



Potatoes Aartappels SA

ANNUAL REPORT

2022/2023



Content

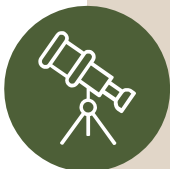
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1 ABOUT US

Potatoes South Africa (PSA) is a Non-profit Company under the Companies Act, 2008 (Act 71 of 2008), whose main objectives are:

- Serve as the mouthpiece of the South African potato producers;
- Establish and maintain a central representative body called the Potato Industry Forum;
- Institute and endorse the maintenance of a national Potato Industry Development Trust which shall collect, distribute and govern industry levies in accordance to statutory strategies as set out in the government notices;
- Structure any business activity or service in such a manner that financial interests and results are transparent and are made available to all interested parties independent of PSA;
- Strive for the systematic development and environment friendly outlook of the potato industry, including, inter alia, the preservation of the soil and water resources, the maintenance and improvement of the fertility of the land and improvement of production and marketing methods.

VISION



***Together towards excellence
in the potato industry.***

MISSION



- To provide strategic support services to a dynamic industry, thereby enhancing the sustainability of potato producers in South Africa.
- By providing the industry with industry-strategic knowledge and management support and support services with regard to South Africa's potato consumption.
- Providing producer development support services and business excellence.

VALUES



PSA pursues excellence in the following ways:

- Proactive
- Integrity
- Impartial
- Service excellence
- Collaborative

Our Identity

The identity of Potatoes South Africa (PSA) is symbolised by:

- The authority of the potato industry which, in particular, refers to the annual turnover of the industry, measured against the total agricultural turnover and which makes it a prominent role player in agriculture and in the food value chain. In addition, potatoes constitute the biggest fresh vegetable crop in South Africa and represent more than 30% of the turnover of fresh produce markets.
- The solid character of potato producers, which is characteristic of high-risk takers who, at the same time, can cope with setbacks, remain optimistic and, most important of all, who are entrepreneurs, focused on innovation and have solid values.
- The essence of the organisation is based on excellence in service delivery to all potato producers, as set out in its mission statement, as well as to all other role-players in the industry. The organisation aims to protect and promote the interests of potato producers in particular and the potato industry as a whole.
- The face of the organisation is representative of young, dynamic leadership, backed by passionate enthusiasm and the pursuance of stronger cohesion, as well as the ability to visualise the bigger agricultural picture and react to it with a clear vision, strong opinions, solid values, as well as the ability to establish a united front, representative of all role players. The organisation's youthful character and approach create room for innovative thinking and proactive action – to the benefit of the potato industry as a whole. In addition, the organisation symbolises transparency, stability and sincerity in all its activities.

Governance

POTATO INDUSTRY DEVELOPMENT TRUST

Board of Trustees: Dr B Pieterse (Chairperson); JF vd Merwe; WM Fourie; N Maceba and DH Van Zyl.

POTATOES SA (NPC) BOARD OF DIRECTORS

NAME	REPRESENTING
Mr. G.F. (Gert) Bester	Chairperson
Mr. J.W.F. (Jannie) Basson	Southern Production Region & Chairperson Marketing Committee
Mr. J.H. (Hannes) Becker	Northern Production Region
Mr. A.F. (André) Coetzee	Vice-Chairperson Western Production Region & Chairperson Research Committee
Mr. J. I. (Izak) Cronje	Western Production Region
Mr. M.J. (Mike) Green	Eastern Production Region (KwaZulu-Natal)
Mr. J.C. (Johan) Holtzhausen	Northern Production Region & Chairperson Information Committee
Mr. M. (Mzimasi) Jalisa	Southern Production Region (Eastern Cape: Enterprise Development)
Mr. NJ Lourens (NL)	Eastern Production Region (EF)
Mr. T.W. (Walter) Mathidi	Northern Production Region (Limpopo: Enterprise Development)
Mr. M. (Meshack) Ndongeni	Eastern Production Region (KwaZulu-Natal: Enterprise Development) & Chairperson Transformation Committee
Mr. P.G.J. Posthumus	Seed Potato Growers
Mr. D.C. (DC) Schellingerhout	Southern Production Region
Mr. M.C. (MC) Venter	Northern Production Region

In terms of the Memorandum of Incorporation of the company, the Chairperson of the Audit Committee will be a non-executive and unattached qualified person. During the year under review, Mr J H du Plessis of the chartered auditing firm, Geyser and Du Plessis, again served as Chairperson of this Committee.

2 FINANCE AND ADMINISTRATION

Chief Finance Officer Report, Hein Oberholzer

PSA is a non-profit company (NPC), incorporated in terms of the Companies Act, 2008 (Act No. 71 of 2008), established to serve, protect and promote the interests of the South African potato industry. It operates as an organisation with an integrated structure that comprises a network of industry-orientated forums and committees on which participating role-players and individuals have a seat. This structure ensures that the organisation executes its mandate to render a comprehensive service to the potato industry as a whole.

Financial Matters

The activities of PSA (NPC) are funded by a statutory levy on potatoes, held in the PIDT. As the appointed administrator, PSA (NPC) collects the levy on behalf of the PIDT and applies to the PIDT for funds to finance its activities and administration. In accordance with the ministerial guidelines, the funds are appropriated as follows:

On 30 June 2022 PSA (NPC) the third year of the fifth statutory period concluded. Every year an amount in the form of bridging capital is transferred to the next year. This is simply done to continuously maintain a positive cash flow as the PIDT continuously have a high debtors' book. This is the result of the inevitable time lag for bag manufacturers to recover the levy from their debtors (producers).

To address this issue, for the potato industry as well as other industries, the National Agricultural Marketing Council (NAMC) decided on 29 May 2018, during its Council meeting, to adopt a guideline that when making recommendations to the Minister of Agriculture, Forestry and Fisheries regarding carry-over funds, depending on the merit of each case, a maximum of two months of levy income in a relevant industry, be used to cover running expenditure of organisations that operate as a going concern over a levy cycle. The remainder, if any, can still be used for transformation projects. The past financial year has been characterised by a negative growth in volumes and therefore levy revenue resulted in an amount under budget, but with savings and underspending on expenditures. This underspending for the 2021/2022 financial year can be attributed to a deliberate planned underspending on Transformation and Marketing projects. Regarding Transformation projects, the decision was a consequence of external funding that was received and used for Enterprises Development projects. In terms of Marketing, funds have been transferred to the 2022/2023 financial year to implement the new marketing strategy. Due to the lower income, there was an increase in the carried over funds, amounted to R21.8 million. The bridging capital will form part of a decision to carry over funds of the said projects to the new financial year to complete the relevant projects. PSA (Voluntary) also has non-statutory funds available that are supplemented by sponsorships and combined project funding.

These funds are used to fund projects and functions in the interest of potato producers, and the potato industry in general. Approval for the appropriation of such funds lies with the National Council of PSA (Voluntary).

Statutory Income & Expenditure – Potatoes SA (NPC)

PSA (NPC) as an administrator, collected R50.4 million on behalf of the PIDT in statutory levies during the 2021/2022 financial year. This amounts to 100% of all levies recovered that were invoiced by bag manufacturers, Processors and Seed Growers. A further R198 912 was received in interest on investments. The 2021/2022 budget of PSA (NPC) as approved by the PIDT amounted to R58.5 million of which R48,1 million was appropriated. The underspending of R10.4 million (16.4%) was attributable specially to Travel and Accommodation-, meeting- and overseas travel, as well as savings on other operational costs. However, there was a calculated underspend on the levy funded budget on projects as a result of the mentioned external funds that were received, and which were allocated for projects in accordance with the objectives of the prescribed spending as with the Statutory Levy on potatoes.

Bridging capital in the PIDT carried over funds started off with R15.41 million at the beginning of the statutory period on 1 July 2019, which was carried over as per Ministerial approval, and accumulated to R20.96 million on 30 June 2020 and decrease to R18,9 million on 30 June 2021, and increase again on 30 June 2022 to R20,4 million for the reasons of the underspending above. The amount will be transferred to the 2022/2023 financial year with the approval of the Potato Industry Development Trust. The already approved budget for the 2022/2023 financial year amounts to R63,8 million and the expected Levy Income R54.6 million which will decrease the Bridging Capital on the end of the fifth statutory period to the goal of R10.2 million as per NAMC guidelines.

As set out in Figure 1: Appropriation of Funds 2021/2022 Financial Year, Potatoes SA (NPC) managed to meet the prescripts given by the Minister.

STATUTORY INCOME & EXPENDITURE - PSA (NPC)

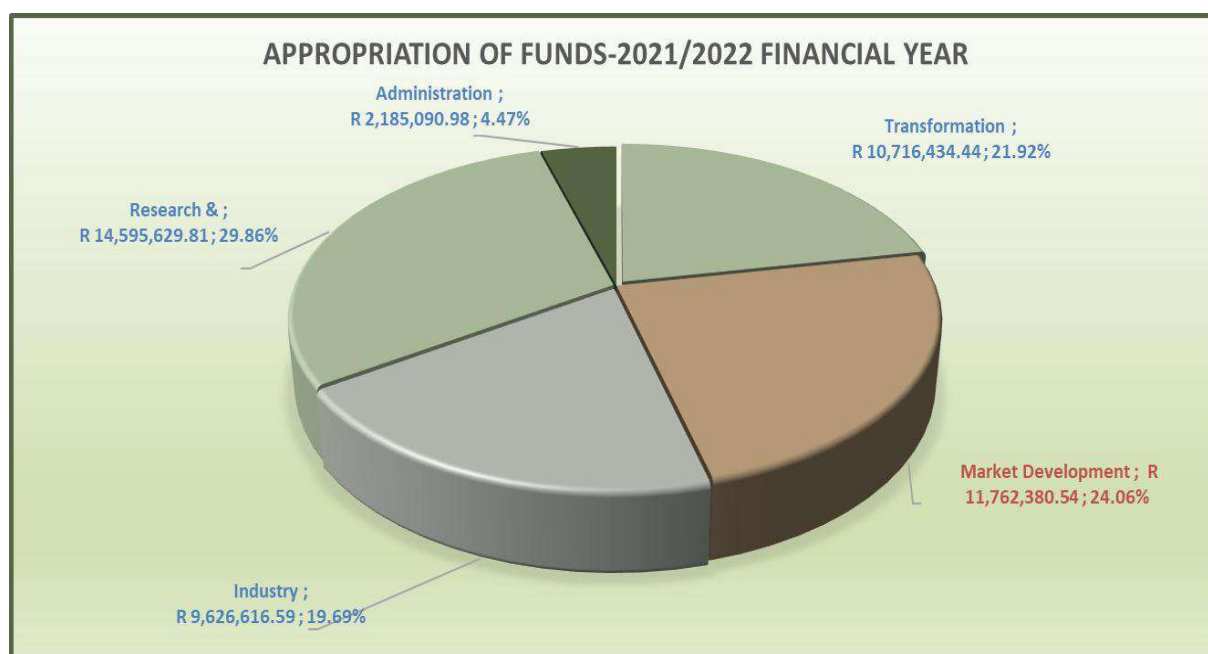


Figure 1: Appropriation of Funds 2021/2022 Financial Year

The marginal deviations in respect of the above were due to work still in progress in the Transformation and Marketing core businesses. This gave rise to funds being transferred to the 2022/2023 financial year, but still utilised in the relevant core businesses. The decision was taken that

a ratio of about 60%:40% between operational and project costs should be maintained. In this regard PSA (NPC) did not succeed in the 2021/2022 year, but this was compensated for in the 2022/2023 budget. The expenses of approximately R48,8 million was utilised as shown in Figure 1 (rounded off).

Potatoes SA Voluntary

Potatoes SA (Voluntary) funds are mainly supplemented by the following:
 Return on Investment and loans R 584 281
 Rent received on capital items R 828 973

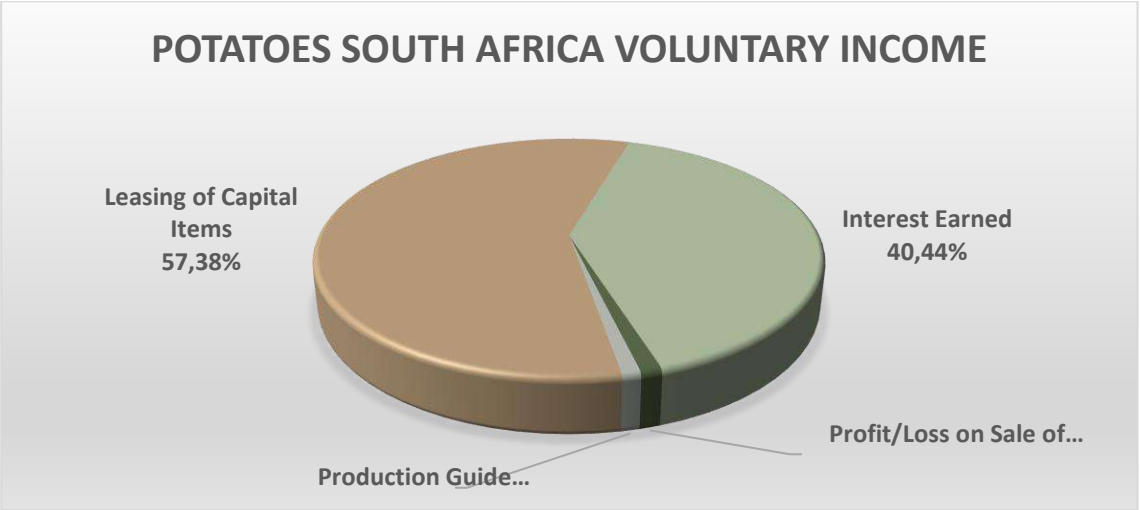


Figure 2: Potatoes South Africa Voluntary Income

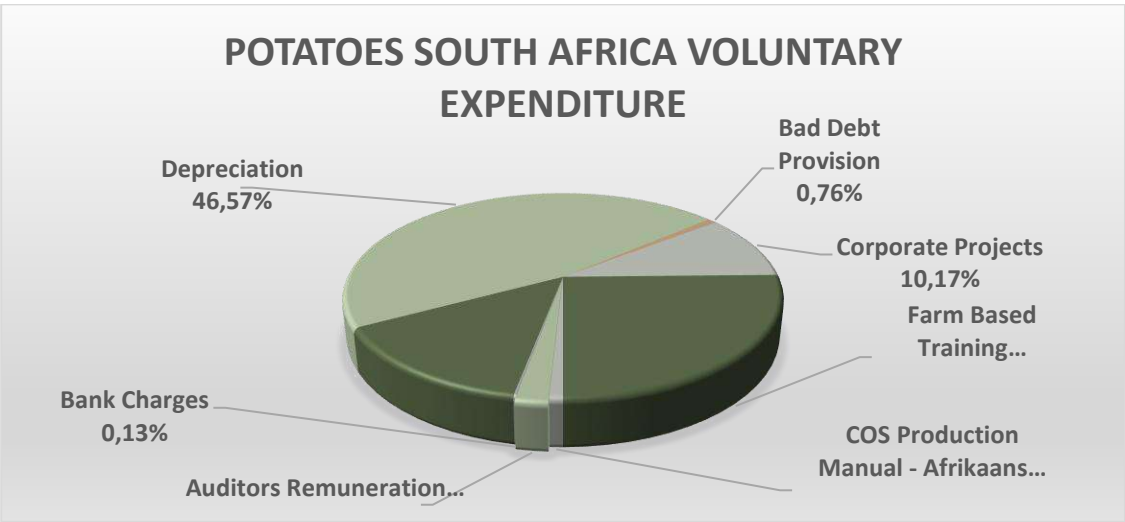


Figure 3: Potatoes South Africa Voluntary Expenditure

Expenses related to the normal income as mentioned below are depreciation of assets R658 108, auditing and audit costs R29 000, administrative costs R199 424, corporate and other project costs R501 489 (refer to Figure 3). The Symposiums and Regional Meetings were funded in total by additional income received from sponsors during the year under review.

Total funds and reserves amounted to R11,7 million. Property and movable assets, based on book value amounted to R2.4 million and investments and loans to R9.4 million.

Financial Position

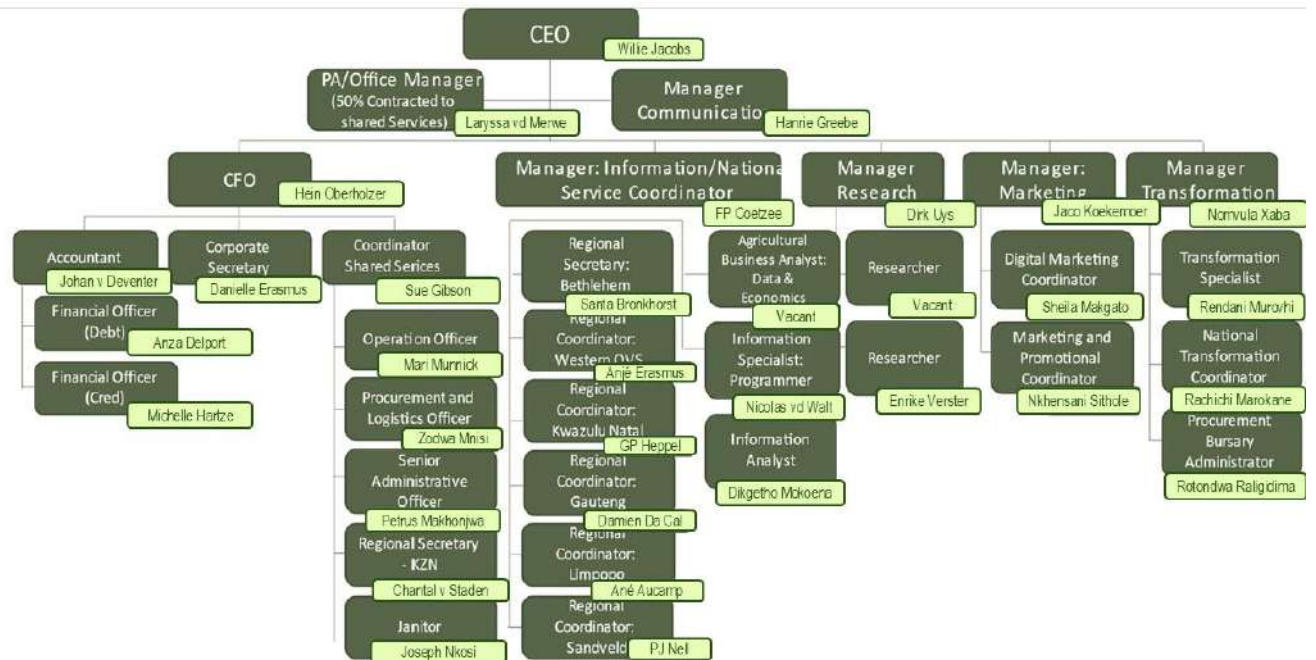
The allocation to projects could be adjusted upwards to optimize the value added to the industry. Tally and control measures are continuously reviewed and tightened to restrain operational costs and thereby ensuring a healthy balance between operational costs and the appropriation in respect of projects. The Audit for the 2021/2022 year has not yet been performed, and therefore no Audit Report is available at the time of compiling this report. As part of its managerial responsibilities, PSA (NPC) is also responsible for the implementation and management of the core business projects accepted by PSA's Board of Directors and approved by the PIDT.

Administration

In the 2021/2022 financial year, the following personnel movements took place:

EMPLOYEE	APPOINTMENTS	TERMINATION	REASON
Pretorius L	1987/09/01	2021/10/31	Retirement
Basson N	1999/12/08	2022/07/31	Resignation
Haak H	2005/06/01	2021/10/31	Retirement
van Zyl P	2005/11/01	2021/06/30	Resignation
Zinde I	2006/05/01	2022/03/31	Resignation
van der Merwe M	2008/08/18	2021/09/30	Resignation
Niederwieser F	2011/10/03	2022/03/31	Retirement
Manana B	2019/03/01	2021/08/12	Resignation
Motsoeneng M	2020/07/13	2022/03/31	Resignation
Marokane R	2021/11/01		Appointment
van Deventer J	2021/12/01		Appointment
Erasmus A	2022/03/01		Appointment
da Cal, D	2022/03/01		Appointment
Uys, D	2022/05/03		Appointment
Nell PJ	2022/05/03		Appointment
Aucamp A	2022/05/03		Appointment
EMPLOYEE	APPOINTMENTS	PROMOTION	REASON
Makhonjwa, P	1988/02/01	2022/01/01	Senior Administrative Officer / Reception
Mnisi, Z	2015/04/09	2022/01/01	Logistics & Procurement Officer
Gibson S	2013/04/16	2021/10/01	Co-Ordinator: Shared Services
Bezuidenhout J	2019/03/01	2021/12/01	Information Manager
Coetzee FP	2019/04/01	2021/12/01	Co-Ordinator: National Service Delivery

Personnel Structure



3 INDUSTRY INFORMATION SERVICE

3.1 Introduction

Potatoes South Africa's Industry Information Services is regarded as a supplier of timely, accurate and relevant market and production information and business intelligence to all stakeholders in the South African potato value chain, but also other role players who have an interest in agriculture.

One of the requirements for the proper functioning of a competitive free market is for industry role players to have access to uniform and comprehensive information. Potatoes South Africa's Industry Information Service contributes to the maintenance of a competitive free market in the interest of the potato producer and the potato industry in general. Potatoes South Africa has also obtained an opinion from the Competition Commission regarding its data, information and intelligence creation activities in 2013. The Competition Commission responded that they did not find anything wrong in terms of the type of information generated and the dissemination thereof.

The Industry Information Service supplies the potato industry with the following two categories of information, and it will be concentrated upon for the duration of the statutory period in order to attain the approved goals set out in Potatoes South Africa's business strategy (see also 5.2):

- a) Data and information generation, i.e. the collecting and analysis of data to generate information and the dissemination of such information via various different platforms including, but not limited to, Potatoes SA mobile application sms, website, e-mails, magazines, farmers' days, etc.
- b) Intelligence creation, i.e., investing in different programmes and technologies that provide the basis for deeper analysis of different variables that could potentially impact on the sustainability of the potato value chain.

Figure 4: Data, Information and Intelligence Services (Annexure A), shows the different dimensions of the information services delivered by Potatoes South Africa.

3.2 Strategic Goals for Industry Information Service

In terms of the Potatoes South Africa strategy the strategic goals applicable to Industry Information Service are:

- a) Provide industry strategic knowledge management support:
 - Industry strategic information (market information, production information, macro-economic information).
 - Knowledge transfer.
- b) Industry Information Service strives to be regarded as an outstanding provider of production and market information as well as business intelligence to the South African potato value chain. To achieve this Industry Information Service collects, interprets and disseminates production, marketing and strategic information on all aspects related to the potato industry that are accurate, timeous and relevant for all role players in order to:
 - Improve the level of decision making.
 - Create wider transparency to ensure that all role players are kept informed about production trends, market prices and other relevant information.

c) With the information at their disposal:

- Producers are able to make market-related decisions when planning production and marketing.
- Producers, processors, market agents, market management, pre-packers, supermarkets, hawkers, and retailers have daily access to information on the supply of and the demand for potatoes as well as prices and quality.
- End users have a transparent view of the supply of and the demand for potatoes as well as potato prices and quality on a daily basis.
- Producers can compare input costs to their potato production volumes and selling prices and thereby be able to adjust production practises to become more productive.
- Industry and policy makers can use the data and information to evaluate the impact of different policy decisions.

3.3 Strategic Orientation

Industry Information Services strategic orientation can be encapsulated into different focus areas. These focus areas are shown in Annexure A, *Table 1: Strategic Focus Areas of the Industry Information Service Core Business*.

3.4 Industry Information Service Processes

The information available through the Industry Information System is conveyed by Industry Information Service directly to role players through established communication channels or via the regional offices. In the latter instance Industry Information Service renders an extremely important supportive service to the regional offices to provide the information to be conveyed to producers. The channels used to convey the information are:

- An industry-related magazine – CHIPS;
- An e-mail system;
- National and regional newsletters;
- SMS and WhatsApp systems;
- Mobile application – Potatoes SA mobile application;
- The Potatoes South-Africa website www.potatoes.co.za;
- Public relations programme;
- Information and producer days;
- Meetings of the various industry-related forums.

The regional personnel in each of the identified production regions are, amongst others, responsible to:

- Collect information from producers either by telephone, e-mail or by personal visits to farms;
- Continuously monitor the growth of the crop to enable them to prepare proper crop estimates;
- Monitor the actual harvesting which includes quality assessments;

- Continuously update the list of producers per production area;
- Organise the flow of market information back to producers;
- Organise producer meetings where the information is disseminated;
- Establish producer involvement in production and marketing planning in the different production areas;
- Handle the retrieving, processing, and interpretation of information;
- Promote the utilisation of the industry information system.

In order to contribute towards more effective dissemination of information, the 16 production regions are grouped and allocated to five regional staff. The regional personnel in the different production regions arrange production and marketing planning meetings on a regular basis during which:

- Comprehensive information (national and per production area) is submitted for decision-making;
- Inter-regional influence is considered;
- Continuous linkage between the source of information and the producer exists;
- All actions are steered, monitored and evaluated by the relevant regional management structures.

The regional personnel are in regular contact with one another and Industry Information Service to jointly:

- Co-ordinate the processing, interpretation and distribution of information on a national basis;
- Formulate recommendations on a national basis for consideration and decision-making by Potatoes South-Africa's Board of Directors and regional managements;
- Co-ordinate the implementation of the recommendations (message) nationally and per production region and, where necessary, take proper steps to implement the recommendations;
- Co-ordinate the activities of the respective regional managements in close consultation with the regional personnel; and
- Monitor the inter-regional actions and inter-regional influences in close consultation with the relevant regional managements and personnel.

The information collected at regional level and from other sources such as fresh produce markets and processors are used by Industry Information Service to:

- Maintain an effective two-way communication network;
- Collate and process the information from production regions and other sources;
- Distribute the information to the different production regions and other role players;
- Keep production regions and other role players informed of the production being planned nationally in the different potato production regions.

3.5 Information Process

As is the case for Transformation and Research and Development core businesses, Industry Information Service is also governed at the corporate level through the Information Committee. The composition of the Information Committee is as follows:

- Eight producers from the largest potato production regions.
- Additional members may be co-opted.
- The chairperson is appointed by the Board of Directors of Potatoes South Africa.

The Committee meets at least biannually where the strategic nature of the services that are provided are evaluated and discussed. In addition, existing activities are evaluated, while possible future projects are considered. The committee also considers the budget for Industry Information Services and make recommendations to the Board of Directors of Potatoes South Africa and approval by the Potato Industry Development Trust.

3.6 Partners

In order to render a quality information service, the Industry Information Services core business partners with several institutions, including, but not limited to:

- Universities
- Prokon
- Freshmark Systems
- Technofresh
- Market Authorities
- BFAP
- FuseIT
- Infusion

4. RESEARCH AND DEVELOPMENT

4.1 Introduction

To enable optimal efficiency in the Potato industry the research and innovation is focused on three areas namely:

- Optimising the potential of yields
- Minimising risk due to pests and diseases
- Reducing limitations related to nutrition and irrigation

The current research program is focusing on future challenges facing the potato industry including soil health, water efficiency, rising input costs, and increasing pressure on crop protection remedies and fertiliser. This is linked to challenges such as the EU Green Deal and increasing regulatory challenges. The ability to enable efficient potato production practices combined with an understanding of our customer is key to the sustainable growth in the potato market.

To achieve this sustainable growth during the following statutory period to attain the approved goals set out in Potatoes South Africa's business strategy, focus will be on:

- The potato consumer
- Efficient agronomic systems
- Sound environmental practices.

Sharp increases in production inputs requires research to optimise production practices to improve resource use efficiency and to identify modern cultivars to increase the attainable yield and consumer demand for South African potatoes. It is therefore important for the competitiveness of an industry to introduce innovative research practices to optimise inputs and determine efficiencies of resource utilisation.

4.2 Strategic Goals for Research and Development

In terms of the Potatoes South Africa strategy, the strategic goals applicable to Research and Development are:

- Provide and communicate industry strategic knowledge management support
- Collaboration with our input providers to ensure access to innovation
- Enable services
- Provide technical support, i.e. best practice, advice, product testing trials.

4.3 Strategic Orientation of the Research and Development Programme

The Potatoes South Africa Research Committee developed a Strategy Framework by identifying and prioritising a number of research areas based on grower needs (see Annexure A, *Figure 5: Potatoes South Africa Research Priorities*).

The main objective of this strategy is to work towards sustainable potato production fueled by innovation and driven by the United Nations Sustainability Development Goals (SDG). An important outcome of the revised research strategy is a list of prioritised research focus areas.

The current research focus areas are:

- Soil health and conservation of natural resources

- Regional cultivar evaluation
- Water use and quality.
- Management of virus diseases.
- Management of pests, nematodes and diseases.
- Management of weed and volunteer potato plants.
- Transfer of new knowledge gained through research, as well as new and emerging pests and diseases.

Research is carried out in two programmes namely the national programme and the workgroup programme. The national programme addresses issues of strategic and national importance and is typically carried out by professional research institutions. The workgroup programme addresses the need to identify improved potato cultivars in each production region, to identify adaptability of new cultivars and to conduct trials on farms.

Opportunities exist in collaboration on specific research through partnerships with funding organisations and related industry organisations.

(Refer to *Annexure A: Figure 7: Research Focus Areas*).

4.4 Research Focus Areas/Objectives

For the duration of the statutory period research efforts will focus on the following key research objectives (not in any particular order of importance):

4.4.1 Identification and Introduction of New Cultivars to Optimise the Genetic Potential of Potatoes in South Africa

Maximum temperatures in South Africa are generally higher than optimal for the growth of potato plants. In some regions temperatures $>35^{\circ}\text{C}$ are regularly recorded. In addition, the temperature fluctuation can be as much as 20°C during spring and autumn in some production regions. The selection of cultivars able to produce high yields under local conditions, is therefore one of the most critical research needs for the potato industry. As the average temperature is expected to increase by 2°C as a result of climate change, cultivar evaluation is expected to enjoy high priority into the future as well.

Cultivar evaluation trials have been carried out by Potato Workgroups in 13 of the 16 potato production regions, and this initiative will be continued. Trials are carried out under the auspices of Potatoes South Africa and in co-operation with local representatives of the potato breeding companies who supply the cultivars currently grown in South Africa. Data is analysed statistically and reports published in CHIPS (the official potato industry magazine) and on the official Potatoes South Africa website. Analyses of data of all trials will be carried out to identify widely adapted cultivars and cultivars best adapted for specific conditions, for example dry land production, summer production or winter production.

4.4.2 Improve Soil Health and Natural Resource Conservation

Soil borne diseases are becoming an increasingly big problem in potato production. Currently the only effective measure to control certain soil borne diseases is with soil fumigation. Soil fumigation is not only expensive, but also destructive and can cause more problems in the long run. When a soil is fumigated it is also sterilised and all the beneficial micro-organisms are thus killed. Pathogenic organisms, introduced by planting material, proliferate under these conditions.

Several projects have been initiated to address soil health issues, namely soil micro-organism diversity, organic matter content, biological inoculants, bio-fumigation etc. The Western Cape

Department of Agriculture has been contracted to study the long-term effect of soil tillage methods in combination with different cover crops on soil health. As soil health indicators and strategies to improve soil health is very region specific, similar projects will be initiated in other production regions. The University of Pretoria is investigating the role of various rotation crops on soil health in the Eastern Free State. The Agricultural Research Council and the University of Limpopo is investigating the potential use of cover crops in an integrated programme to manage nematodes. Research on these pathogens and management options will receive considerable attention in the next statutory period as early dying is a disease typical of high temperatures and with climate change this disease complex is expected to become more prevalent.

4.4.3 Optimisation of Water Use

Water is the most valuable natural resource in South Africa, both on macro-economic and farm level. At the same time, maximum yield can be attained only if enough water is available to the potato crop. Research on water use of potato plants under local conditions have been conducted in previous years, and this was followed by research on irrigation scheduling. The fact that new laws on water use will place restrictions of water availability on producers, together with increasing energy cost, necessitates irrigation scheduling by more potato producers. Concerns about the quality of irrigation water in terms of both biological and chemical properties have been raised and need to be investigated. The deteriorating quality of water for purposes of both irrigation and washing of ware potatoes is a challenge for the potato industry. Projects on water and nutrient use efficiency in the regions with sandy soil (Sandveld and North West) shows that water use efficiency is relatively good and that leaching of nutrients can be limited with efficient irrigation scheduling. Rain during the winter in the Sandveld makes efficient water use difficult.

Based on these results, technology transfer to promote irrigation scheduling will be implemented and new technology to determine water use will be tested.

4.4.4 Management of Virus and Virus Vectors

Although several viral diseases have been reported in South Africa, two (Potato Virus Y (PVY) and Potato Leaf Roll Virus (PLRV)), commonly result in down grading of seed and reduction in yield. Tomato Spotted Wilt Virus (TSWV) and Calico virus are reported occasionally.

Management of viral diseases relies heavily on the control of aphids which act as vectors for the spread of virus. A national aphid monitoring network has been established and aphid occurrence is communicated to producers. The lack of control of viruses in many seed production areas keeps aphids high on the technology transfer agenda.

4.4.5 Management of Soil-borne Diseases

A number of soil- and seed-borne diseases occur in South Africa and collectively cause considerable yield- and quality loss. As in most potato producing countries in the world, common scab, powdery scab, bacterial soft rot and root-knot nematode remain major production limiting diseases in South Africa. However, research in the past years indicated the pathogens such as *Verticillium spp.* (causing wilt), *Rhizoctonia solani* (causing wilt and black scab), *Fusarium* (causing wilt and dry rot of tubers) and *Colletotricum* (causing black dot on tubers) are involved in the potato early dying complex.

- Soft Rot is caused by a group of bacterial species (*Pectobacterium* and *Dickeya* species). Although these are opportunistic pathogens, they are extremely successful pathogens when conditions are favourable for disease development and causes considerable losses during warm, wet seasons. Although a lot is known about the pathogens and conditions favourable to the disease, little is known about the effect of local cultivars, climate, soil and production methods on disease development and the control thereof.

- Powdery Scab caused by the fungus *Spongosora subterranean*, symptoms are galls on roots and associated with nutrient and water deficiencies result in downgrading of seed potatoes and ware potatoes on markets. Currently, it is thought that the disease is limited to specific regions. The pathogen can survive in soil for decades through resistant survival structures in soils. Research information such as relative susceptibility of popular cultivars, alternative host plants and cultivation methods under local conditions are required to limit the spread of the disease and to develop management strategies. These aspects will continue to receive attention during the next statutory period.
- Nematodes have the largest impact on crop protection spend. Concerns are increasing in efficient control strategies related to the withdrawal of numerous solutions including MeBr and aldicarb and pressure on existing alternatives due to regulatory pressure related to the EU Green Deal. Although new solutions have been recently introduced, alternative methods of control need to be developed to ensure long term control strategies that are safe to the environment. Research during the previous period showed that all commercial cultivars are susceptible to root-knot nematodes. Other approaches such as the use of cover crop and cover crop mixes will be investigated.

4.4.6 Control of Weeds and Volunteer Potatoes

During harvest a percentage of tubers, especially the small tubers remain in the soil. These tubers have an amazing ability for regrowth and are then known as volunteer potatoes or weeds. As volunteer potato plants support survival of soil-borne pathogens and viruses, control of potato weed plants is critical for maintaining a good rotation programme, especially during seed production. Cultivation is not completely successful as volunteer tubers can occur deep, and under local climatic conditions tubers can survive in soil for a long time. Chemical control is thus required. The choice of suitable herbicides is a huge problem for seed producers as the sprouting ability and vigour of seed may be affected by the herbicide. With ware potato production, the choice is easier as sprouting ability is not required. As the increase in soil-borne diseases is a concern for the whole industry, more effective management strategies for volunteer control is required.

4.4.7 Technology Transfer

Transfer of technology and knowledge is of cardinal importance in the potato industry. The following channels are employed to transfer technology and knowledge generated through research:

- Guide to Potato Production in South Africa: Revised English and Afrikaans versions of the Guide to Potato Production of 1999 and 2003 were published in 2011 and 2012. The information is also used to compile other training material to different groups in the industry.
- Potato Research Symposium: The Annual Potato Research Symposium is the main event where researchers report back on progress on research projects to the industry. The platform is also used by the Potato Workgroups to report back on the trials conducted in the regions. Attendance during the last two events has grown from 220 to 280 delegates (producers, researchers, input supplier representatives and officials of Potatoes South Africa, Potato Certification Service and Potato Laboratory Services).

The Potato Industry Development Trust's post graduate bursary students attend the potato research symposiums as part of their training and students are expected to present their results to the industry at the symposium.

- Regional farmers' days: To give researchers more exposure to the industry and to improve interaction between growers and researchers, farmers' days are organised in all the potato production regions with the main focus on research. The latest

developments of research projects are discussed as well as results of trials conducted in a specific region by the relevant potato workgroup. Challenges unique to that growing region are identified and specialists are then requested to present the latest information and discuss potential solutions.

- CHIPS: The CHIPS magazine is an important medium to communicate with producers. Two to three technical articles and two potato workgroup reports are published in each edition. Contributions are not limited to personnel of the research department and contracted researchers, but also other experts in the industry.
- Website: Summaries of project reports, research reports and technical articles published in CHIPS are published on the website. An initiative has been started to make full final reports and literature studies accessible to all by publishing them on the Potatoes South Africa website www.potatoes.co.za.

4.4.8 Fact Sheets

A total of 13 factsheets covering important topics pertaining to diseases, pests and production practices have been developed, published and distributed to farmers. They are all available on Potatoes South Africa's website (www.potatoes.co.za/research/fact-sheets). Two 'Best Practice' guides were developed (www.potatoes.co.za/research/Best-Practices). The 'Guide to the Handling of Seed Potatoes' was developed with input from various role players in the value chain and cover aspects such as the responsibility of the seed grower, commercial farmer, handling of complaints, inspection of seed upon arrival on the farmers safe use on the farm. 'Responsible Use of Crop Protection Products' give guidelines on the safe use of crop protection products, effective application, factors affecting the action of crop protection products, etc.

4.5 Research Process

At corporate governance level Potatoes South Africa utilises several committees to oversee its Research and Development Programme. First is the Research Committee whose role is to develop and maintain a research strategy, determine priorities for research funding, prioritise projects against evaluation criteria and to identify research projects to be funded. The Research Committee has eight producer members each representing a total production region as well as two representatives of the seed growers in South Africa. The Chairperson is appointed by the Board of Directors of Potatoes South Africa. The Research Committee co-opts persons representing various stakeholders in the industry, for example Potato Certification Service, Potato Laboratory Services and processing companies.

The role of Potato South Africa's Research and Development core business is to manage innovation and research (i.e. call for proposals, administration of the proposals, the proposal evaluation process, quality of proposals and to communicate research project decisions), as well as the monitoring of the research once it commenced and finally to ensure that researchers finalise projects in a timely manner. Personnel also participate in the workgroup programme that addresses the need to evaluate potato cultivars in each production region, to identify adaptability of new cultivars and to conduct trials on farms (see Annexure A, *Figure 6: Potatoes SA Research Process*).

4.6 Network of Professional Partners

The national research programme of Potatoes South Africa is conducted by well qualified and experienced researchers. To maintain this capacity, the development of a network of partnerships with science-based organisations is crucial with the view to establish centres of

excellence where research needs can be addressed. Partners in the research network include, amongst others, the Agricultural Research Council, University of Pretoria, University of Stellenbosch, University of the Free State, University of the North West, the KwaZulu-Natal Department of Agriculture and the Western Cape Department of Agriculture. Various input suppliers and processing companies are involved in the research projects of the potato workgroups in the various production regions.

- University of Pretoria established a potato research programme during 2005. The aim of this programme is to give the potato industry access to all the disciplines at the University. This is also the ideal situation to build scientific capacity for the potato industry for the future.
- University of the Free State is well known for its strength in agronomy and the Potato Industry Development Trust is funding research at this university since 2013.
- KwaZulu-Natal Department of Agriculture at Cedara is ideally located to partner with Potatoes South Africa to contribute to the needs of both commercial and emerging Black commercial producers.
- Western Cape Department of Agriculture at Elsenburg's proximity to one of the major potato producing areas (Sandveld), its expertise on soil tillage and soil health, as well as on aphid monitoring to manage plant aphids, makes the department a research partner. Researchers of the department also work closely with researchers at Stellenbosch University to form multi-disciplinary teams.
- The Agricultural Research Council has a longstanding relationship with the potato industry. The Agricultural Research Council hosts the potato gene-bank, a critical service to the industry. The expertise of entomologists and plant pathologists at various institutes are available in different production regions.
- Through the Agricultural Research Council, relationships are being built with new partners such as the Tshwane Technical University and the University of Limpopo.
- International collaboration. Maintaining the international collaboration network that was built over the past years is important for strengthening of local research capacity.
- Collaboration with Grain SA has also been initiated to explore the management of soil health as part of a multidisciplinary research initiative.

4.7 List of Projects 2018/19 – 2020/21

4.7.1 National Projects

Refer to Annexure A, *Table 2: List of National Research Projects*.

4.7.2 Potato Workgroup Projects (2018/19 – 2020/21)

The potato industry has a unique programme of potato workgroups. These workgroups are formed by producers, input supplier representatives and personnel of Potatoes South Africa. They are mainly responsible for on-farm research in the various production regions. The data of all these trials are evaluated by Potatoes South Africa in order to ensure that the work is done in a independent scientifically sound way and that the conclusions are based on scientific principles (see Annexure A, *Table 3: Potatoes SA Potato Workgroup Projects*).

5 TRANSFORMATION

5.1 Introduction

Transformation within Potatoes South Africa aims at establishing sustainable Black commercial potato producers. The focus in terms of transformation is as set out hereunder and in order to attain the approved goals set out in Potatoes South Africa's business strategy:

- a) Enterprise Development
- b) Small Grower Development
- c) Farm Based Training
- d) Tertiary Skills Development

5.2 Strategic Goals of Transformation

In terms of the Potatoes South Africa strategy the strategic goals applicable to transformation in the potato industry are to:

- a) Provide industry strategic knowledge management support
 - Knowledge transfer through support services, information dissemination, training.
- a) Provide producer development services
 - Provide competence development, i.e. Enterprise Development with the primary aim of developing Black commercial producers, skills development and bursaries.
 - Provide technical support, i.e. best practice, advice, product testing trials and seed, i.e. to developing emerging farming enterprises to become commercial and uplifting people and communities in terms of food security.

5.3 Strategic Orientation of the Transformation Programme

The main thrust of Potatoes South Africa's transformation programme during the current levy period was on Enterprise Development. This is in line with the NAMC guidelines on how funding that is earmarked for transformation should be utilised. When the Enterprise Development program was initiated the main aim was to introduce at least 6 new producers into the program annually. The number of producers introduced was mainly limited to the amount of money that was available within the ambit of the total levy income and the high cost of producing potatoes as mentioned earlier. During 2013 the program was evaluated in terms of its impact and it was concluded that the program had limited impact, i.e. high cost-low impact. The program was hence amended in recent years in order to optimise impact, but at the same time adhere to the NAMC guidelines for transformation. This will be discussed in more detail in the next section.

The following sub-sections will highlight the different aspects of the transformation programme in more detail.

5.3.1 Enterprise Development Programme

- a) The goals of the Enterprise Development Programme are the following:

- Develop an economic programme that is aimed at sustainable potato production by Black emerging commercial producers in order to utilise available land and assist to the maximum benefit of an integrated production system.
- Identify potential Black producers that can be introduced into the enterprise development programme;
- Assist in setting up, supporting and growing viable new Black owned potato producing enterprises by providing services that include, but are not limited to strategic farm business planning, technical support and seed supply.

b) Strategic orientation of the Enterprise Development Programme

Based on the support model to introduce at least 6 producers annually in the programme there were a number of challenges that producers experienced; the major being access to finance and machinery. The mechanics of the 6 producers per year model implied that all producers participating in the Enterprise Development Programme need to have own funding for chemicals, fertiliser, labour and also access to machinery. Over and above this, they still had to contribute towards their seed cost as the years progressed. Lack of own finance to produce potatoes profitably and in a sustainable manner resulted in the following:

- As the producers progressed in the programme, the number of hectares decreased. They only had access to seed which was contributed by Potatoes South Africa and seldom made the contribution towards seed cost as per the requirement of the programme.
- The tonnage produced by these producers was not on par with their commercial counterparts and this could be attributed, amongst others, to insufficient fertiliser and chemicals being applied.
- The farming venture not being sustainable due to a lack of technical expertise in potato production.

As mentioned, the result was a high cost-low impact program. This necessitated Potatoes South Africa to adapt the programme by focusing on the expansion of hectares of existing producers that have the potential to become fully commercialised, while at the same time phase out those producers who did not have the potential to graduate to a commercial level. This process does however not exclude new producers who are identified as discussed below. In addition, much more emphasis is placed on partnerships with other stakeholders in the potato value chain that can fill the gap where producers do not have all the means of production and marketing. This, for example, include amongst others access to fertilisers and chemicals at 0% interest, off-take agreements and business support. The issue of partnerships will be discussed in more detail in a following section.

At the time of writing this document there were 16 producers benefiting from the Enterprise Development Programme.

c) Process of Enterprise Development

The following steps are performed to identify and introduce the most suitable producers to enter the Enterprise Development Programme (see Annexure A, *Figure 8: Steps Followed in the Enterprise Development Programme*):

Step 1: Identify the Project

This step entails identifying potential Black producers in areas that are suitable for potato production. The following criteria are broadly applied to identify Black producers:

- Own at least 12 ha of land or must have permission to occupy for a minimum period of 4 years
- Lead farmer/entity with linkages and expertise
- The farmer should be actively farming and have a track record
- Priority will be given to land reform beneficiaries where applicable
- Land should be accessible for information/farmer days
- Land should be accessible for business and technical workgroups
- Establish if bush pigs are a problem in the area
- 800 mm soil depth
- Soil acidity must be less than 30%
- Evaluation of history of the land (crops planted) for at least the past 5 years for risk and nematodes
- Average annual rainfall for site
- Preference given for sites with irrigation
- Fenced land a benefit

Once a potential farmer is identified soil samples are taken to determine the suitability of the producers' lands, while possible mentors are also identified. When lands are suitable and willing mentors are identified a pre-feasibility study is compiled specific to a farmer. Components of the pre-feasibility study typically include the following:

- Description of the farm (including type of land use patterns)
- Water availability
- Infrastructure on the farm
- State of mechanisation
- Level of skills
- Existing labour force
- Access to inputs, finance and extension services
- Production potential
- Access to markets (different channels)

Step 2: Present to the Business Development Unit (BDU) for input and recommendations

The BDU serves the following purpose per project:

- Advisory to Potatoes South Africa.
- Advisory to Transformation Committee.
- Assist with technical planning.
- Monitoring and evaluation.

The BDU comprises of Potatoes South Africa personnel, input suppliers, technical experts and other core business representatives. It provides a joint recommendation on the projects (potential producers) proposed for inclusion into the Enterprise Development Programme. The BDU also performs the dual role to solicit support from participating stakeholders to assist the potential producers.

Step 3: Entering the Committee System

Once recommendations have been made by the BDU, such recommendations are presented to the Transformation Committee for recommendations to the Board of Directors of Potatoes South Africa and the Potato Industry Development Trust for final approval.

Step 4: Business Plans

A full business plan is developed for each farmer. The business plan entails a much more in-depth analysis of the elements included in the pre-feasibility study but go further to include a detailed SWOT and gap analysis, as well as a financial, human resources and operation plan. It also clearly stipulates timeframes and sequencing of operational activities.

Step 5: Implementation

When the business plan is completed, the implementation phase commences. This is done jointly by the farmer, the mentor, and the respective Potatoes South Africa officials.

Step 6: Monitoring and Evaluation

Constant monitoring and evaluation take place. This ensures that problems and challenges are identified and rectified timeously. Other role-players also play a part, especially those who have invested in the production of the crop.

Potatoes South Africa's Enterprise Development Programme is typically geared to support producers over a 4-year period. Over and above the financial contribution by Potatoes South Africa towards the pre-feasibility studies (and where required soil samples), this support entails provision of seed, remuneration of mentors, training and other industry exposure activities such as attending the Potatoes South Africa Congress, NAMPO and an industry induction tour which would typically include a visit to Potatoes South Africa Head Office, a fresh produce market, a processing plant and a successful Black potato farmer.

The 4-year support provided to producers is structured as follows:

- In the first year that a farmer enters the programme he/she receives 100% support to access seed, i.e., Potatoes South Africa procure all the seed for the farmer. This amounts to approximately R40 000 to R50 000 per hectare for which the farmer qualifies.
- In the second year the farmer will receive 75% and he/she is responsible to procure the other 25%.
- In the third year the farmer will receive 50% and he/she is responsible to procure the other 50%.
- In the fourth year the farmer will receive 25% and he/she is responsible to procure the other 75%.

As mentioned, Potatoes South Africa has been expanding producers currently on the program and limited the number of new entrants. The aim is to create commercial producers in the future and the producers are expanded to produce a minimum of 30 ha's provided they have access to enough land for rotation and access to resources required for this commercial unit.

The expansion programme with existing producers will, however, take the same format as with new producers in that the support provided for added hectares will also be phased out over a 4-year period. Depending on the status of the farmer he/she might qualify for a third cycle of support.

The benefits of the above-mentioned approach are multi-fold and include, but are not limited to:

- Financial and resource benefits derived from better economies of scale for the producers;
- Increased willingness of support services to visit farms due to a larger number of hectares being serviced. It also translates into a more efficient utilization of the time and capacity of different support services;

- Cost savings on travel and accommodation costs per unit of hectare supported can be utilized more effectively elsewhere in the programme;
- Continued access to specialized support by emerging Black commercial producers to embed tacit knowledge and competencies to farm commercially with potatoes;
- Increased willingness of input suppliers to participate in the programme in a partnership approach as a result of scale benefits.

See Annexure A for selected Enterprise Development Farmers supported by Potatoes South Africa, *Table 4: Selection of Potatoes SA Enterprise Development Farmers*.

5.3.2 Small Grower Development

The Small Grower Development Programme involves producers and communities who plant potatoes primarily for food security with the remainder of the crop being sold to members of the immediate community. It is to be expanded to schools where the participation of learners will be encouraged. Potatoes South Africa managed and co-funded 55 of these projects since 2020, attendance averaged at 50-100 rural growers attending per day, thus a total of over 3 900 growers exposed over the last six years.

a) Goals of the Small Grower Development Programme

The goals of the Small Grower Development Programme are to:

- Disseminate production and business information through trials.
- Provide practical training to producers and communities on good potato production practices.
- Utilise cultivar or demonstration trials as a way of educating, training and disseminating important technical information that is necessary for successful potato production.
- Provide the necessary assistance and expertise to communities to improve their food security situation through the production and sales of surplus potatoes.

The Small Grower Development Programme follows a similar process as the Enterprise Development Programme. It includes identifying the producers and/or communities that are suitable to participate in the Small Grower Development Programme and make recommendations to the relevant committees for approval. A vitally important element of the Small Grower Development Programme is to identify producers and/or communities where there is potential for producers and/or community members to graduate into the Enterprise Development Programme and eventually become emerging Black commercial producers.

b) Role of Potatoes South Africa in the Small Grower Development Programme

The role of Potatoes South Africa in assisting these producers involves:

- Partnerships with the Department of Agriculture, Forestry and Fisheries and provincial Departments of Agriculture. This entails amongst others utilising the services of the provincial Departments of Agriculture's extension service for support and research purposes.
- Facilitate the supply and planting of certified seed potatoes.
- Supply information at cultivar trials and information days.
- Increasing capacity and tacit knowledge for the producers to produce good potatoes and thereby promote good production practices.

- Use all available communication channels to disseminate information.
- Engaging the local cooperatives to serve as seed distribution points.

See Annexure A for selected Small Grower Development projects, *Table 5: Potatoes SA Small Grower Development Projects*.

5.3.3 Skills Development

Skills Development comprises Farm Based Training and the Skills Development Pipeline.

5.3.3.1 Farm Based Training

Farm Based Training is rolled out in accordance with the provisions of the Skills Development Act and aimed at skills development of new Black producers.

a) Goals of Farm Based Training

The goals of Farm Based Training within Potatoes South Africa are to:

- Uplift the skills of new Black producers focussing on decision making and the understanding of their role.
- Assist in developing new Black producers with technical and business skills to enable them to farm profitably.
- Improve the quality of potato production by improving the knowledge base of the new Black potato producers.

b) Objective of Farm Based Training

The objectives of Farm Based Training are to:

- Provide a limited number of short courses to the Black farming communities.
- Identify and develop new Black producers' skills.
- Ensure the development of new Black producers so as to ensure sustainability and good practice.
- To develop new Black producers to work more effectively.

5.3.3.2 Tertiary Skills Development Pipeline

The Tertiary Skills Development Pipeline includes providing bursaries, internships and workplace experience.

a) Goals of the Tertiary Skills Development Pipeline Programme

The goals for the Tertiary Skills Development Pipeline Programme are to:

- Develop the technical capacity in the potato industry by offering bursaries to deserving Black students.
- Provide internship training opportunities, primarily for bursars, in relevant study disciplines requiring practical training and exposure as part of their qualification conditions and to increase their suitability to take advantage of job opportunities.
- Provide workplace experience opportunities primarily for bursars in relevant study disciplines requiring workplace experience to enhance their employment opportunities.

b) Expected outcomes from the Tertiary Skills Development Pipeline Programme

The expected outcomes from the Tertiary Skills Development Pipeline Programme are:

- Development of young talent through tertiary education that can contribute productively to the maintenance and improvement of sustainability in the potato industry.
- Practical exposure to the potato value chain and building of relations with stakeholders already at an early stage of the student's career.
- Better informed youth that can make informed decisions about their career choices based on exposure and experience.

c) Process/Undertaking of the Tertiary Skills Development Pipeline

The process to deliver the Tertiary Skills Development Pipeline Programme involves:

- Consultation, identification and selection of students by end of October (the students will either be selected from existing Black potato producing enterprises or from second year level upwards at the Colleges and/or Universities).
- Selection and recommendations to the Potatoes South Africa Bursary Committee.
- Allocate funding for bursaries to deserving candidates for tertiary education in January.
- Placing candidates at the relevant tertiary institutions in January.
- Offering an induction course to students to obtain a better understanding of the potato industry.
- Offering undergraduate students the opportunity to attend the biennial Potatoes South Africa Congress and the annual Transformation Symposium to gain knowledge on the workings of the potato industry, and the transformation programme specifically.
- Offering post graduate students the opportunity to attend the biennial Potatoes South Africa Congress and the Potato Research Symposium to present their research results/progress.
- Organising and monitoring holiday work for students.
- Monitoring and evaluating the progress on a regular basis.
- Liaise with interested stakeholders (producers, organisations, companies) to place students for internships and workplace experience.

5.4 Transformation Process

Transformation within Potatoes South Africa is managed at corporate level through different committees. First, there is the Developing Producers Committee that comprises emerging commercial producers (most are part of the overall transformation initiatives of Potatoes South Africa). This committee has the responsibility to nominate representatives to the Potatoes South Africa Transformation Committee and to identify needs, challenges and opportunities for emerging Black commercial producers.

The above mentioned is then elevated to the Transformation Committee that comprises of new era Black commercial producers, commercial producers, processors, input suppliers, government representatives and representatives of the NAMC. The Chairperson is appointed by the Board of Directors of Potatoes South Africa. The role of the Transformation Committee is to develop and maintain the approved transformation strategy, evaluate progress made according to stated objectives and projects approved, consider recommendations for new projects and activities and make recommendations to the Board of Directors and the Potato Industry Development Trust.

Once projects and activities are approved for funding it becomes the responsibility of the staff of the Transformation Core Business of Potatoes South Africa to plan and implement it. The Transformation Core Business has the following staff members, namely a senior manager, a national coordinator, a specialist and an administrative assistant. This core business is also supported through six regional offices.

The Transformation Senior Manager is responsible for the strategic direction of the core business, which entails, but are not limited to, interaction with relevant government departments on national and provincial level, liaison with input suppliers, interaction with other commodity organisations to leverage resources and cooperation possibilities, interaction with upstream role players to access markets and assist with the process of sourcing of additional funding for the expansion of the transformation sub-programmes.

The National Transformation Coordinator is responsible for the implementation of the transformation projects in the field based on the approved strategy and funding. This entails championing the prefeasibility and business planning processes, as well as the coordination of the processes on the ground pertaining to the Enterprise Development and Small Grower Development Programmes.

The Transformation Specialist is responsible for offering technical advice in terms of production practices to the projects under the Enterprise Development Programme and the Small Grower Development Programme. This entails recommendations during soil preparation, planting, growing and harvesting.

The Transformation Administrative Assist and is responsible for coordinating the administrative duties within the unit. This includes inter alia, handling travelling arrangements of the staff, processing invoices from service providers, facilitating and sharing information within the unit in relation to queries from stakeholders. The regional offices assist in terms of providing technical and training support to participants in the Enterprise Development and Small Grower Development Programmes. Assistance is also provided on a demand basis where participants require specialised knowledge or assessments regarding, for example, disease status, harvest readiness, etc.

5.5 Network of Partners

To achieve the goals of the Transformation Programme within Potatoes South Africa, it is imperative that other partners be brought on board. The following partners have been identified as critical in ensuring that the transformation programmes are sustainable but are not limited to the ones mentioned below.

5.5.1 NAMC Together with Relevant Government Departments

Representatives of the NAMC and representatives of the Department of Agriculture, Land Reform and Rural Development are part of the Transformation Committee, and through this involvement provide inputs in terms of strategic direction, but also contribute towards the evaluation and monitoring of the programme. The NAMC's role is further to provide guidelines in terms of transformation and monitor Potatoes South Africa to adhere to these guidelines. The involvement of government officials ensures that transformation in Potatoes South Africa is aligned with the key priorities of government as far as transforming in the sector is concerned.

5.5.2 Input Suppliers

Input suppliers provide a realistic view in terms of the requirements of different potato production areas. Input suppliers, such as Nulandis, also assist in soil sampling to ensure that land being identified is suitable for potato production. Nulandis, for example, has involved their partners to participate in the Enterprise Development Programme, which includes amongst others, projects where Nulandis, AECl are collaborating with Potatoes South Africa to develop Black commercial producers. Agribusinesses such as NTK/VKB have also been in collaboration with Potatoes

South Africa where a huge impact has been made especially in Limpopo where farmers under the Enterprise Development Programme have enjoyed access to credit facilities that allow for provision for production inputs.

5.5.3 Off-takers

To ensure the sustainability of transformation projects, there must be guaranteed markets for emerging Black commercial producers. Engagements with retailers such as Famous Brands, Fresh produce markets and processors are regularly taking place. They have all indicated their interest in working with developing producers and they are willing to be part of the group that will ensure that good quality product is realised from this group of producers. It is therefore critical that Potatoes South Africa forms partnerships to ensure different market channels to mitigate price and offtake risks.

5.5.4 Commercial Banks

The commercial banks are crucial to secure funding. Given the strict lending criteria of banks they play an important role in ensuring that applications are suitable for funding, or at least provide valuable inputs in the process to graduate emerging Black enterprises into bankable clients.

6 MARKET DEVELOPMENT AND GENERIC PRODUCT PROMOTION

6.1 Introduction

Potatoes South Africa is proactive and relentless in its efforts to unpack and gain insights of attitudes and perceptions towards potato consumption in South Africa. The organisation conducts national consumer studies every 4 to 5 years to gauge perceptions, attitudes, and product usage. The last national study conducted in the 2018/2019 fiscal revealed a compelling case for generic promotion to be carried out in order to continue to shift perceptions through well-crafted campaigns/promotions that seek to:

- Positively influence consumer buying behaviour.
- Stimulate demand for increased per capita consumption.
- Educate about price fluctuations to avert negative attitudes.
- Create awareness of the biological, nutritional and value adding attributes of potatoes.
- Serve as the mouthpiece of producers on consumer related regulatory aspects such as food labelling requirements and packaging requirements, quality issues, as well as Consumer Protection Act 68 of 2008 (CPA).

Some of the key findings from the national attitudes and usage study of 2018/2019 revealed are:

- a) Over 50% from a sample of 500 respondents think that potatoes are value for money. However, over a third of consumers think that potatoes are either too expensive or quite expensive.
- b) Consumers cited wanting to know different things about potatoes mainly health benefits, recipes, and cooking methods.
- c) Younger people from the sample expressed most dissatisfaction with potatoes mainly because of the hassle of cooking. This presents an opportunity for youth marketing with the object to create future loyal buyers and consumers today.

The Marketing Core Business of PSA has since developed a 2024/2025 marketing strategy whose principal vision is to attract, retain and grow overall market share. The 2018/2019 study further revealed that consumers mainly use television, radio, satellite, and social media as their main source of information. As such, PSA's generic campaign deploys classical marketing communication mediums of Public Relations, above-the-line advertising and digital marketing to inform, educate and inspire targeted consumers segments.

6.2 Potatoes South Africa's Strategic Marketing Model

Refer to Annexure A, *Figure 9: Potatoes South Africa's Strategic Marketing Model*.

6.3 Marketing Team and Structure

The Marketing team of PSA is lean and mean. The Marketing Core Business relies on the support of AgriSeta for internship placements and support from cross Marketing Core Business collaborations. The full-time team has a combined experience that spans over 25 years in marketing and communications from various industries and sectors, 17 of which is from the potato industry.

6.4 Strategic Management and Direction

The Marketing Core Business is guided and led by THE *Marketing Committee* comprising of stakeholders such as the NAMC, South African National Consumer Union, PEPSICO, Department of Agriculture, Land Reform and Rural Development, within as well as producers who represent different production regions.

The *Marketing Committee* makes strategic decisions that are based on insights from an environmental assessment and are responses to strategic questions about how Potatoes South Africa will grow, such as:

- What is the Marketing Core Business's primary function?
- Who is the target customer for the organization's products and services?
- Where are the customers and how do they buy?
- What is considered "value" to the customer?
- What countries are attractive for market access and development?
- What regulatory issues are affecting the sale of potatoes inside and outside the Republic of South Africa?

6.5 Strategic Marketing Management Process

In the age of constant change, ever increasing volatility and uncertainty, and most recently the extraordinary turbulence brought on by COVID-19, strategic management is crucial than ever. Marketing strategies play two important roles:

- a) To increase demand.
- b) To offer a unique value proposition.

The Marketing Core Business follows a structured process with a mid to long-term orientation for purposes of proper evaluation and control (see *Annexure A, Figure 10: Strategic Marketing Management Process*).

6.6 Marketing Priority Agenda

The Marketing Core Business has been mandated by the Marketing Committee, National Council and Potato Industry Development Trust to:

- a) Pursue strategy from a long-term cycle of 4-5 years with continuous reviews and improvements in the short term.
- b) Continue to focus generic product promotions efforts on the end consumer rather than the distribution channel.
- c) Identification of target markets:
 - The core target market shall be the middle-income consumer segment of all demographic groups.
 - The secondary target market shall be low- and high-income segments of all demographic groups.
- d) Marketing budget to be allocated to generic product promotion efforts in accordance with the national population share of each demographic group as well as adherence to NAMC's Guidelines for generic promotions.
- e) Design a clear product positioning statement.

- Work on the strategic positioning of potatoes as a: tasty, convenient, and versatile meal option.
 - Redirect the health and nutrition messaging to niche consumer markets and sporting events.
- f) Medium of marketing communication:
- Deploy the promotion mix elements of PR, above-the-line advertising, digital marketing, and sporting events as the driver of all marketing communication messages to end consumers.
- g) Pursue farm gate sales studies and develop and industry-wide strategy for adoption by industry.
- h) Pursue foreign market development studies in select African countries develop and industry-wide strategy for adoption by industry.

6.7 Marketing Objectives: 2020/2021 - 2024/2025

Refer to Appendix A, *Figure 9: Potatoes SA's Strategic Marketing Model* to explain the Marketing Objectives 2020/2021 - 2024/2025.

6.8 Market Access and Development Unpacked

Market development is a growth strategy that aims to:

- Enter new segments of an existing market.
- Enter a completely new market.
- Converting non-users into users.
- Increasing consumption per user.

For the potato industry foreign market development has been identified as a critical growth strategy to pursue between 2020 and 2025. Due to COVID-19 and subsequent bans on travel and trade, the study could not be initiated between 2020 and 2021. It is scheduled for implementation in the 2022/2023 fiscal. The Marketing Core Business has been in consultations with the NAMC to bring them on board as a strategic partner. As of February 2022, engagements point towards a feasible alliance, earmarked to commence on 1 July 2022.

The objectives of the study are to:

- Investigate the realistic market opportunities for potato products in Africa,
- Investigate market barriers that limit the market access for potato products, and
- Determine the cost of exporting potato products to Angola, Congo, Mozambique, Zambia, and Zimbabwe.

The Southern African region has presented a growing demand of fresh potatoes, particularly unwashed potatoes from the Mozambique market. Market barriers such as import bans, phytosanitary measures and import licencing requirements limit export supply. North African countries present import opportunities as a result of their negative trade balance. Currently North African countries import large volumes from European countries. There has been a growing demand of frozen potatoes in the global market in recent years due to convenience and changing consumer preferences. Africa is highly dependent on European imports for frozen French Fries. The TRADE-DSM approach was used to identify the realistic market opportunities for the potato industry. This approach uses the following indicators to identify the REO in the world:

- Operational environment of target market,
- Import demand of target market,
- Market access conditions, and
- South Africa's competitiveness in the target market.

6.8.1 A Study to Aid the Development of Markets for South African Potatoes in Pre-select Countries in Africa

a) Timelines: 1 July 2022 – 30 June 2023

b) Foreign Market Development Mission Statement

To identify, assess and formulate a foreign market development strategy of realistic market opportunities for the export of South African potatoes

c) Foreign market development vision statement

3I's of PSA's Foreign Market Development:

- Identify preselect markets in the continent with real export opportunities
- Investigate the markets' opportunities, challenges, and business climate
- Infiltrate existing and new markets with a consistent and superior value proposition

d) Identified Countries

1. Angola
2. Congo
3. Zimbabwe
4. Zambia
5. Mozambique
6. Namibia

The Marketing Core Business would like to credit Africa Advisory Council and the National Agricultural Marketing Council for its contributions towards this working document.

6.9 Project Highlights for 2021/2022

8.9.1 Market/Trade Intelligence

In the 2020/2021 fiscal year, one project was carried out under the Market & Trade Intelligence project namely: Import/Export Monitoring.

In the year under review the focus was on the import side with focus on frozen French fries from Europe. The Marketing Core Business gathered and analysed monthly statistics of tariff line 2004.10.20, which served as a catalyst lobbying government to protect the local industry from dumping. In the case of South Africa, there is an ongoing battle between our local agriculture sector and global importers, with South Africa being considered a prime destination for dumping frozen and processed potato products. Anti-dumping duties, which have been in place since 2016, have protected local industry to a large extent. However, these duties have recently been terminated, leading to an anticipated influx of cheap potato chips from Europe, and putting the South African potato industry under severe threat.

Imports of frozen French fries declined since the implementation of trade remedies from 46,904 tons in 2010 to 18,417 tons in 2020. This represents a percentage decline of 61% in a decade. In the months January and May 2021, 11.8 million kilograms of frozen fries were imported into South Africa between January & May 2021, which represents the highest year-to-date volumes when comparing to the years 2019 and 2020.

Potatoes South Africa and members of the Potato & Vegetable Processors Forum (PVPPF) are working around the clock to have anti-dumping duties re-instated after they officially lapsed in June 2021.

Refer to *Annexure A, Figure 11: Market/Trade Intelligence* for more information.

6.9.2 Consumer/Trade Education

Content creation remains an integral tool for formulating marketing communication messages that are professionally researched, backed by science, and generated through expert opinion and thought leadership. To this end, the generic promotion of potatoes relies heavily on content generation.

The Marketing Core Business commissioned work for the development of recipes (videos and stills) nutritional articles that were used to undertake the strategic mission of the Marketing Core Business to inform, educate and inspire current and potential consumers about the many ways in which potatoes can be prepared and incorporated into a balanced, healthy, tasty and affordable meal.

6.9.3 Generic Product Promotion

Generic promotion is the cooperative effort to increase demand for products which are similar. The strength of generic promotion lies in its ability to benefit all producers as opposed to brand promotion that only increases the share of the market for only a select few. The Marketing Core Business uses a subset of the marketing mix – the promotional mix. The promotional mix is used by marketers to communicate with identified consumer markets to fulfil organisational goals and objectives.

a) The promotional mix elements are employed:

- Media and Public Relations
- Television and radio
- Digital Marketing (consumer website and social media)

b) Objectives of this project category are to:

- Reach consumers through varied mass media channels
- To strengthen the product offering to target audiences through strategic marketing communication.
- To promote the consumption and use of potatoes to target consumer segments.
- To measure the efficacy of all advertising and promotional campaigns through focus groups.

6.9.4 Television/Radio

- Eight (8) new radio and television commercials produced.
- Television commercials launched on *SABC 1 and 2* from 1-31 December 2020, 25 March – 8 April 2021 and 7-21 June 2021.
- Radio commercials launched on *Metro FM and RSG* from 1 February to 11 March as well as 30 May to 29 June.
- For the first time the Marketing Core Business commissioned a focus group study aimed the effect and impact of the newly produced commercials, the communication message contained in the commercials as well as the suitability of the mediums chosen for advertising.
- All television and radio commercials performed reaching well over 30 million South Africans in the middle-income segment and achieving an average frequency of 3.8.

Whilst above-the-line advertising (radio and television) may not directly impact on individual farm enterprises in the short term. At consumer level, it carries the power to create consumer awareness, positively shape perceptions and behaviour to stimulate demand and ultimately grow the industry in respect of consumption and sales.

6.9.5 Public Relations

The Marketing Core Business's Media & Public Relations efforts were intentional under the year in review. The rationale was to achieve positive, meaningful, and maximum impact for all interventions, using classical PR. Three campaigns were implemented, achieving great success as follows:

- First campaign: Amazambane for Life successfully executed in October/November 2020, acquiring free media exposure of R164 467.90
- Second Campaign: Our Potatoes, your way successfully executed in November/December 2020, acquiring free media exposure: R786 871.46
- Third campaign: State of the Potato Industry Address, amassing free media exposure: R400 009
- Total media earned in the year under review = R1 351 348.36.

The Marketing Core Business through well conceptualised and executed PR campaigns was able to add over R1 million to its advertising spend through media coverage gained on well-motivated, credible and narrated marketing communication.

6.9.6 Digital Marketing

The consumer website together with well performing social media platforms have enabled the Marketing Core Business to reach a multitude of consumers and deliver consumer geared product content such as health, nutrition, recipes, fun facts, and information. Upon revamping the consumer website: www.potatonation.co.za – the following immediate results were realised:

- 6 461 page views in April 2021 representing a percentage increase of 614% when compared to January statistics.
- 1 256 monthly users in April representing a jump of 155% compared to January 2021.
- The bounce rate moved from 88% to 66% in April, a clear sign that site visitors are staying longer on the new page and exploring more.

Potatoes South Africa has been able to grow the engagement, reach and number of followers across social media platforms of Twitter, Facebook, and Instagram. The number of followers in the fiscal under review reached 71K followers combined. This milestone was reached by analysing targeted social media audiences and developing strategies tailored to inform, educate, and inspire. A lot of content was created and distributed for all social media profiles, coupled with constant monitoring of online conversations, collaborating with influencers, and evaluating impact.

6.9.7 Trade/Industry Relations

PSA has been an active member participant in Project Rebirth since its inception. Project Rebirth was established to improve the standard operations and effective management of national fresh produce markets. A key success of the project was the development of the Codes of Best Practice which have seen ailing markets such as East London rise to the top five of best performing markets.

COVID-19 had an adverse impact on the work of project rebirth. It was impossible to undertake market visits and secure meetings with stakeholders in the first 6 months of the 2020/2021 financial year. As such only two meetings took place in the current fiscal with Nelson Mandela Bay Market and Tshwane Market.

The project rebirth steering committee had drafted and sought opinion on a Bill for submission to Parliament pertaining to the development of a national fresh produce market agency in the previous financial year. The NFPDM Bill was not supported by the Office of the Chief State Law Advisor (OCSLA) on the basis that the Bill violates sections 44, 151 and 156 and schedule B of the Constitution where NFPMs are deemed local government function. National Department does not have legislative competence to regulate NFPMs. Only municipalities are vested with the power to enact bylaws regulating markets within their jurisdiction.

Had the draft Bill been approved, it would have been a game changer in the sale of fresh produce through national fresh produce markets. Although the draft Bill, was rejected, the battle for the sale of fresh produce through national fresh produce markets in the current format remains an ongoing challenge for the fruit and vegetable agricultural sectors. As such, project rebirth remains a much-needed committee to initiate change through dialogue and concentrated local municipality lobbying.

6.9.8 Market Access/Development

The project category market access and development focused efforts on monitoring and seeking remedial actions in industry-related issues such as the dumping of French fries on the South African market. As such the key focus areas in the year under review were combating any measures that hampered fair trade, crippled producer profitability and impede industry growth. PSA, in collaboration with members of the Processing Forum have pursued a Sunset Review (SSR) application for the anti-dumping duties for Belgium and the Netherlands. Due to COVID-19, ITAC's investigation into the matter has been slowed down. The industry's anti-dumping duty protection recently lapsed - June 2021. An application had been made for the reinstatement of the tariff for another five years, but local regulator the International Trade Administration Commission of SA did not complete it on time.

PSA has lodged a new application which can take 6-18 months to conclude. In the interim, the Marketing Core Business in close working with members of the PVPF will closely monitor the volumes of imported French fries and associated impact to the local industry. (See *Annexure A, Figure 12: Strategic Market Development*).

7 National service delivery

7.1 Introduction

The National Service Delivery Section of Potatoes South Africa is a service delivery section of the business that supports the four core business sections namely Marketing, Information, Research and Transformation.

The aim of the Service Delivery Section of Potatoes South Africa is to be the mouthpiece from the producer to Potatoes South Africa and vice versa.

National Service Delivery has several regional Coordinators operating in all 16 potato producing regions of South Africa. Their mission is to build relationships with farmers, in doing so carrying over knowledge to farmers from projects emerging out of the four core businesses of Potatoes South Africa. Other services like quality control of potatoes packed, seed quality, complaints, hectares planted, and general information, but not limited to it, is part of the portfolio of this dynamic team. In essence this team can be seen as the feet in the field for the Potato industry (See *Annexure A: Figure 13: National Service Delivery*).

ANNEXURE A: LIST OF TABLES AND FIGURES

Table 1: Strategic Focus Areas of the Industry Information Service Core Business

Strategic Focus Areas of the Industry Information Service Core Business		
Focus areas	Objectives	Motivation
Market Information	<ul style="list-style-type: none"> Market reports: Daily, weekly, monthly, seasonal and annual Monthly market comment Fresh produce markets: Trend analysis Monthly YouTube video (Plaas Media) 	Market oriented economies cannot be successful if markets do not operate successfully, and a prerequisite for the successful working of markets is effective competition. Effective competition however depends on the availability of market signals. Without market signals the net result will be frequent and meaningful imbalances between supply and demand. The lack of market signals also constrains effective planning by the industry of, inter alia, production, procurement and coordination of logistics.
Production Costs	<ul style="list-style-type: none"> Updating of production costs in major production regions Updating of price/yield model 	Potato production is not only costly, labour- and capital intensive, but also a high-risk product to produce. High market price volatility is also evident in the industry. Understanding production costs trends, as well as other costs in the value chain is vitally important in order to derive strategic approaches to mitigate such risks in a high-cost environment.
Potato Value Chain Analysis	<ul style="list-style-type: none"> Determine the following indicators: size of industry, per capita consumption, main varieties, consumer spending, etc 	In the future agri-food producers, processors and retailers will no longer compete as individual entities. Rather, they will collaborate as a strategic value chain and compete with other value chains in the marketplace. This is where Industry Information Services plays a key role in supplying crucial industry information to all stakeholders.
Potato Industry Model	<ul style="list-style-type: none"> To present an outlook of potato production for the coming years (based on certain assumptions) Test “what if” scenarios on the industry 	The industry needs a strategic tool to use to establish what the potential effect can be of structural changes on the industry, such as the impact of sharp increases in input costs on supply response. By doing scenario analysis or using a different set of assumptions a better understanding of the potato industry is generated.
Policy Analysis	<ul style="list-style-type: none"> Use the Potato Industry model, value chain analysis and other information to analyse 	Unpacking the complex interactions in the value chain: (1) Provides insight into the real tangible issues. (2) Provides an in depth

	the effect of different scenarios on the entire value chain or parts of it	understanding of the relative performance drivers at various stages of the chain.
Pack-house & marketing efficiency	<ul style="list-style-type: none"> • Pack-house efficiency norms will be generated and analysed • Issues like for instance weight loss, size groups, mechanical damage and market price variation are being investigated • Cost of labour versus (ownership) cost of lifting and packing equipment 	During the “ <i>Labour & Machinery</i> ” project that came to an end in 2015, it was imminent that variations occur in pack-house efficiencies, e.g. the average number of bags packed per day per labourer. The potato production process, especially the lifting, washing, sorting and packing process is not only capital but also labour intensive. An outflow of this project is the establishment of a Quality Index for producers delivering to fresh produce markets (which serves as a benchmark for individual producers).
Retail price survey: Informal	<ul style="list-style-type: none"> • Price surveys once a month in formal and informal outlets for different packaging sizes • Estimation of consumer spending on potatoes and potato products 	No database on consumer prices for potatoes and potato products exist. On the other hand, more than enough information on the producer price of potatoes is available. Determine and analyse over time the difference between producer and consumer prices of potatoes.
Build and maintain a database	<ul style="list-style-type: none"> • On a daily, weekly, monthly, seasonal and annual basis data and information is collected. Relevant data needs to be collected, processed and disseminated in an orderly manner 	Potatoes South Africa's database forms the centre of its Industry Information Services. Without a proper database Industry Information Services cannot play a key role in consistently supplying crucial industry information to stakeholders.

Table 2: Potatoes South Africa National Research Projects

National Research Projects		
Focus Area	Project Title	Objectives
Soil health	Conservation tillage in the Sandveld (Western Cape)	<ul style="list-style-type: none"> • Development of guidelines for conservation tillage practices in the Sandveld. • Evaluation of conservation tillage on yield, physical, chemical and biological status of soil. • Evaluation of the effect of conservation tillage on water use. • To determine the effect of conservation tillage on soil microbe populations and prevalence of soil-borne diseases.

		<ul style="list-style-type: none"> Advise producers of best practices for conservation of agricultural land in the Sandveld.
	Development of a crop rotation programme in the Eastern Free State	<ul style="list-style-type: none"> To develop a rotation programme to decrease risk related to soil-borne diseases and to improve soil health.
	Nematode populations and crop rotation programmes	<ul style="list-style-type: none"> To determine how different crops affect the nematode populations and thus the health of the soil.
Cultivar evaluation and maintenance	Cultivar evaluation	<ul style="list-style-type: none"> This project is carried out in production regions in co-operation with Potato Work Groups and the licence holders of cultivars – see table Potato Workgroup projects.
Water use and quality	Soil water monitoring in the Sandveld	<ul style="list-style-type: none"> To assist producers to manage the extremely valuable ground water resource in the Sandveld to protect its sensitive and unique ecosystem.
	Promotion of sound irrigation management practices	<ul style="list-style-type: none"> To assist producers to use water optimally through short courses, publications, etc.
	Ecological impact of water and nitrogen use for potato production in South Africa	<ul style="list-style-type: none"> To quantify the impact of water use and nitrogen leaching in different regions. To develop strategies to decrease the ecological impact for each region.
Aphid monitoring	Potatoes South Africa aphid monitoring network	<ul style="list-style-type: none"> To provide seed growers with information on the aphid flight patterns in different seed production regions in order to reduce the risk of virus and pesticide usage. To determine how climate affects the activity and intensity of plant virus vectors in order to advise producers with regard to suitable planting times.
Soil-borne diseases	Development of an integrated management plan for the control of powdery scab (<i>Spongospora subterranea</i> f.sp. <i>subterranea</i>)	<ul style="list-style-type: none"> To determine susceptibility of commercial cultivars to <i>Spongospora subterranea</i> f.sp. <i>subterranea</i>. To test the effect of fumigants, soil conditioners and biological control agents. To identify plants suitable for use in rotation with potato in land infested with powdery scab.
	Bacterial wilt (<i>Ralstonia solanacearum</i>)	<ul style="list-style-type: none"> To determine the survival ability of <i>R. solanacearum</i> in different soils. To test the effectivity of a disinfectant to decontaminate implements to reduce spread of the disease.

Insect pests	Potato leaf miner	<ul style="list-style-type: none"> To investigate methods to improve control of leaf miner.
Nematode	Integrated control of parasitic nematode	<ul style="list-style-type: none"> To determine the host status of cover crops. To determine the effect of rotation crops on nematode populations.
Quality	Culinary characteristics of potatoes	<ul style="list-style-type: none"> To validate the method to rapidly test the suitability of potatoes for cooking methods. To determine how the culinary qualities of potatoes are affected by climate.
Emerging pests and diseases	Awareness of emerging and new pests and diseases	<ul style="list-style-type: none"> To liaise with DAFF to remain informed regarding emerging and new pests. To determine the host status of potato for <i>Tuta absoluta</i> (tomato leaf miner). To keep potato producers informed regarding new and emerging pests.
Knowledge transfer	Knowledge transfer	<ul style="list-style-type: none"> To develop factsheets and handbooks on relevant topics. To package research results in popular articles and distribute them through published and electronic media. To arrange workshops and courses addressing problems. To arrange annual research symposia where results of funded research are discussed with industry.

Table 3: Potatoes SA Potato Workgroup Projects

Potato Workgroup Projects		
Production Region	Locality	Objective
South Western Free State	Petrusburg	Cultivar evaluation trial under irrigation - ware potatoes
Northern Cape	Douglas	Cultivar evaluation trial under irrigation - ware potatoes
Eastern Free State	Reitz	Cultivar evaluation trial under dryland conditions
	Oranjeville	Cultivar evaluation trial under irrigation
Western Free State	Bultfontein	Cultivar evaluation trial under irrigation - ware potatoes
	Kroonstad	Cultivar evaluation trial under dryland conditions
Limpopo	Tom Burke	Cultivar evaluation trial under irrigation

Table 4: Selection of Potatoes SA Enterprise Development Farmers

Potatoes South Africa Enterprise Development Farmers (selection)	
Rasetla Farming (Ngoako Masipa) Location: Avon, Limpopo Ha: 10 Yield: 55 t/ha	Project Summary <p>In 2021, the farmer has been in his first year of the Enterprise Development Programme of Potatoes South Africa. Despite limited infrastructure and machinery, he has entered into a memorandum of agreement with Raletjena Farming CC to lease machinery for land preparation, planting, pest control and disease management, harvesting, washing, and packing of potatoes. In the next upcoming years, the farmer plans to expand production to 20ha and acquire additional funding to facilitate such expansion.</p>
Afrikan Farms (Siphiwe Khumalo) Location: Marble Hall, Limpopo Ha: 20 Yield: 50 t/ha	Project Summary <p>Afrikan Farms is currently owned and managed by Siphiwe Khumalo and Vusi Khanyile who started producing potatoes in 2020 where their business produced a yield of 48t/ha on Portion 433 of the farm Loskop Noord 12 JS, Marble Hall (Limpopo). In 2021, the farms started its first year under the Enterprise Development Programme of Potatoes South Africa where it planted 10ha and 13ha of Mondial potatoes. Harvesting of the 10ha crop is expected to be conducted from 20 November 2021, while the 13ha crop will be harvested from the 1st week of December 2021 where the entire crop will be sold to the National Fresh Produce Markets. The farm has successfully implemented the envisaged production plan under the mentorship of Alex Jandrel. As of 2022, African Farms plan to expand potato production to 30ha on its other farm located in Amersfoort (Mpumalanga). In the long run, the business plan is to expand potato production to 100ha in 4 years' time. To cater for the planned expansion, Afrikan farms is currently in a process of registering for more than 50 000 m³ (50 000 000) water rights per annum, with the Department of water and sanitation for the farm in Amersfoort</p>
Maponya Agricultural Trust (Jonas Maponya) Location: Polokwane, Limpopo Ha: 10 Yield: 20 t/ha	Project Summary <p>In 2021, the farmer has been in his first year of the Enterprise Development Programme of Potatoes South Africa. Although there are 4 boreholes on the farm, there is relatively low underground water level as this was experienced during the 2021 production season. The potato yield archived on the first 5ha harvested was relatively at 20t/ha low due to a lack of water for irrigation. The farmer has highly been reliant on renting machinery from local farmers, therefore plans to secure fund to make provision of such items.</p>
Mamusha Boerdery (Walter Mathidi) Location: Vivo, Limpopo Ha: 27 Yield: 48 t/ha	Project Summary <p>In 2021, the farmer has been in his first year of the Enterprise Development Programme of Potatoes South Africa. Of the 27ha planted, only 10ha was funded by PSA. The farmer has all the adequate infrastructure and machinery required for potato production. The crop has been doing well. However, the last 10ha could not be harvested due to excessive rainfall in the area. For the next production season, the farmer can plant early to avoid the rainy season.</p>

Masiqhame Trading (Meshack Ndongeni) Location: Kokstad, KZN Ha: 50 Yield: 50 t/ha	Project Summary In 2021, the farmer has been in his first year of the Enterprise Development Programme of Potatoes South Africa. Of the 50ha planted, only 20ha was funded by PSA. He has access to all the machinery and the infrastructure and will be assisted by a neighbouring commercial farmer. During the farm visit conducted by potatoes SA's official, the crop was looking good with harvesting expected in February 2022. However, due to excessive rainfall in the farm's location, harvesting may be delayed to late February 2022. In 2022/23 production season, the farmer plans to expand production to 70ha.
Mankona Farming (Andrew Nekgotha) Location: Devrede, Limpopo Ha: 17 Yield: 65 t/ha	Project Summary Andrew Nekgotha is a farmer located in Devrede Village of Blouberg Municipality of Limpopo. To date, the farmer has been involved in the production of potatoes for 9 years. Foremost, 2021 marks the third year since the farmer has joined the Enterprise Development Programme of Potatoes South Africa. Farming activities are conducted on a 120ha portion of Land acquired through a Permission to Occupy (PTO) from local tribal authority. During the current 2021 season, the farmer has planted two fields amounting to 7ha and 10ha of potatoes. In the next 2 years, the farmer is planning to expand potato production to 30ha. To accommodate for the expansion, he intends to buy an additional 13 ha centre pivot, drill 2 boreholes and upgrade the electrical transformer from 50 kVA to 100 Kva to ensure that there is sufficient electricity
Buyshoek Boedery (Aldrin Lawrance) Location: Mara, Limpopo Ha: 14.4 Yield: 55 t/ha	Project Summary In 2021, the farmer has been in his third year of the Enterprise Development Programme of Potatoes South Africa. Initially, the farmer started on 7.2 ha, where he was later expanded by another 7.2 to reach 14.4ha. Despite the water challenges experienced by the farmer, the yield was relatively good. An effective chemical application programme was applied throughout. Steven Fick harvested, washed, sorted and sold the produce of the farmer to National fresh produce market. Currently, the farmer is in the process of acquiring additional land to expand his production.
Matteottis Primary Agriculture (Robert Chauke) Location: Avon, Limpopo Ha: 11 Average yield over the years: 50 t/ha	Project Summary In 2021, The farmer's electricity was cut off by Eskom, as a result he cannot pump enough water for optimal irrigation. Raletjena Farming has borrowed him a generator and a pump to use, however he could not irrigate efficiently hence he realised a low yield of 20tons/ha. The farmer prefers to sell unwashed potatoes, to the Mozambique trucks. The farmer has been granted a lease of 70 ha for a period of 10 years. He is currently in a process of registering water rights for this land, which he will use for expanding and rotation purposes. Currently, the farmer plans to put up a pack house and purchase a potato washing and sorting machine.
Kaalbult Farming (Petrus Ratsumane)	Project Summary Petrus Ratsomane is a farmer located in Eldorado Village of Blouberg Municipality in Limpopo. The farm was initially established by his late father Petrus Ratsomane. Petrus (current farmer) is

Location: Eldorado, Limpopo Ha: 20 Yield: 71 t/ha	<p>currently in his second year in the Enterprise Development Programme of Potatoes south Africa. Farming activities are currently conducted on a 120ha portion of land acquired through a Permission to Occupy (PTO) from the tribal authority. During the current year of 2021, he planted 20ha of potatoes of which was harvested in October 2021 and attained a yield of 71 tons/ha. Produce was sold to the Mozambique market as well as the local National Fresh Produce Markets at R5 300/ton. The farm has successfully implemented the envisaged production plan under the mentorship of Alex Jandrel, VKB and Solly's Boerdery. The farmer intends to purchase an additional 10ha centre pivot and plant potatoes on 30 ha.</p>
Tswetsi Farming (Enos Mahwai) Location: Ga-Kibi, Limpopo Ha: 10 Yield: 40 t/ha	<p>Project Summary</p> <p>In 2021, the potatoes were struck by hail (after recovering from frost). However, the damage was not severe because the farmer was planning to desiccate the leaves, in preparation for harvesting. Despite the farmer spraying on weekly basis to minimise the infestation, Tuber moth was detected at harvest resulting in huge losses that resulted in a relatively low yield of 40tons. As such, the farmer could not deliver to RSA market agents at the Joburg National Fresh Produce Market as initially planned. In 2022, the farmer plans to form part of the out-grower programme of Simba where he will plant 10ha through Raletjena Farming.</p>
Selamoola and sons Boedery (Johannes Selamolela) Location: Indermak, Limpopo Ha: 6.5 Yield: 50 t/ha	<p>Project Summary</p> <p>Johannes Selamolela is potato farmer located at Avon village in the Blouberg Municipality of Limpopo. The farmer has been involved in the production of potatoes for five years, where he is also currently in his third year of the Enterprise Development Programme. During the current 2021 season, he has planted Mondial potatoes under 6.5ha where harvesting commenced in the early weeks of November 2021. The entire produce is expected to be sold as 'unwashed potatoes' to the Mozambique traders and to Soedkor in Dendron. The farm has successfully implemented the envisaged production plan under the mentorship of Alex Jandrel and Wouter Van Amstel who is a local commercial potato farmer. The farmer has also received support from the Limpopo Department of Agriculture, Land Reform and Rural Development (LDARLR) in terms of the development of water infrastructure, chemicals, and fertilizers. Novon has also provide the farmer with crop protection technical advice. The farmer plans to expand with 10 ha next season (2022). He acquired a grant funding of R 5 000 000 from LDARLR which he will use to purchase an additional 10 ha centre pivot ,950 000 reservoir, fencing and production inputs for the 16ha potato crop. He also acquired an additional 10-year lease agreement, for 200 ha of land that will be used for expansion and rotating potato fields.</p>
Sebenzangamandla Primary Coop (Bheki Nene)	<p>Project Summary</p> <p>The farmer has planted 18 ha of Mondial with the assistance of his mentor. 2021 marks the third year since the farmer has joined the</p>

Location: Mooi River, KZN Ha: 18 Yield: 45 t/ha	Enterprise Development Programme of Potatoes South Africa. The project is highly diversified with cash crops that provide liquidity. However, in the long run, the farmer might have to focus on few commodities for increased results. An effective chemical application has been placed over the period, however the excessive rainfall recorded in Mooi River led to delays in harvesting.
Aubrey Ratsomane Location: Bochum, Limpopo Ha: 15 Yield: 60 t/ha	Project Summary In 2021 the farmer was in his last year of the ED programme. Based on the reports from PSA's official, the crop has been looking good from planting to harvesting despite the prevalence of Tuber moth which was recorded in very low percentages. The farmer lifted his potatoes in October 2021 where the entire output was sold to the National Fresh Produce Market. The farmer has also invested in the production of sugar beans on 15ha as part of crop rotation for the sustainable production of potatoes. Currently, the farmer is also taking care of his father's farm business (Solly's Boerdery) where he is responsible for various functions across the business including potato farming operations. Over the years of participation in the ED programme where the farmer started on 5ha, he has been consistent with his potatoes yield that was coupled also with an excellent whole farm planning approach. Lastly, the farmer has been nominated as one of the candidates for PSA's Enterprise Development Farmer Awards for 2022.

Table 5: Potatoes SA Small Grower Development Projects

Potatoes South Africa Small Grower Development Projects				
Dendron	Limpopo	0.5	13-Jul-21	25-Nov-21
Buyshoek	Limpopo	0.2	14-Jul-21	25-Nov-21
Ga-Kibi Village	Limpopo	0.2	16-Jul-21	26-Nov-21
Tugela Ferry	KwaZulu Natal	0.2	30-Aug-21	25-Jan-22
Appelsbosch	KwaZulu Natal	0.2	10-Sep-21	25-Jan-22
Swaymane	KwaZulu Natal	0.2	3-Sep-21	25-Jan-22
Ixopo	KwaZulu Natal	0.2	1-Sep-21	25-Jan-22
Bronkhorstspuit	Gauteng	0.5	1-Dec-21	5-Apr-22
Donkerhoek	Gauteng	0.2	2-Dec-21	6-Apr-22
Warburton	Mpumalanga	0.2	16-Nov-21	29-Mar-22
Dundonald	Mpumalanga	0.2	17-Nov-21	29-Mar-22
Piet Retief	Mpumalanga	0.2	18-Nov-21	30-Mar-22
Secunda	Mpumalanga	0.2	19-Nov-21	30-Mar-22
Ga-Kibi village	Limpopo	0.2	23-Mar-22	3-Aug-22

Busihoek	Limpopo	0.2	24-Mar-22	4-Aug-22
Germake	Limpopo	0.2	25-Mar-22	4-Aug-22
Mbumbulu	Kwa -Zulu Natal	0.2	24-May-22	8-Sep-22
Mpangeni	Kwa-Zulu Natal	0.2	25-May-22	9-Sep-22
Modimolle	Limpopo	0.2	28-Jun-22	4-Oct-22
Bela Bela	Limpopo	0.2	29-Jun-22	5-Oct-22

Table 6: Principles for Market Analysis and Foreign Market Development

Principles for Market Analysis and Foreign Market Development	
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4	COMPETITOR ANALYSIS 4.1 International competition (subsidies/FTA/etc.) 4.2 IEC production levels and producers 4.3 Competitive advantages 4.4 Best market window for South African exports
5	CONSUMPTION & DEMAND 5.1 Local consumption patterns 5.2 Trends in consumption spending 5.3 Consumer preferences & segmentation 5.4 Packaging 5.5 Consumer perceptions on South African potatoes
6	DISTRIBUTION CHANNELS 6.1 Types of distribution channels available 6.2 Market development (formal and informal retail) 6.3 Regulations on distribution channels (if any) 6.4 Logistics infrastructure
7	TRADE REGULATIONS, REQUIREMENTS AND STANDARDS 7.1 Tariffs and non-tariff barriers for imported agricultural products 7.2 Import requirements and documentation 7.3 Standards and regulations (sanitary & phytosanitary) 7.4 Ports of entry and logistic infrastructure

	7.5 Turnaround time for customs clearance
8	PRICE 8.1 Price forming mechanisms 8.2 Factors influencing pricing 8.3 Methods of payment
9	DOING BUSINESS 9.1 Market development 9.2 Connecting with importers 9.3 Business culture
10	CONCLUSIONS AND RECOMMENDATIONS 10.1 Proposed interventions to access and develop markets in IEC 10.2 Proposed interventions on how to overcome barriers to entry 10.3 Strategy to build relationships with importers
11	CONTACTS 11.1 Sector/industry contacts 11.2 Embassies and consulates

Data, Information and Intelligence Services

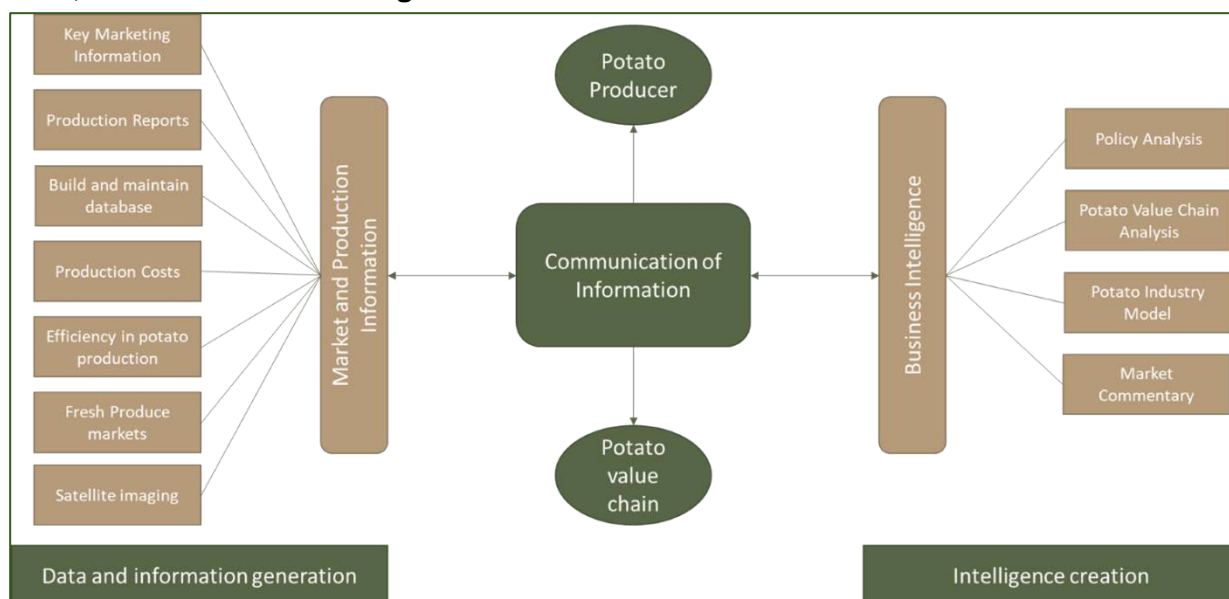


Figure 4: Data, Information and Intelligence Services

Potatoes South Africa Research Priorities

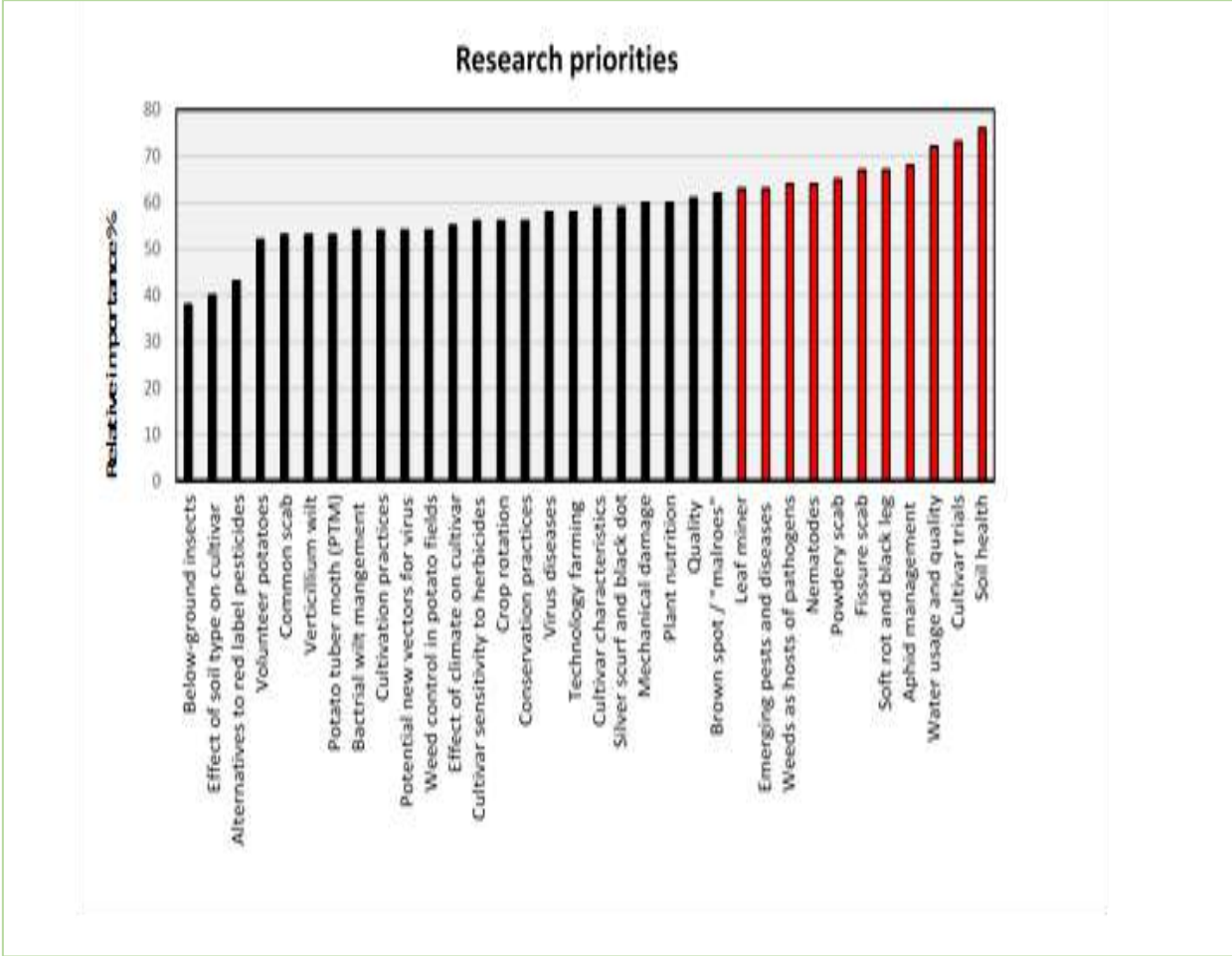


Figure 5: Potatoes South Africa Research Priorities

Potatoes SA Research Process

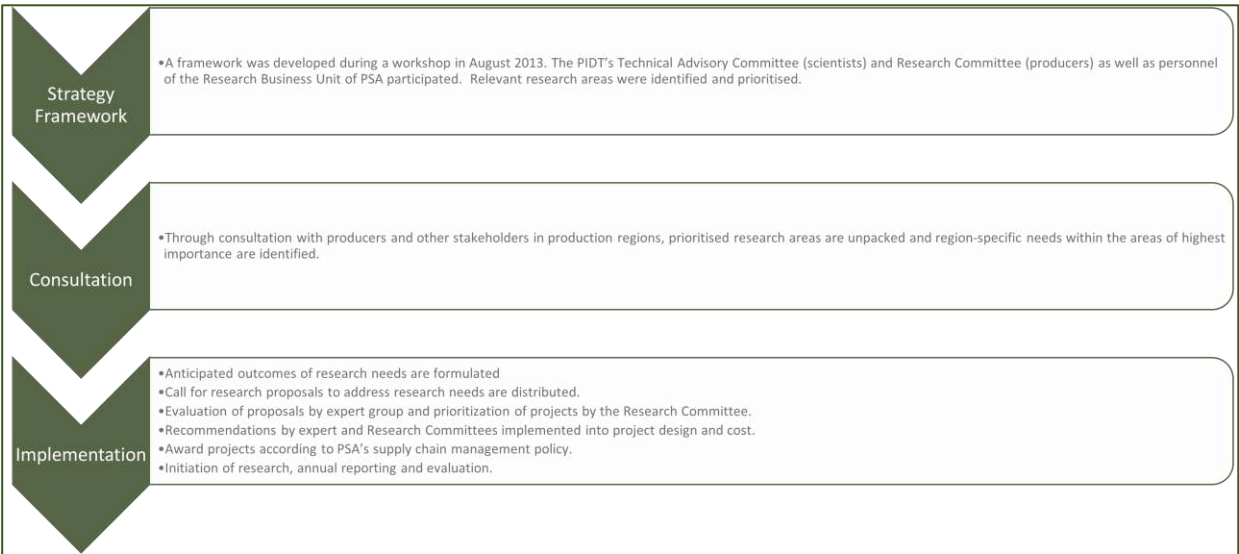


Figure 6: Potatoes SA Research Process

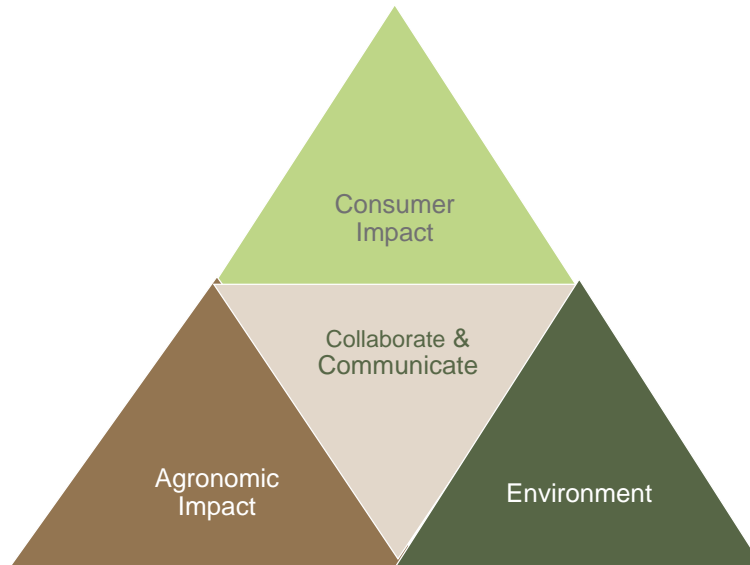


Figure 7: Research Focus Areas

Steps Followed in the Enterprise Development Programme



Figure 8: Steps Followed in the Enterprise Development Programme

Potatoes SA's Strategic Marketing Model

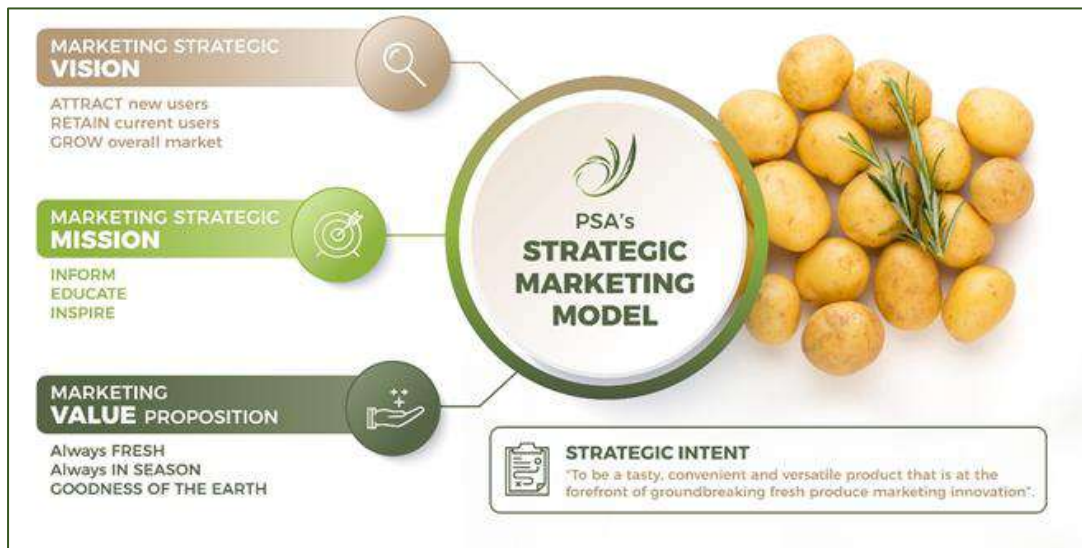


Figure 9: Potatoes South Africa's strategic marketing model

Strategic Marketing Management Process

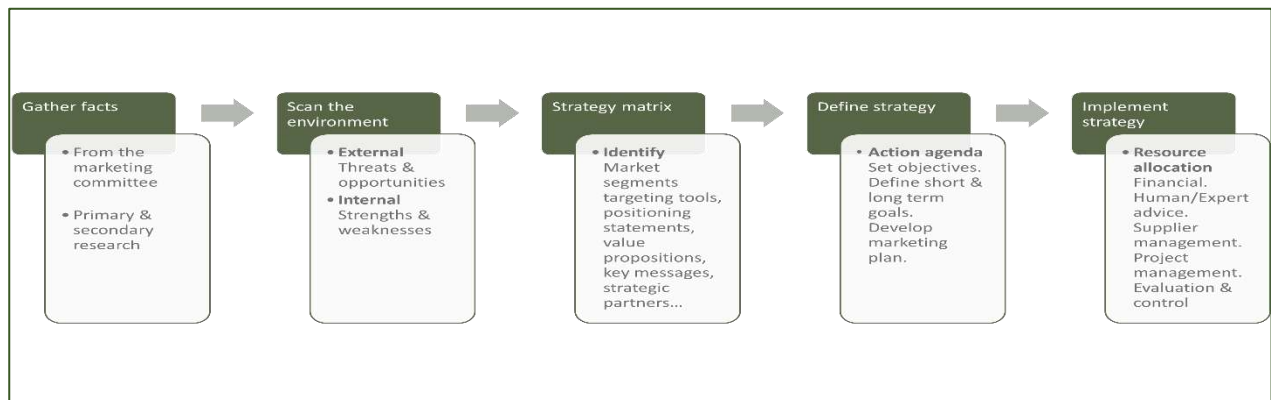


Figure 10: Potatoes SA's Strategic Marketing Process

Market/Trade Intelligence



Figure 11: Market/Trade Intelligence

Strategic Market Development

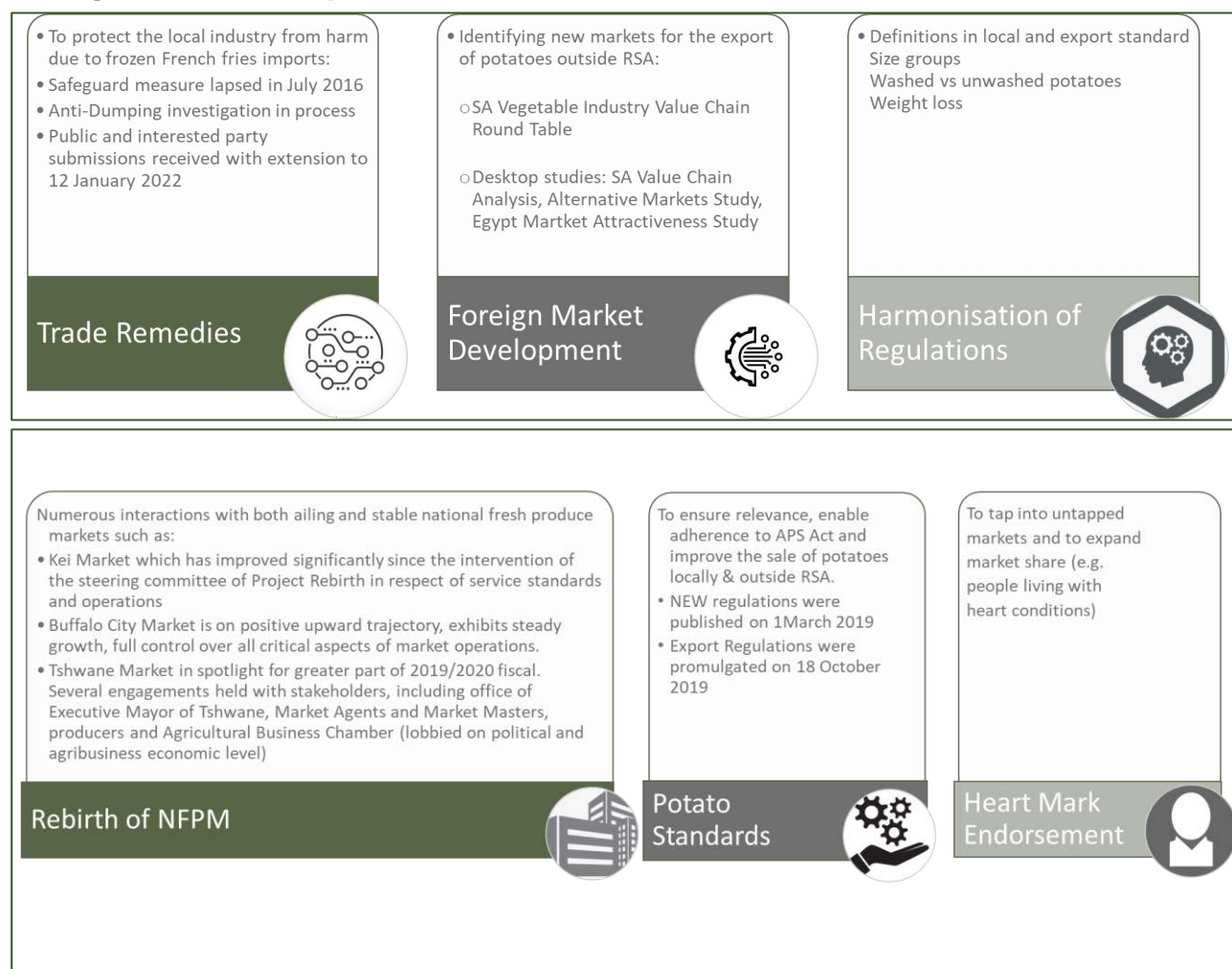


Figure 12: Strategic Market Development

National Service Delivery

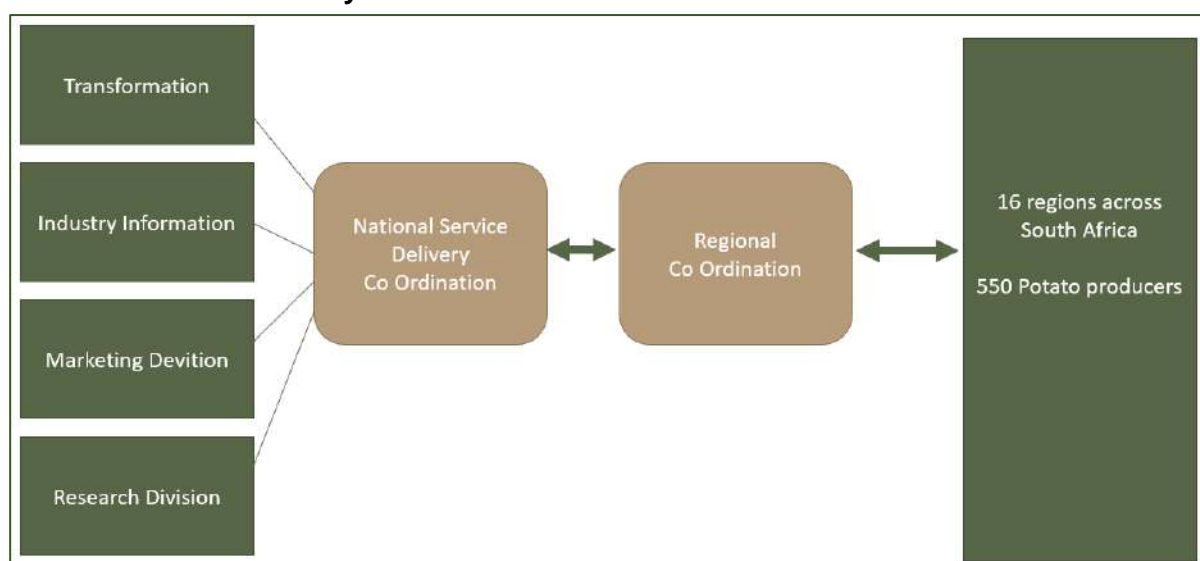


Figure 13: National Service Delivery