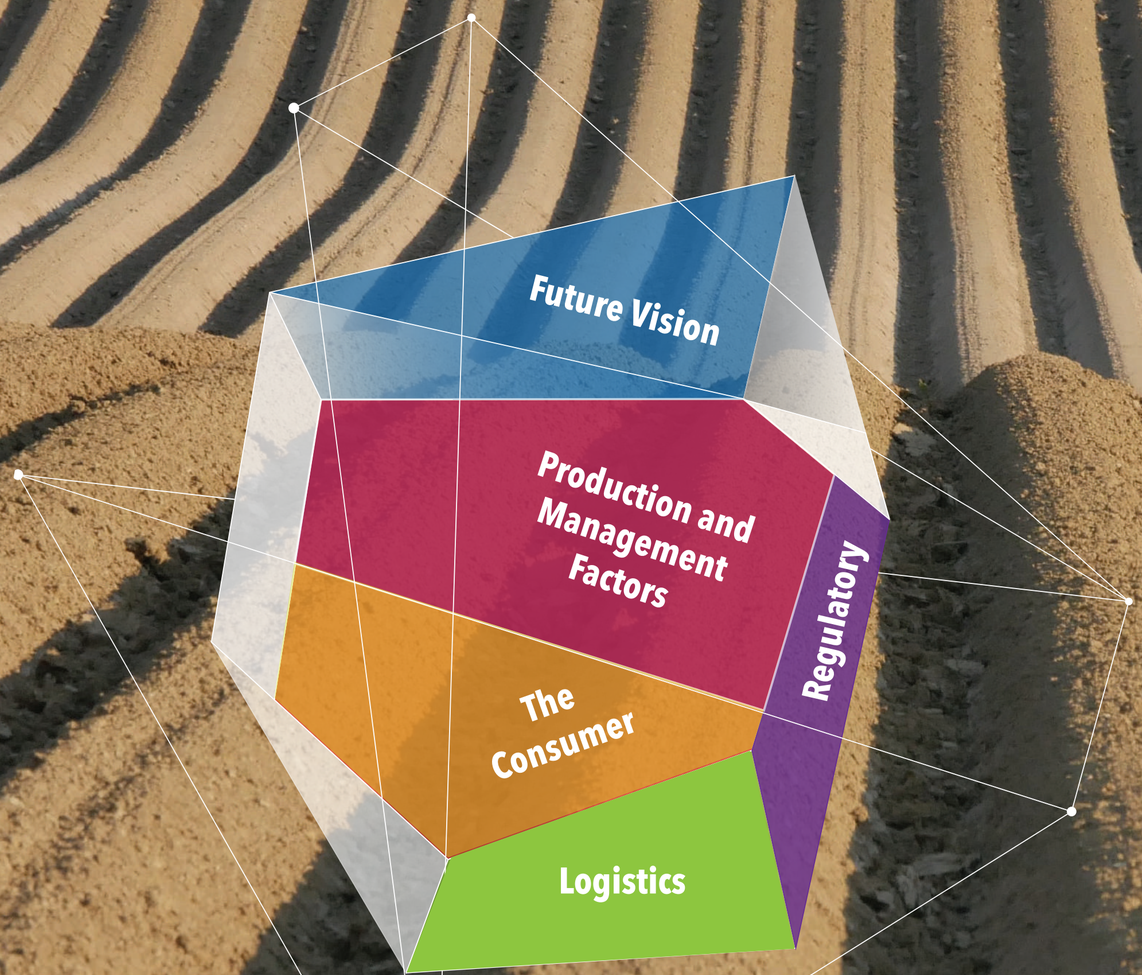
Potatoes SA
PILLARS OF PROGRESS



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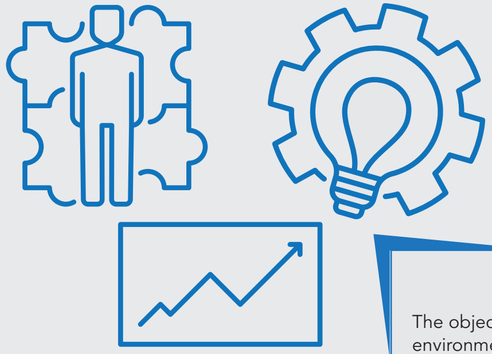
FUTURE VISION



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Potatoes South Africa (PSA) aims to ensure an innovative, and sustainable potato industry that meets the evolving needs of our society and environment. Our vision for 2050 is centered around enhancing industry growth, promoting sustainability, and advancing technology to secure a prosperous future for the potato sector.

By 2050, Potatoes South Africa envisions a thriving potato industry that is globally competitive, environmentally sustainable, and socially inclusive. We aim to lead in innovation, quality, and efficiency while fostering a resilient industry that supports economic growth, food security, and environmental stewardship.

By focusing on sustainability, innovation, economic growth, social inclusion, and supportive policies, we aim to build a resilient and prosperous potato industry that benefits all stakeholders and remain at the forefront of global potato production.

STRATEGIC OBJECTIVES

1. SUSTAINABILITY AND ENVIRONMENTAL STEWARDSHIP

Our objective is to promote sustainable farming practices and minimize the environmental impact of potato production.

Sustainable Farming Practices: Encourage and support the adoption of sustainable agricultural practices, including water and soil conservation, integrated pest management, and reduced chemical use.

Climate Resilience: Develop and implement strategies to adapt to climate change, including research into drought-resistant and disease-resistant potato varieties.

Resource Efficiency: Promote efficient use of resources such as arable land, water, fertilizers and energy throughout the supply chain. The challenge is to produce more food and increase farm profitability while nurturing land and water resources through regenerative agricultural practices.

Transparency: Promote increased interconnectedness, transparency and traceability from farm to fork.

2. INNOVATION AND TECHNOLOGY ADVANCEMENT

The objective is to foster innovation and integrate advanced technologies to enhance productivity and efficiency. The industry will experience increased scarcity of resources, which should create a sense of urgency to shift perspective towards finding novel ways to face challenges. Investment in technology such as genome editing is paramount.

Research and Development: Invest in research to develop new potato varieties, improve crop yields, increase disease resistance and enhance nutritional value. Innovate to offer convenience and healthier snack options.

Technology Adoption: Enhance the use of precision agriculture technologies, including remote sensing and data analytics to optimize farming practices.

Digital Platforms: Develop digital platforms to support farmers with real-time data, best practices, and market information.

Deglobalisation: Be aware of the implications of deglobalisation and develop strategies to mitigate effects.

3. ECONOMIC GROWTH AND MARKET EXPANSION

The objective is to strengthen the economic viability of the potato industry and explore new market opportunities.

Value Chain Development: Support the development of a robust value chain that includes processing, packaging, and distribution to add value and create jobs, while decreasing wastage and encourage the use of second and third grade potatoes. Understand and segment the diverse consumer market and educate consumers regarding potato varieties, nutritional benefits and versatility of potatoes. Promote sustainability to align with modern consumer values.

Market Diversification: Explore new domestic and international markets for South African potatoes and develop strategies to enhance market access and competitiveness. Ensure affordability, particularly for lower-income consumers and continue to adapt and respond to shifting consumer trends and needs.

Producer support: Provide technical support to producers to improve productivity, quality, and profitability.

4. SOCIAL INCLUSION AND COMMUNITY DEVELOPMENT

The objective is to promote inclusivity and enhance the social impact of the potato industry.

Producer Education and Training: Offer training programmes to enhance producers' technical skills and knowledge, focusing on sustainable practices, use of technology and business management.

Community Engagement: Foster strong community relations and support local initiatives that benefit the communities involved in potato production.

5. REGULATORY FRAMEWORK AND POLICY ADVOCACY

The objective is to ensure a supportive and risk appropriate regulatory environment and advocate for policies that benefit the potato industry.

Policy Development: Engage with policymakers to develop and advocate for regulations that support the growth and sustainability of the potato industry in a risk appropriate manner. This includes the revision of South Africa's approach to grouping genetic editing with genetically modified organisms (GMOs).

Compliance and Standards: Promote adherence to quality standards and best practices to ensure the safety and quality of potato products. It is crucial that regulatory approvals keep up with accelerated technology while not affecting food safety. Potatoes SA should provide inputs regarding new plant biosecurity legislation.

Advocacy: Represent the interests of the potato industry in national and international forums and negotiations. Industry needs to ensure that natural science issues are kept separate from social science and the humanities, while considering public perception. Industry should be aware of global lobbying agendas against commercialised agriculture and related aspects.

Resource allocation: Secure funding and resources to support the implementation of initiatives and ensure their success.

Monitor Progress: Develop a monitoring and evaluation framework to track progress, measure impact, and make necessary adjustments.

Stakeholder engagement: Foster collaboration with industry stakeholders, including producers, researchers, policymakers, and consumers, to ensure a coordinated industry.

6. LOGISTICS

The objective is to optimise logistics through innovative initiatives that mitigate environmental impacts, enhance efficiencies, increase value and optimising an interconnected ecosystem to unlock value.

Holistic solutions: A holistic approach to logistics entails more than the physical movement of produce. It relies on an information interface linking the entire value chain. Optimising an ecosystem in which everything is connected will unlock huge value.

Optimising transport: Minimise costs by using appropriate vehicles and technology and ensure market-appropriate distribution. Products need to reach the market quicker and at lower cost so that it will ultimately benefit the consumer.

Shelf life and pricing: The ultimate goal is a worldwide just-in-time system where every stakeholder in the value chain understands where the stock levels are at, where to move their produce and how growers and agents can create the best value for produce.

Inefficiencies: Logistics is capital and labour intensive. Hence, it is important to measure and eradicate inefficiencies.

Supply chain diversification: More aggregation points will enable producers to spread potato supplies more evenly. More sales space and aggregation points will feed intelligence back into the system, providing consumer with a wider choice range of more affordable options, which should increase demand for potatoes, and mitigate the risk currently borne by producers.

7. PRODUCTION AND MANAGEMENT

The objective is to produce more on less land with the least possible environmental impact. Innovative thinking and the use of new technologies will be key. Producing new cultivars faster, identifying new diseases earlier, managing production better and increasing sustainability are the challenges. Regenerative agricultural principles are important for sustainability in yields, carbon capture, reduction of emissions, promotion of biodiversity and improvement of soil health and water usage.

Identify challenges and risks: A farm's most limiting factors will affect yield the most. Know where the main limiting factors are and how to adapt to support the plant to best manage the influence of these limiting factors.

Planning: Farmers need real-time information to make the right decisions in a timely manner and adjust their management accordingly. Changes in weather patterns and disease pressure may require quick actions.

Water management: With warmer temperatures predicted, the potato plant will experience more heat stress and water stress going forward. Farmers need to know how to adapt irrigation and plant nutrition to prevent production losses.
Plan smartly for climate change

Climate change will require major adjustments in management of aquafers and catchment areas such as making clever use of drainage and wetlands. The use of cover crops to protect the soil should be promoted.

Fertilization and disease control: Rising input costs highlights the importance of careful planning of fertilization and disease control. New technology in weather forecasting and disease control models makes it possible to make timely decisions.

Climate change will affect nutrient uptake, time of application, yield potential and uptake efficiency of fertilization.

Technology: What you can measure, you can manage. Building data is important. With the information, farmers can drive data-based efficiencies. Use new technology and understand climate change.

Farmers need to learn from others. Not only from their fellow potato farmers, but also from other industries.

PRODUCTION & MANAGEMENT FACTORS

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South African farmers will continue to produce potatoes to meet the demand of the local population. The production will take place in areas with the right climate and good quality water. These areas may shift due to climate change, but farmers should seize the opportunities and use the latest technology.

Farmers need to realise that the environmental impact is becoming increasingly important and due to various factors, the available land, which is suitable for food production, is becoming smaller per capita.

Farmers will have to achieve a higher yield on this land.
Farmers need to push boundaries and determine what is possible in their part of the production chain to continuously improve yields. Innovative thinking and the use of new technology can unlock opportunities. Technology will drive efficiency. New technology can be used to breed new cultivars faster, identify new diseases earlier, manage production better and sustainably and ultimately produce a higher yield of high-quality products on the same land.

Regenerate agriculture will become more important, not only for yield and profits, but also for carbon capture, the reduction of emissions, promotion of biodiversity and improvement of soil health and water usage. It must become part of farming systems that drive outcomes.

CHALLENGES AND RISKS

Potato production will never be without challenges and risks. It's important to remember that a farm's most limiting factors will affect its yields the most. Know what the main limiting factors are and how to adapt. This will support the plant to best manage the influence of these factors.

Challenges include infrastructure, the uncertainty that power outages bring to irrigation farmers, input costs that have risen rapidly over the past three years, as well as the management of water and labour.

Risks will increase, mostly due to climate change which will cause more heat and water stress. Good management and planning ahead are becoming increasingly important to survive in an environment with more challenges and risks.

Farmers need real-time information to make the right decisions in a timely manner and to predict what is happening and adjust their management accordingly. They need to know what the conditions are in which the plant needs to produce and what can affect their harvest.

Changes in weather patterns and disease pressure may require quick actions. Farmers need to make sure that the structure at ground level is in place to act swiftly.

WATER MANAGEMENT

No one denies that the future should be built on new technology, but sometimes it is necessary to take a step back and focus on the basics, such as the efficiency of irrigation systems. There are systems that are ineffective, which negatively influences the uniformity of application and the efficiency of water use. With higher temperatures predicted, the plant will experience more heat and water stress going forward.

Farmers need to know how to adapt the irrigation and plant nutrition to prevent production losses. To get it right, it's important to measure to know what's going on in the soil. There are many tools available to do this. This applies not only to irrigation, but also to fertilization.

PLAN SMARTLY FOR CLIMATE CHANGE

The reality is that the future will be drier. Climate change will require major adjustments in management, especially in the next 20 years when weather patterns will be more complex.

Climate change is already visible in the western parts of South Africa. In the Sandveld it is drier in autumn and winter with longer dry spells, less rainfall and more droughts. Farmers in the area will have to determine how rainfall will change across the catchment areas that feed the aquafers from which they irrigate. This will require change in the management of these areas and other resources to protect them. Farmers will therefore need to understand the rainfall dynamics.

Other factors to keep in mind:

- It is difficult to predict extreme weather patterns (storms, hail and heat). More information is needed to make the right decisions.
- By making clever use of drainage and wetlands, water can be stored for later use.
- Avoid bare soils where water runs quickly and can cause water erosion.
- Cover crops can protect the soil from wind erosion and drying out and improve the rate of water penetration.
- Cover crops also use water. This should be part of the planning when determining water needs.

FERTILIZATION AND DISEASE CONTROL

The input cost of potato production has risen a lot in the last three years, highlighting the importance of careful planning of fertilization and disease control. Each farm is unique and must be managed accordingly.

New technology in weather forecasting and disease control models puts the farmer in a position to make timely decisions about the use of chemicals and whether to act preventative or reactive. Data from his own farm, neighbours' farms, and other regions can help him make accurate decisions.

Due to the rising cost of fertilizing, it is important to use only the best soil for potato production. Fertilization can be managed accurately to maintain a proper balance to prevent under- or over-fertilisation. Both have drawbacks and can impair the effectiveness of fertilizations. Over-fertilization of nitrogen and potassium should be avoided in particular. The overuse of nitrogen will stimulate an extensive vegetative growth. If a plant is stimulated, and you have a large leaf area, you create a plant with much higher need for water. This can be detrimental in hot, dry conditions, especially in dry land potato production.

The right calcium levels are important in managing heat and water stress. Conditions that affect the water uptake and the transpiration of plants, affect calcium uptake. The timing of calcium application is critical. The best time is during cell division, from tuber initiation until the tuber has reached 30% of its final size.

Factors to also consider, are climate change that will affect nutrient uptake, the time of application, the yield potential of the land, and the uptake efficiency of the type of fertilization. And remember, at the end of the season there are many nutrients left in the soil that need to be managed properly to prevent the loss thereof.

WHAT SHOULD FARMERS DO NOW?

Farmers are exposed to a lot of uncertainties, but they can't wait until they have all the answers before they act. Farmers need to apply what they know now. Use the technology, information, and resources that are available now.

There are many things they can do before planting to ensure a higher yield. What you can measure, you can manage. So, measure everything you can measure. Building data is important. With the information, farmers can drive data-based efficiencies.

Use new technology and understand climate change. That's the only way you can know what's going on in the soil and how you can manage what's happening in it. The latest technology in sensors and weather stations is mind blowing.

Farmers need to learn from others. Not only from their fellow potato farmers, but also from other industries. By working together, new practices can be developed and negotiated with one voice on important matters such as water allocation to the potato industry.

The industry needs to determine how much water it will need going forward and sageguard it. By speaking with one voice to other industries, the industry can get the right water allocation. The application will need to be supported with the right vision, strategy, and data.

In a world characterised by deglobalisation it is important to look at environmental impacts that bring with it scenarios such as a smaller freight volumes passing through important areas such as the Suez and Panama Canals due to water shortages.

In terms of logistics, industry needs to keep inventing green programmes and sustainable solutions – this requires efficiency, green logistics, and green solutions to previously ignored problems. Industry needs to drive logistic efficiencies in order to get products in and out of Africa.

LOGISTICS

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FUTURE VISION

- Technology will drive logistic efficiency in ways we cannot imagine.
- The flow of trade and produce will look very different.
- The potato industry will witness a definite switch from fresh potatoes to processed potatoes which can be transported easier.

Private equity investments firms and controlled environmental agriculture view farms as a logistical hub placed close to the cities where the end user resides. This drives those firms' investment and requires the potato industry to be open-minded and adopt an experimental mind-set. Technical support in South Africa is still limited and, while general technical skills are available on farms, they are difficult to maintain, especially in the rural areas.

TRANSPORT AND THE POTATO PRODUCER

Transport is a key input in potato production. Many producers have already established in-house transport systems which has its own level of complications. However, having to run a micro-transport company along with a farm is technically complicated which is why there are logistics companies who are experts in what they do.

Producers are increasingly moving fewer of the less valuable products off the farms to optimise efficiency as it is expensive to move low quality produce. This implies stricter sorting in packhouses, and ensuring that a higher value product per ton is transported to keep transport costs as low as possible.

THE ROLE OF HOLISTIC LOGISTIC SOLUTIONS

A holistic logistics solution does not entail merely the physical movement of produce from one place to another, but also the information interface provided throughout the value chain. Optimising an ecosystem in which everything is connected, has unlocked huge value in the world of logistics.

Optimising transport lies on two levels:

- Minimising trip costs by using the right vehicle, using technology that provides geo-locations and plots routes, understanding the vehicle type and make, and calculating the amount of fuel that will be used.
- Ensuring flows that are complementary to the market and finding partners with whom one can establish shared value networks, create visibility, and efficiency.

TRANSPARENCY AND VISIBILITY

Partnering with government in respect of the country's port, road and railway infrastructure is non-negotiable. While we may be dealing with inefficiencies, it is important to identify opportunities for specific and bespoke solutions. Partnering with major users of infrastructure is important for introducing our assets across the continent. The South African potato industry is well-positioned to lead this process.

For this to happen, industry needs to obtain greater access to information allowing for the proactive prediction and solving of problems in the value chain, from farm to fork. We need to get our produce to the consumer quicker and with less difficulty, at lower cost so that it will ultimately benefit the consumer. This requires making sense of available data – one of our biggest challenges going forward.

Proper logistics require visibility in the supply chain. In this regard a lot of work is being done to allow more predictability in marketing, warehousing, and transportation. The capacity of fresh produce and informal markets where produce is sold, including the commission structure and logistical costs as well as and each region's specific needs, requires more real-time transparency for better decision-making and creating an ideal environment for each product.

The next leg of the loistical challenge is ensuring the efficiency of aspects such as off-loading and moving produce into the spaces where they are sold, accurate temperature regulation, et cetera.

Apart from infrastructure challenges, Transnet's performance, and the impact of the current socio-economic environment, the industry must address:

- Upskilling more people in the industry's logistics sector.
- Placing a greater focus on safety, specifically road safety.
- Staying in tune with consumers' changing needs.

SHELF LIFE AND PRICING CHALLENGES

Potato production is a highly regulated environment that cannot function without rules and regulations. Well-functioning fresh produce markets are now at a point where we need to decide what the outlook will be in the next 30 years. The ultimate goal is a worldwide just-in-time system where every player in the chain understands where the stock levels are at, where to move their produce to, and how growers and agents can create the best value for produce.

LOGISTICS OF KEY COST DRIVERS

Logistics is a capital intensive and labour intensive industry. Hence, it is important to measure inefficiencies in aspects such as transportation, and root them out. It is important to avoid unnecessary losses or pay unnecessary premiums to avoid possible losses.

SUPPLY CHAIN LOGISTICS

- More aggregation points will enable growers to spread the potato supply more evenly.
- More sales space and aggregation points will feed intelligence back into the system, informing consumers about the product.
- More affordable products will then be available to consumers, which will grow the demand for potatoes, and spread the risk currently borne by producers.

IN A NUTSHELL

New data and technology, of which logistics is a part, opens up a massive opportunity for the potato industry to step up its game and learn how to do things better. Potatoes SA is too small to bear all of the responsibility, as is government. The creation of real partnerships is crucial for collaboration and sharing knowledge and capacity with growers in such a manner that they will no longer need to bear all the risk.

The industry is committed to tackling the challenges ahead by discussing issues that are difficult to deal with. There is already an underlying willingness to solve these problems and to ultimately supply the end consumer with highly nutritious, fresh potatoes at a competitive price all year round. There are many role-players involved in this process, hence the need to collaborate and aggregate information. Diligence is needed to allow a quicker flow of efficiencies which will ultimately enhance consumers' experience of eating fresh potatoes.

KEY TAKE-HOME MESSAGES

- Plan for possible problematic transport scenarios.
- Think green.
- Embrace technology for greater efficiency and flows.
- Be open-minded and adopt an experimental mind-set.
- Ensure information interface throughout the value chain.
- Work towards an ecosystem in which everything is connected.
- Minimise trip costs by using the right vehicle, the latest technology, and being fuel efficient.
- Establish partnerships that drive efficiency and connectivity.
- Learn to make sense of available data.
- Establish efficient offloading procedures to keep the cold chain in check.
- Upskill more people.
- Focus on safety, specifically road safety.
- Stay in tune with consumers' changing needs.
- Follow current market trends and understand what awaits in the future.
- Stay on top of stock levels, produce movement, and value creation.
- Measure inefficiencies in order to correct them and avoid losses.
- Drive the creation of more sales space and aggregation points for improved potato supply.
- Collaborate and aggregate information across the value chain.
- Think consumer, think fresh produce.
- Focus on quality to optimise efficiency.

THE CONSUMER

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The potato industry plays a crucial role in South Africa's food supply, serving a wide range of consumer markets, from home cooks to informal traders and large-scale processors. In order to serve the producer and the consumer, industry needs to understand consumer preferences, challenges facing the sector, and strategies for growing potato consumption in the country.

CONSUMER PREFERENCES

Consumers in South Africa fall into two main categories: those purchasing for home consumption and those buying for the food market, specifically the *kasi kos* fast food market. These two groups have different preferences regarding the size, variety, and appearance of potatoes.

Size and appearance

- **Home consumers:** Medium-sized potatoes are preferred for home cooking, while smaller potatoes are less popular. The colour and cleanliness of potatoes are also key considerations; consumers generally prefer clean, soil-free potatoes, although there is room to educate buyers about the benefits of unwashed potatoes, which tend to have a longer shelf life.
- **Kasi kos market:** Informal traders in townships and the fast-food market prefer large potatoes, which are typically used for chips or other fried dishes. Price is a significant factor in this segment, with second- and third-grade potatoes thriving in the informal market, where visual appeal is less important.
- **Processing industry:** The processing sector, which produces snacks such as chips and crisps, has very specific requirements. For crisps, the industry requires potatoes with high solids content, good starch maturity, and medium round shapes. This ensures a final product that is crisp, fresh, and flavourful. The processing industry faces significant waste, as only specific grades of potatoes meet the stringent criteria for snack production. To mitigate waste, the industry utilises by-products for animal feed or energy generation through anaerobic digesters.

Variety and taste

Consumer preferences are also influenced by the potato variety. While informal traders are well versed in the different potato cultivars, such as Mondial, many consumers need to be educated as to the distinctions between varieties. For example, the Indian community prefers soft, white potatoes for their dishes, regardless of the cultivar. On the other hand, the broader coloured community is more focussed on taste and texture, especially for dishes such as curries, where the potato's skin is typically removed.

Price and shelf life

Consumers are price-sensitive and demand value for money. The lifespan of the potato is another crucial factor, especially in the informal market, where unwashed potatoes are favoured for their extended freshness. Across all consumer segments, affordability and longevity are paramount.

THE ROLE OF INFORMAL TRADE

Informal traders are vital in South Africa's potato value chain. These traders typically operate in townships and lower-income areas, providing affordable potatoes directly to consumers. The informal market thrives on second- and third-grade potatoes, which are often rejected by larger retailers but still highly valued in this segment. Price sensitivity is crucial, and traders offer lower-grade potatoes at competitive prices, ensuring minimal wastage.

One innovative example is the success of the Jabu potato brand, which has garnered a loyal consumer base. This brand operates by selling directly from the farm, bypassing the formal market. The approach serves a community of buyers who cannot afford the premium prices of market-sold potatoes. This producer found that direct farm-to-consumer sales reduce wastage and provide an additional revenue stream.

MARKETING AND EDUCATIONAL CHALLENGES

Industry agrees that there is a need for improved marketing and consumer education. There is a perception among many South Africans that potatoes are fattening, which has contributed to a decline in consumption. There is an urgent need for educational campaigns to debunk these myths and promote potatoes as a nutritious and versatile food source.

There is also consensus on the importance of involving the youth in these educational efforts, for example integrating potato cultivation into school feeding schemes. This will allow children to learn about potatoes while benefitting from the nutritious crop in their meals. Such initiatives could not only boost potato consumption, but also promote food security.

Marketing campaigns need to be inclusive, targeting not only the formal retail market but also informal traders and low-income consumers. Potatoes SA is a key player in driving these initiatives, but there is also a need for collaboration with government and educational institutions.

INCREASING POTATO CONSUMPTION IN SOUTH AFRICA

There is a need for a better understanding of the value chain. Each player, from farmer to retailer, must optimise their operations to serve consumers more effectively. The industry should also focus on creating new 'occasions and opportunities' for potato consumption, demonstrating the versatility of the potato in different types of meals.
Another opportunity lies in product diversification. Industry should investigate the possibility of developing healthier snack options made from potatoes, catering to a growing global trend towards convenience foods. However, the challenge remains in positioning potatoes as a convenient, healthy option, particularly for younger consumers with fast-paced lifestyles.

While potatoes have long been a staple food, competition from other starches such as maize, rice, and wheat has reduced their consumption. By promoting potatoes as a versatile, healthy, and sustainable alternative to these other staples, the industry can regain market share and grow demand.

Consumer preferences are diverse, but the common thread across all segments is the demand for affordable, long-lasting, and versatile potatoes. By improving education, expanding marketing efforts, and optimising the value chain, the industry can boost potato consumption and ensure that this humble crop continues to play a vital role in South Africa's food system.

From affordability to convenience, health, and sustainability, consumers today demand more from the products they buy. The potato industry must embrace innovation, education, and adaptability to meet these expectations, ensuring that potatoes remain a cherished and essential part of the South African diet. By focussing on consumer needs, investing in marketing, and enhancing product offerings, the potato industry can continue to thrive in the years to come.

KEY TAKE-HOME MESSAGES

- Understand and segment the diverse consumer market.
- Educate consumers regarding the nutritional benefits and versatility of potatoes.
- Educate consumers regarding potato varieties.
- Promote less wastage and encourage the use of second- and third-grade potatoes.
- Innovate to offer convenience and healthier snack options.
- Ensure affordability, particularly for lower-income consumers.
- Promote sustainability to align with modern consumer values.
- Continue to adapt and respond to shifting consumer trends and needs.

The South African potato industry's regulatory environment is changing rapidly. Potatoes SA must be vocal in ensuring that these changes benefit the country's potato producers and the value chain in general, rather than harming production.

REGULATORY

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BREEDING AND TECHNOLOGY

One of the major pitfalls in the current regulatory environment is the fact that South Africa is one of only a handful of countries that have decided to group genetic editing with genetically modified organisms (GMO).

To put it into perspective: South Africa defined GMOs in the early nineties, while the first commercialisation of one of the most widely recognised gene editing technologies, CRISPR-Cas9, only took place in 2012.

The current regulatory practices are problematic, because regulation is essentially about risk management – specifically the management of the risks posed by a product or organism. Potatoes SA is of the opinion that the potential or perceived risks are vastly different when it comes to GMOs vs. gene editing. Therefore, a revision of this matter is urgently required to ensure that South Africa does not miss out on the gains of early technological advancements.

Genome editing and genetic breeding is one of the biggest issues that will be on the regulatory agenda in the near future.

BIO-INNOVATION AND PUBLIC PERCEPTIONS

Potatoes SA needs to ensure that natural science issues are kept separate from social science and the humanities. However, it is important not to lose focus of scientific research or softer issues, such as public perception. Both can have a significant impact on the regulatory environment, but mixing the two will have an adversely negative effect on the industry's plight.

However, when it comes to natural scientific issues, such as bio-innovation, it is critical that Potatoes SA and all industry role-players share a common vision as a collective stance will empower industry's stance when issues are discussed with regulatory authorities. It is also critical to note that industry's views on regulatory affairs should be formulated in such a manner that people outside the agricultural field can grasp it as well. Note that the Department of Agriculture is but one of six departments that are stewards of matters pertaining to bio-innovation.

The industry's views must also be clear to other non-agricultural private sector role-players. Sectors that could potentially be influenced include health, biodiversity, and the industrial sector.

It is also crucial to take note of the rise of global lobbying against commercialised agriculture, especially on matters such as the use of agrochemicals, carbon emissions and biotechnology in general. These activists' agenda should always be considered when it comes to regulatory affairs, as lobbyists' activities can lead to unnecessary costs due to overregulation.

PLANT HEALTH BILL

The *Agricultural Pests Act, 1983 (Act 36 of 1983)* is currently being repealed and will, in time, be replaced by the Plant Health Bill. New regulations for the implementation of the *Plant Health Bill* are yet to be created and Potatoes SA is set to submit input on issues such as importation and exportation control regulations.

It should be noted that South Africa is a signatory of the World Trade Organisation's agreement on the application of sanitary and phytosanitary measures (the *WTO-SPS Agreement*) as well as the International Plant Protection Convention (IPPC). Therefore, South Africa's phytosanitary legislation and regulations must align with the relevant obligations in terms of the *WTO-SPS Agreement* and IPPC.

The *Plant Health Bill's* regulations should focus on the prevention of the introduction, establishment and spread of regulated pests to safeguard South Africa's agricultural and natural, indigenous plant resources. This will support:

- Safe and fair international and domestic trade.
- The maintenance of current export markets and the establishment of new markets.
- Crop production and/or food security programmes.
- Economic growth and development.
- Job creation.

Furthermore, the department plans for all regulations to prohibit the movement of plant material from infected areas to non-infected areas. It also wants regulations to make it compulsory for all new pests or diseases to be reported to government by researchers, landowners, or users as well as any non-profit organisations that identify emerging pests or diseases.

In future, government is looking at new plant biosecurity legislation and Potatoes SA should gear up to submit inputs in this regard as well as the regulations that will govern this legislation and the co-ordination surrounding it.

In respect of the *Fertilisers, Farm Feeds, Seeds and Remedies Act, 1947 (Act 36 of 1947)* Potatoes SA acknowledges the fact that South Africa needs to be certain that any pesticides or other agrochemicals are safe for the environment, crops, and the end consumer. Therefore, any agrochemicals that are scientifically proven to be risky need to be phased out. However, if there is no alternative to the product, it should not merely be phased out at the peril of livelihoods and food security. In such instances, regulations are required to ensure that these chemicals are still available under strict prescription.

Integrated pest management (IPM), which looks at biological as well as semi-chemicals, must also be embraced, but strict protocols are needed for this new field and Potatoes SA needs to give its input where and when necessary. Issues such as the handling of these chemicals must also be addressed to ensure that Potatoes SA's members and their staff are always safe, and that a safe product is delivered to market while not having adversely affected the environment. It is crucial that the industry remains relevant and sustainable.

KEY TAKE-HOME MESSAGES

- Industry must urge for a revision of South Africa's approach to grouping genetic editing with genetically modified organisms (GMOs) for improved risk management.
- Industry needs to ensure that natural science issues are kept separate from social science and the humanities, while considering public perception.
- Industry's views on regulatory affairs should be formulated in such a manner that the non-agricultural sector can grasp it as well.
- All industry role-players should be aware of global lobbying agendas against commercialised agriculture and related aspects.
- It is crucial that regulatory approvals keep up with accelerated technology while not affecting food safety.
- Potatoes SA will submit input in respect of the proposed Plant Health Bill, specifically on issues such as importation and exportation control regulations.
- Potatoes SA should gear up to submit inputs regarding new plant biosecurity legislation.
- It is important that agrochemicals that are scientifically proven to be harmful and risky, must be phased out without affecting livelihoods and food security.
- All industry role-players must ensure that chemicals are used strictly according to product recommendations and instructions.
- While integrated pest management (IPM) must be embraced, industry recognises that strict protocols are needed.
- Potatoes SA needs to ensure that adequate input is given from industry's side regarding globally and locally environmental, social and governance (ESG) reporting.

SPEED OF TECHNOLOGICAL DEVELOPMENTS

Globally, breeding is moving away from selection and more towards designing through technologies such as artificial intelligence (AI) modelling. Among others, these models are helping breeders to design a plant with traits that are tailored to the need(s) of growers in a specific geographical area. It is critical to keep this in mind while conducting regulatory discussions.

Technology has also cut down on the timeframe needed to complete breeding cycles aimed at crop improvement. Today, good results can be achieved in four to five months with the use of glasshouse technologies. This acceleration calls for adapted regulations to ensure that this increased efficiency is accommodated. Abbreviated timelines are of no use if it is still going to take regulatory authorities several years to approve any advancement. However, regulations should not be adapted and shortened to the detriment of food safety.

ESG REPORTING REQUIREMENTS

Globally and locally environmental, social and governance (ESG) reporting is becoming a requirement and Potatoes SA needs to ensure that adequate input is given from industry's side while suitable regulations are being put in place. While Potatoes SA does not oppose ESG reporting, it is critical to keep in mind that these regulations should not create a barrier for new entrants, nor should it create an additional cost burden on existing producers.

To ensure a truly sustainable potato industry truly, the goal of ESGs should essentially be to benefit people, profit, and planet (PPP). People include both end users as well as all role-players in the potato value chain. Profit is necessary, as an unprofitable business is unsustainable. The planet aspect should be aimed at improving ecological factors on farms to ensure that future generations inherit fertile, usable soil.