

Request for Expression of Interest

Invitation to participate in the Evaluation and Commercialization of the ARC Sweet Potato Varieties.

EOI No: ARC/29/09/2024

The Agricultural Research Council (ARC) extends an invitation to interested parties to participate in the evaluation and commercialization of our sweet potato varieties. The proposed partnership aims to assess the suitability of these varieties/elite lines towards commercialization across various provinces of South Africa. The ARC wishes to identify interested organizations/individuals, with relevant capabilities to participate in the program. The ARC reserves the right to not accept any submission that does not meet the criteria outlined in this invitation.

Date of issue	04 October 2024	
Date for Compulsory briefing session	10 October 2024 at 11h00 am	
Closing date and time	29 October 2024	
EOI Number	ARC/29/09/2024	
Submissions to be emailed to:	Mlindin@arc.agric.za	
Compulsory Briefing sessions	Hybrid: Please send us an email to get the meeting link (1) MS Teams + Physical meeting at ARC VIMP, Roodeplaat campus, R573 northeast of Pretoria	
Enquiries SCM	N. Mlindi	Mlindin@arc.agric.za Contact No: 060- 536 5622
Technical Enquiries	Dr S Laurie	SLaurie@arc.agric.za Contact: 083 311 6029

Introduction

The ARC, as one of the leading scientific organizations in Agricultural Research and Development, has partnerships with various government departments, scientific organizations and institutions of higher education to undertake directed and multidisciplinary research, development, and technology transfer that contributes to the improvement of crop production for economic development. The ARC developed new sweet potato cultivars aimed at improving wilt disease tolerance, dry matter content in combination with keeping ability and root quality. Some of these varieties are showing great potential for commercialization (Refer to Annexure A-cultivar descriptions). It is envisaged that some of these varieties/lines will provide alternatives for the limited number of varieties currently available.

Background

In South Africa, the gross value of sweet potato production was estimated at R370 million in 2021, an increase of 28.9% from 2019 which was R283 million. An upward trajectory was seen in production volumes over the past 20 years, which peaked in 2019 at 89,000 t, followed by 82,000 t in 2020. The

average market price has doubled in the past ten years, and peaked in 2016 at R4,872 per ton followed by R4,752 per ton in 2020.

There is a notable increase in the export of sweet potatoes reaching 5,262 t of the local production in 2019 and 7,529 t in 2020 and was valued at R95 million. These mostly reached Netherlands (47.9% of exports) and United Kingdom (31.1%), followed by 6.3% to Namibia, 5.3% to Botswana, and 4.4% to Belgium. The volume of sweet potato used for processing has shown a promising increase over the past nine years. During 2016, processing was indicated as only 1,326 t of the market, but significantly increased to 14,625 t in 2019. In 2020, processed sweet potato volume declined by 9.8% when compared to 2019 processed volumes to 13,190 which coincided with the increase in export volumes. Both these markets have high potential for orange-fleshed sweet potato.

The local industry is hampered by the sensitivity of the major local cultivar Blesbok to Fusarium wilt. There is a need for alternative cultivars with improved resilience to wilt disease as well as pleasant flavour and texture. This request for an Expression of Interest (EoI) is to identify producers (farmers) with interest in semi-commercial evaluation of two ARC sweet potato varieties and one elite line (any number e.g. 1, 2, 3..) towards potential commercialization. Blesbok will be planted as commercial control.

Following successful evaluation, producers (farmers) will have the first right of refusal for entering into a licensing agreement for commercialization of the varieties.

VETTING CRITERIA FOR PRODUCERS (FARMERS) TO PARTICIPATE IN THE PROGRAM

- 1) Producers (farmers) must be prepared to enter into a valid Material Transfer Agreement with the ARC. A response to this request is considered as an expressed acknowledgement of their willingness to be part of the evaluation.
- 2) Minimum of one (1) hectare (ha) arable land with irrigation should be made available, while available arable land should not be less than 5 ha. The producers (farmers) should be willing to maintain the trial for four to six months, depending on climatic zone.
- 3) The Producer(s)/farmer(s) must have an appropriate level of background knowledge that allows them to farm sweet potato. Prior experience with cultivation of sweet potato for the commercial market (minimum two (2) years) is compulsory. The provision of/ability to maintain farm records for general farm operations is a requirement.
- 4) Preparation of an evaluation reports will be required.
- 5) The following information is required for the proposed site (assistance can be provided by the ARC to obtain this information *but the farmers must express the need for assistance*):
 - a. GPS coordinates of the area to be utilized;
 - b. Crops currently grown;
 - c. Soil type;
 - d. Land preparation practices followed on the farm;
 - e. Availability of water for irrigation purposes and water use right or related documentation;
 - f. Specifications of the irrigation system available as well as irrigation scheduling;
 - g. Access to suitable equipment for effective land preparation and trial maintenance (including ridge maker and potato harvester).
- 6) The Producer (farmer) must maintain the evaluation block(s) in terms of specified operational requirements as agreed upon with the ARC. The ARC will provide the management programme to be used in the trial block(s). The producer can expect regular monitoring and evaluation to ensure that standards are maintained for data collection.
- 7) The Producer (farmer) must commit to participate in the trial for the entire duration of evaluation starting with planting to harvest.

- 8) The ARC retains the right to select Producers (farmers) from other areas based on the ARC's evaluation requirements.
- 9) The Producer (farmer) must have control over the trial plot (proof of ownership, lease agreement, permission to occupy, etc.). The trial plot must be secure (farm must be fully fenced) with all necessary security controls in place to restrict access of unauthorized individuals to protect the trial.
- 10) The Producer (farmer) will receive without charge planting materials for maximum 0.25 ha per variety. The Producer (farmer) must supply any inputs and supplies for production. Any loss due to lower production to regular planting is for the Producer (farmer)'s account.
- 11) The Producer (farmer) takes note that the ARC is obliged to collect royalties on the commercialization of cultivars as stated in the IPR Act of 2008 and regulated by the National Intellectual Property Management Office (NIPMO).
- 12) The ARC researcher(s) must have access to the trial block. Visits will be communicated with the producer/farm manager in advance and no other unauthorized individuals should be allowed to access the trial block without the consent and/or presence of the ARC researcher.
- 13) By responding to this call, the Producer (farmer) undertakes not to expect any financial gains from the program.
- 14) The Producer (farmer) consents to keep records of irrigation, fertilization, and spray programmes, as well as harvest and pack-out data, where applicable.
- 15) The sweet potatoes from the farm will belong to the Producer (farmer). Other advantages for the Producer (farmer) with this agreement include: 1) priority access to plant materials; 2) having first-hand knowledge regarding on-farm performance of the varieties; 3) first right of refusal for entering into a licensing agreement for commercialization of the said varieties.
- 16) Should the Producer (farmer) contravene any of the stipulations, the ARC has the right to terminate the partnership.

Submission specifications

Proposal from interested parties should not exceed 10 pages and where relevant, supporting documents should be attached as appendices. The following should be included (but not limited to) in the proposal:

- Organization/farmer/farmer cooperative profile, including land ownership
- Details of the current farming activities
- Traceable evidence of experience in the cultivation of sweet potatoes
- Information on technical capabilities and available resources as detailed above to enable successful cultivation of sweet potatoes

Costs of submission

Parties submitting an Expression of Interest assume all risks for resource commitment and expenses, direct or indirect, of proposal preparation and participation throughout the EoI process. The ARC is not responsible directly or indirectly for any costs incurred by the parties.

Site visits

The ARC may decide/request to visit the shortlisted producers to further conduct suitability assessments. Arrangements for the visits will be coordinated well in advance.

Process for shortlisted applicant/s

- The shortlisted applicant/s shall proceed into the application phase where further assessments shall be completed.
- The successful applicant/s shall be subject to the parties agreeing to mutually acceptable terms and conditions. In the event of the parties failing to reach such agreement within a mutually agreed date after the provisional appointment date, the ARC reserves the right to appoint or not appoint.

Disclaimers

The request for Expression of Interest, by the ARC, is advertised in good faith. However, the ARC, its agents, employees and collaborators/partners do not warrant its accuracy or completeness. To the extent that the law permits, the ARC will not be liable for any claim whatsoever and howsoever arising (including, without limitation, any claim in contract, negligence or otherwise) from any incorrect or misleading information contained in this request due to any misinterpretation. This request is not an offer document; answers to it must not be construed as acceptance of an offer or imply the existence of a contract between the parties. By submission of its information, organisations shall be deemed to have satisfied themselves with and to have accepted all Terms and Conditions of this request. The ARC makes no representation, warranty, assurance, guarantee or endorsements to any party concerning the request, whether regarding its accuracy, completeness or otherwise and the ARC shall have no liability towards any party in connection therewith.

ADMINISTRATIVE REQUIREMENTS

The following documents need to accompany the proposal.

- A valid Tax PIN Number from SARS.
- Current Central Supplier Database (CSD Report)
- Complete and Sign the Standard Bidding Documents (SBD forms)
- The Service Provider must submit a proposal.

NB: Farmers / producers will be assisted with CSD registration and filling in of documents

COMPULSORY REQUIREMENTS.

- Proof of attendance of the compulsory briefing session in person or MS Teams. This will be

confirmed through an attendance register kept by the ARC.

Failure to attend the briefing session will result in disqualification.



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CULTIVAR CATALOGUE : SWEET POTATOES

Colour categories:

- Purple flesh with cream skin
- Orange flesh
- Purple flesh

The catalogue present representative varieties in each of the categories but not necessarily all available varieties since new elite lines are released on ongoing basis.

PURPLE SKIN CREAM FLESH – FRESH/EXPORT MARKET

Blesbok (OPEN VARIETY) (Benchmark)

Origin: ARC Sweet Potato Research

Shape: Long oblong – long elliptic

Skin colour: Purple

Flesh colour: Pale cream

Dry mass %: 16.6

Advantages: Excellent yield; early maturing; excellent storability

Disadvantage: Few constrictions, watery taste

Market suitability: Fresh market/ export / freezing



Cultivars protected with Plant Breeders' Rights

NC51-1 (ARC SP-11)

Origin: ARC Sweet Potato Research

Shape: Short oblong – Long oblong

Skin colour: Purple

Flesh colour: Dark cream

Dry mass %: 18.1

Advantages: High yield; Uniform, avg-good storability

Disadvantage: Skinning may occur; some level of wilt tolerance



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NC51-15 (ARC-SP-12)

Origin: ARC Sweet Potato Research

Shape: Short oblong – Obovate – Long elliptic

Skin colour: Purple-Pale purple

Flesh colour: Dark cream

Dry mass %: 23

Advantages: High dry mass content; Good – high yield; Good storability; dryer cooked texture

Disadvantage: Skinning may occur



Elite lines

FS10-21

Origin: ARC Sweet Potato Research and LSU

Shape: Long obovate – Elliptic - Oblong

Skin colour: Dark purple

Flesh colour: Pale cream

Dry mass %: 16.7

Advantages: Attractive skin colour; good storability; wilt tolerance

Disadvantage: Medium yield; some tips



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ORANGE-FLESHED SWEET POTATO CULTIVARS

Beauregard (OPEN VARIETY)(Benchmark)

Origin: USA

Shape: Long oblong – long elliptic

Skin colour: Pale purple pink

Flesh colour: Orange

Dry mass %: 17.9

Advantages: uniform, attractive, smooth, good yield

Disadvantage: performance less stable

Market suitability: Export/Freezing/Fresh market



Cultivars protected with Plant Breeders' Rights

2010-15-2 (ARC-SP-10)

Origin: ARC Sweet Potato Research

Shape: Long elliptic – Long oblong

Skin colour: Bright purple-red

Flesh colour: Dark orange

Dry mass %: 19.9

Advantages: High yield; very uniform; very good storability

Disadvantage: Can show leaf and stem blight when conditions are conducive



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ARC-SP-2 (2004-9-2)**

Origin: ARC Sweet Potato Research

Shape: Oblong – Heavy elliptic

Skin colour: Pale purple - pink

Flesh colour: Pale orange - orange

Dry mass %: 20.7

Advantages: High yields, early maturing, oblong shape; excellent storability

Disadvantage: Some grooves

Young leaves are purple



ARC-SP7 (2014-7-3) **

Origin: ARC Sweet Potato Research

Shape: Obovate – Round elliptic - Elliptic

Skin colour: Dark orange

Flesh colour: Dark orange

Dry mass %: 21.7

Advantages: Good yield; uniform; attractive appearance; high β -carotene better keeping ability than Bophelo and Khumo (Easy identified based on Lobed leaves)

Disadvantage: some with tails dry matter content is a bit lower



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ARC-SP-5 (2008-12-4) **

Origin: ARC Sweet Potato Research

Shape: Obovate - Long elliptic – Elliptic

Skin colour: Bright dark purple

Flesh colour: Orange

Dry mass %: 17.4

Advantages: Early maturing; **Very high yield**

Disadvantage: Veins; soft skin, slight stem blight, not uniform

Interesting lobed leaves with purple abaxial veins





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PURPLE-FLESHED SWEET POTATO LINES

2021-1-10



Skin colour: Dark Red Purple

Flesh colour: Violet, cream spots

Shape: Elliptic – Round elliptic

DM%: 27.6

Other Traits: Colour not bright; Smooth; Uniform; Avg – High Yield

2021-1-13



Skin colour: Purple Red

Flesh colour: Violet

Shape: Ovate – Round elliptic

DM%: 24.6

Other Traits: Double skin; Smooth; Uniform shape; Good yield