are:

- Soil health
- Cultivar evaluation
- Water usage and quality
- Aphid and virus management
- Management of soil- and tuber-borne diseases
- Insect pest management
- Nematodes management
- Potato quality

With this call for proposals, researchers are invited to prepare proposals for the following research fields (a more detailed explanation for each is provided at the end of this document):

- Soil health
- Cultivar evaluation
- Water quality
- Management of fusarium dry rot and black dot
- Potato leaf miner management
- Nematode management
- Potato quality

The three strategic objectives of research are:

- To promote co-operation between researchers of different disciplines and local research institutions
- To build research capacity in potato research, and
- Maintain relationships with foreign researchers.

Researchers are therefore encouraged to address these objectives in the development and performance of the proposals.

Application

1. A **Call for Proposals** is sent out by PSA *via* e-mail and is posted on PSA's website (www.potatoes.co.za).
2. A Project Proposal is prepared using PSA's Project Proposal template (attached and available on the PSA website) and submitted no later than **8 February 2019** *via* e-mail to the Manager: Research and Development, Potatoes South Africa (fienie@potatoes.co.za).
3. Project Proposals that are compliant with the Project Proposal template are evaluated by experts in the industry and in the research field. During this process the researchers can be approached to provide more clarity on aspects of the proposal.
4. Proposals recommended by the experts will be presented to the Research Committee by the project leader. Notice of the meeting will be sent to the project leader ± 10 days before the Research Committee budget meeting scheduled for **5-6 March 2019** in Pretoria.
5. Project evaluation criteria are:
 - Impact on sustainability and competitiveness to the potato industry
 - Research objectives relevant to end user needs
 - Value for money
 - Quality and clarity of the research proposal (Problem statement accuracy, quality of literature review, research methodology, research milestone clarity and research capacity of the team)
6. In anticipation of approval of the research budget for the financial year 2019/2020 by the PIDT by 30 June 2019, project leaders of projects recommended by the Research Committee will be contacted to initiate administrative processes according to PSA's supply chain management policy in order to ensure timely commencement of projects. (Note: until approval of the budget by the PIDT, the project may still be rejected or postponed).
7. Following the approval of the budget by the PIDT, the Research Agreements and Terms of Reference will be finalized and signed. Funding for approved projects will be available from 01 July 2019 provided that the research agreements are signed by all parties. PSA's financial year is from 01 July 2019 – 30 June 2020.

Project proposals

The duration of projects varies from between one to four years. Student bursaries, preparation of a dissertation/thesis, overseas travel or attendance of congresses and symposia other than the annual Potato Research Symposium are not funded.

Reporting

1. The transfer of information and knowledge generated during the execution of projects to the potato industry, is critically important.
2. An annual progress project report will be submitted by **30 June** of each year and must be accompanied by a draft CHIPS magazine article. Researchers are also expected to verbally report on progress during the annual Potato Research Symposium.
3. Funding will be released in accordance with the funding schedule agreed upon, provided satisfactory progress as set out in the Terms of Reference of the research agreement.
4. Thirty percent (**30%**) of the funding of the final year of the project will be withheld until approval of the final report and at least one CHIPS article.

Additional funding

Researchers are encouraged to source additional funding from sources such as the NRF, DTI-Thrip, etc. Funding from the potato industry is in the first place to address problems in the field.

Background to projects

1. Soil health

Soil health is the integration and optimization of the physical, chemical and biological properties for specific soil types to improve productivity in a sustainable manner. Intensive agronomic crop production has contributed to gradual deterioration of soil health, resulting in reduced yield and profitability. In addition to this, consequently soil-borne diseases are becoming more difficult to control. For some diseases little to no chemical control options are available. Soil-borne diseases that have become a major problem in potato production in South Africa include powdery scab, common scab, fusarium, black dot, and root knot nematode. A sustainable approach needs to be investigated, ultimately developing the development of a soil health strategy for potato

production. Farmers are also keen to 'measure' the health of their soil to monitor the success of practices towards improving soil health. Proposals can include a variety of approaches such as cover - and green manure crops, tillage methods, crop rotation, soil amendments, etc.

2. Cultivar evaluation

Cultivar choice is one of the most important aspects of potato production. The genetic potential for yield and tolerance to biological and environmental stress determines how successful potatoes can be produced in a specific situation. With a vegetative propagated crop such as potato, qualities of the propagation material play a key role to realise the full potential of cultivars. Under increasingly competitive farming conditions and sophisticated markets, the correct choice of cultivar has become very important. Researchers are invited to submit proposals to evaluate characteristics of cultivars, keeping in mind that potato working group trials are already evaluating cultivars in respect of yield and adaptability to various climatic conditions.

3. Water quality, and the effect thereof on potato production

Water is the most valuable resource in South Africa, both on macro-economic and farm level. At the same time, maximum yield can only be attained if enough water of acceptable quality is available to the potato crop. Research on water usage by potato plants under local conditions have been done in previous years, and this was followed-up by research on irrigation scheduling. Concerns about the quality of irrigation water in terms of both biological and chemical properties have been raised and need to be investigated. Proposals to investigate effects of water quality on potato production are therefore invited.

4. Management of soil-borne diseases

Powdery scab, and soft rot & black stem, common scab, verticillium wilt, black dot and fusarium diseases, etc., are of the tuber-borne diseases causing yield and quality loss worldwide. Farmers in Limpopo identified black dot as limiting yield and quality and farmers in the Eastern Free State reported that fusarium dry rot is a problem. Researchers are invited to submit proposals to address various aspects of integrated disease management strategies for both these diseases.

5. Potato leaf miner management

In the past, potato tuber moth was considered the most important potato pest in South Africa. During a recent survey however, farmers rated potato leaf miner the most important potato pest that can cause considerable damage. Several research questions are already receiving attention, but many still need attention.



6. Nematode management

Since the withdrawal of aldicarb in 2011, management of plant parasitic nematodes became more difficult and farmers realised that they cannot rely on nematicides only to manage nematodes. Researchers are invited to develop project proposals on aspects of an integrated nematode management strategy.

7. Potato quality

Quality (Internal and external) became a very important aspect in the potato industry. Quality of potato is often related to the local climate and production practices. Proposals addressing problems relating to quality of potato.

8. Other research ideas

Researchers may also submit proposals for innovative ideas addressing aspects of potato production and consumption not listed above which will address production or consumption of potatoes.

Do not hesitate to contact me should you require more information.

Yours sincerely

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