



MEAT, MILK AND MORE:

Policy innovations to shepherd inclusive and sustainable livestock systems in Africa



The South African livestock sector has undergone several policy and programmatic interventions to improve its productivity, socioeconomic impact, and sustainability. Consumption of meat grew from 42 kg per capita in 2000 to 60 kg in 2017.¹ Between 2000 and 2016, the average stock of livestock per 100 people, measured in tropical livestock units (TLU), stood at 29.98 TLU – above the continental median of 23.44 TLU. During the same period, the average growth rate of gross production value (GPV) was 2.53 percentⁱ – also higher than the continental median of 2.2 percent. Total agricultural GPV grew from ZAR 1 billion (US\$95 million) in 2013/2014 to over ZAR 1.4 billion (US\$118 million) in 2017/2018. Animal products contributed more than

half of total agricultural GPV in 2017/2018. Within this sector, poultry meat made the largest contribution (14.6 percent), followed by beef and veal production (14.3 percent). Milk, eggs, sheep, pork, wool, and ostrich constituted the remaining income.²

Poultry meat production in South Africa has more than doubled, growing from 816,000 mt to 1.8 million mt between 2000 and 2018.³ However, as of 2018, about 90 percent of this meat came from large commercial operations and the remainder from subsistence stock; four of the continent's six largest broiler producers are based in South Africa.⁴ In addition, 520,000 mt of chicken meat was imported in 2018, 60 percent

ⁱ The average livestock stock TLU per 100 people over the period 2000–2016 (FAO data) was chosen to assess countries' levels of animal stock. To define high and low levels of animal stock, the threshold was set at the median. The average growth rate of the gross production value (GPV) of livestock (in constant 2004–2006 international dollars) over the period 2000–2016 (FAO data) was chosen as indicator of value addition growth of the sector.



of which was sourced from Brazil. In response, the government introduced a higher customs duty on imports of chicken meat to reduce dumping practices.⁵ Although South Africa was a key supplier of chicken meat to neighboring countries, an avian flu outbreak in 2017 led to suspension of trade to Zimbabwe, Namibia, and Botswana.⁶ South Africa is usually self-sufficient in eggs, producing as many as 7.6 billion eggs per year (in 2015).⁷ The growth in the South African poultry subsector – driven by vibrant growth in the broiler-meat market – has boosted overall growth in the poultry sector in Africa south of the Sahara (SSA). South Africa contributed over 50 percent of total poultry sector growth between 2007 and 2017.⁸ At the same time, in 2017, South Africa was identified as the thirteenth largest beef producer in the world and the top beef producer in Africa. Its beef exports have also been growing, especially to the Middle East. Yet South Africa remains a net importer of cattle, with 99 percent of all live cattle arriving from Namibia in 2017.⁹ Two key challenges that have been the focus of interventions are (1) the maintenance of good animal health and reducing the incidence of disease outbreaks, and (2) transforming emerging and communal farmers into commercial producers (although the sector still remains quite segregated). At the same time, a vibrant private sector has channeled investments into the sector, making South Africa one of the continent's largest poultry and cattle producers.

Institutional innovation

Institutional integration

The key national institution overseeing South Africa's livestock sector is the Department of Agriculture, Land Reform and Rural Development (DALRRD). This department was formed as a result of a merger of the Department of Agriculture, Forestry and Fisheries (DAFF) and the Department of Rural Development and Land Reform (DRDLR) following a redefinition of national priorities by President Ramaphosa in June 2019. The mission of DALRRD is to initiate, facilitate, coordinate, and implement an integrated rural development program. The department's overarching structure is replicated at the provincial, district, and community levels to ensure an inclusive bottom-up process, reflective of local needs. Within DALRRD, responsibility for the various elements of the livestock sector are assigned within three branches/divisions: Agricultural Production Health and Food Safety; Food Security and Agrarian Reform; and Economic Development, Trade and Marketing.

Animal health, research and marketing

Other state entities working alongside DALRRD on livestock matters include the Agricultural Research Council (ARC), the National Agricultural Marketing Council, Onderstepoort Biological Products SOC Ltd,





and the South African Veterinary Council. The ARC is the principal agricultural research institution in South Africa. Its primary research areas for livestock include: breeding and improvement, including management of the national database on animal improvement known as the Integrated Registration and Genetic Information System (INTERGIS); rangelands ecology and forage production; food science and technology; and nutrition.¹⁰

Onderstepoort Biological Products (OBP) is a South African state-owned animal vaccine manufacturing company, established in 2000.¹¹ It is mandated to prevent and control animal diseases that impact food security, human health, and livelihoods. OBP produces affordable vaccines and distributes them widely across the country, to regional partners in Botswana, Namibia, and Zimbabwe, and to East African counterparts.¹² While OBP produces vaccinations, veterinary services are regulated by the South African Veterinary Council (SAVC). Formed in 1982, SAVC ensures that animal healthcare services provided by veterinarians and para-veterinarians are competent, efficient, accessible, and needs-driven.¹³

Public-private partnerships

The National Agricultural Marketing Council (NAMC) is a statutory body, accountable to the Minister of Agriculture, Land Reform and Rural Development and responsible for increasing international market access for agricultural products. NAMC leverages the potential of smallholder producers through

partnerships, providing market information, technical assistance, and training. It also connects private sector actors to DALRRD through dedicated Agricultural Industry Trusts. There are four Industry Trusts for the livestock sector (meat, mohair, lucerne (alfalfa), and wool trusts), each one mandated to conduct research into all aspects of production, processing, storing or marketing; disseminate information; coordinate relevant stakeholders; extend financial support in the form of grants or loans; and provide training to start and manage agricultural operations. Each trust is managed by a board of trustees that includes ministerial representatives.¹⁴

Multi-departmental interventions

Recognizing the potential of livestock in driving job creation and meaningful economic transformation and growth, the Department of Trade, Industry and Competition (DTIC) invested ZAR 1.2 billion (US\$101 million) in the agro-processing subsector and leveraged ZAR 7 billion (US\$590 million) from multinational and domestic stakeholders between 2009 and 2018. This includes a ZAR 1 billion (US\$84 million) Agro-Processing Support Scheme initiated in 2017 to foster further development in the subsector. Furthermore, the 2018/2019 Industrial Policy Action Plan outlines time-bound actions to unlock the challenges that inhibit investment in the poultry value chain, including through a pilot processing facility that produces mechanically-deboned-meat.¹⁵ DTIC also led the formulation of a Poultry Sector Masterplan, approved by the minister in November 2019.¹⁶ The plan will guide the development of a strong domestic poultry industry that creates employment and supports the South African economy.¹⁷

Access to finance

Access to finance for South Africa's commercial and emerging farmers can be gained through the Industry Trusts at NAMC, directly through DALRRD, some private sector associations, and from the Land and Agricultural Development Bank of South Africa (Land Bank). Land Bank is a specialist agricultural bank established in 1912 to enable farmers – especially those who are historically disadvantaged – to finance land and equipment, improve assets, and obtain production credit. In 2017, Land Bank subsidized interest rates to the value of ZAR 74 million (US\$5.7 million), further supporting poor farmers with cheaper access to finance.¹⁸ During the year ended March 2019, Land Bank extended loans worth over ZAR 34 billion (US\$2.3 billion), 15 percent of which went to the dairy, feedlot, grain, livestock, pork, and poultry lines.¹⁹



Cooperation with private and professional associations

SA has a vibrant private sector involved in all aspects of livestock production. Industry associations play a key role in coordinating its engagement with the government and with farmers. In the cattle sector, the South African Meat Processors Association (SAMPA), National Emergent Red Meat Producers' Organisation (NERPO), and South African Meat Industry Company (SAMIC) convene value chain actors to create a more inclusive and sustainable industry. Founded in 1945, SAMPA has been instrumental in the formulation of voluntary and statutory regulations in the interest of consumer protection, food safety, and nutrition.²⁰ NERPO was founded to support the commercialization of emerging livestock producers by providing access to information, finance, and technical support. NERPO is a key beneficiary of funding from the Meat Industry Trust at NAMC. In turn, NERPO extends financial services in the form of reduced transaction costs and credit facilities to black smallholder livestock farmers and holds a portfolio of enterprises operating in meat, tourism, and related industries through acquisitions and partnerships with existing businesses. Finally, NERPO advocates for appropriate legislation and policies for the growth and development of the sector. Although it was originally created as a voluntary commodity farmer organization in 1997, NERPO was subsequently registered as a not-for-profit company in 1999.^{21,22,23}

SAMIC is a government appointed company, responsible for grading the quality and safety of red meat in South Africa. This is done by auditing the use of quality marks registered at the (former) DAFF to ensure that appropriate meat classification standards are applied in a uniform manner.²⁴ SAMIC's remit extends to all red meat production, including that from sheep, goats, and pigs. Other institutions relevant for sheep and goat production are the SA Mohair Growers' Association (SAMGA) and the National Wool Growers Association of South Africa (NWGA). In addition, the Mohair Empowerment Trust was formed in 2011 to formalize SAMGA's involvement in the Black Economic Empowerment program.²⁵ South Africa now produces nearly half of all mohair globally from its large population of Angora goats.²⁶

NWGA was established in 1929 to promote profitable and sustainable wool sheep production. The association supports commercial producers to improve productivity by providing cutting-edge technology, enhancing skills in shearing, and encouraging responsible wool production. For producers in communal areas, services include genetic improvement, access to markets, training and mentorship, and data collection for better management. By 2012, half of its 8,000 volunteer

members were black producers and 65 percent of its budget was spent on black empowerment.²⁷ Marketing of wool by communal farmers increased from 222,610 kg in 1997/98 to 3.8 million kg during 2013/14.²⁸ In addition, the wool income of black farmers increased from ZAR 1.5 million (US\$298,000) in 1997/98 to ZAR 73 million (US\$9.5 million) in 2012.²⁹

Other industry associations supporting diverse aspects of livestock value chains include the Red Meat Producer Organisation, South Africa Feed Lot Association, Animal Feed Manufacturers' Association, South Africa Poultry Association, Milk Producers' Organisation, and South African Milk Processors Organisation (SAMPRO).

Policy innovation

South Africa's livestock industry operates in a dual system comprising a highly developed commercial sector and an emerging/developing sector. While the commercial sector – accounting for approximately 35,000 farmers – tends to be specialized, coordinated, well-equipped, and often vertically integrated, the emerging and communal sectors are often more fragmented and more subsistence oriented. It is this latter group of some 3.2 million farmers that has been targeted by South Africa's post-independence livestock policies.³⁰ In this respect, South Africa's policy has been able to raise productivity for small farmers through animal breeding and genetic improvement as well as maintaining high-quality animal health by raising the country's capacity to prevent and cope with disease outbreaks. In addition, a dedicated Livestock Development Policy, developed in 2007, provides an ambitious vision of fast-tracking progress.

Strategic plans for South African agriculture

From the turn of the millennium, the Department of Agriculture, Forestry and Fisheries issued annual strategic plans to outline progress made in the previous year and its ambitions for the following year. The first Strategic Plan in 2001 was developed jointly by the government and the private sector to build a united, nonracial, and prosperous agricultural sector. It set the benchmark for subsequent plans, compiled by the government, to provide access to emerging farmers through well-designed empowerment processes and programs and enhance competitiveness of the sector.³¹

2006, 2007, and 2008 Strategic Plans for the Department of Agriculture

Following dedicated efforts to control the outbreak of animal diseases, South Africa was declared free from avian influenza in November 2005. The 2006 and 2007 Strategic Plans for the Department of Agriculture aimed to build on this success by expanding the provision of



veterinary services, improving surveillance systems for effective monitoring of diseases, updating a disaster management program, and using early warning systems to manage future outbreaks. The plans outlined measures to reduce the incidence of animal diseases and ensure compliance with international standards by setting targets to improve physical controls in high-risk areas:^{32,33}

- Enhancing capacity: building a community of scientific experts composed of new recruits, retaining existing experts, and facilitating retired experts to transfer their experience and knowledge to young scientists; strengthening the Interdepartmental Technical Committee on Agriculture veterinary working group.
- Updating national systems: extending service provision to remote communities, coordinating a comprehensive review of standards, policies, and legislation across provincial and national levels, enhancing law enforcement.
- Regional cooperation: increasing participation in standard-setting bodies at regional and continental levels; and urging regional cooperation to manage cross-border transmission of diseases.

By 2008, livestock contributed 40 percent of South Africa's agricultural output. Yet, the supply of livestock products did not meet domestic demand, making South Africa a net importer – especially for red meat. Therefore, the 2008 Strategic Plan adopted key recommendations from the Livestock Development Strategy (see below) and outlined policy interventions to increase livestock production by 10 to 15 percent within the following three to five years. These included:

- allocating land for livestock farming;
- improved extension programs, targeted for emerging livestock producers;
- investments in communal areas;
- creating awareness about an animal breeding support program; and
- better marketing for existing and new secondary industries such as leather and dairy, supported by an amended Marketing of Agricultural Product Standards Act.

2007 Livestock Development Strategy

The 2007 Livestock Development Strategy (LDS) was developed to build a more inclusive, competitive, and sustainable livestock sector in South Africa.³⁴ The LDS addresses all segments of the value chain, as well as the role of the private sector. To facilitate the entry of resource-poor and emerging farmers into the sector, the LDS called for:

- providing infrastructure and information;
- strengthening institutional links between farmers and responsible government agencies;
- easing access to finance;
- expediting market development through trade negotiations and a review of tariffs, recognition of domestic protocols as equal to international standards, and implementation of a traceability system for export certification;
- providing safety and security against stock theft;
- enabling the production of healthy animals and safe and quality products;
- fostering research, technology transfer, and training in partnership with the private sector by increasing the R&D budget to more than 2 percent of agricultural GDP, encouraging more skills-based training programs, creating paid mentorships, and requiring community service participation by veterinary graduates;
- improving efficiency in production and supply chain management; and
- increasing private sector market research to cater for diverse markets.

Following the presidential election in 2009, policy interventions were expanded to cover a wider range of elements including fencing, animal health, animal improvement, and increased productivity through value chain programs, especially for small stock and poultry value chains. However, budgetary allocations for animal health fell from approximately 60 percent of the budget for biosecurity and disaster management in 2006 to a projected expenditure under 40 percent in 2010/2011.³⁵

On the other hand, the National Infrastructure Policy adopted by the government in 2012 allocated ZAR 827 billion (US\$108 billion) for investments in building new and upgrading existing infrastructure over three years beginning in 2013/14. The Policy defined 18 strategic integrated projects (SIPs) to create jobs, enhance service delivery, and transform the economy. SIP #11, Agri-logistics and Rural Infrastructure, sought to catalyze investments in agricultural and rural infrastructure, including investments in abattoirs and dairy facilities. Although three agri-parks had been constructed by 2017, their scope had to be downscaled to ensure that they have sufficient impact. Nevertheless, by 2019, the DRDLR reported that significant progress had been made, especially in red meat development, through the addition of custom feedlots, wool improvement and shearing sheds, and goat improvement auctions and feedlots. Between 2013 and 2019, 2,350 beneficiaries earned ZAR 109 million (US\$10.4 million) through these agri-parks.³⁶



Programmatic interventions

The South African livestock sector has benefited from both government-led and private-sector-led interventions. The Comprehensive Agricultural Support Programme, National Red Meat Development Programme, Kaonafatso ya Dikgomo, and Sernick Emerging Farmers Programme have all sought to raise productivity and promote commercialization.

Comprehensive Agricultural Support Programme

The Comprehensive Agricultural Support Programme (CASP) was launched by the Department of Agriculture in 2004 to create employment in the agriculture sector, raise incomes, reduce poverty, and improve national and household food security.³⁷ CASP facilitated agricultural development among subsistence farmers by providing a range of services including: information and knowledge sharing; technical assistance and regulatory services; marketing and business development; training and capacity building; on- and off-farm infrastructure and input supply; and financial support. The livestock sector was an important beneficiary of CASP as production rose significantly. The number of animals kept also increased by 296 percent on CASP-supported projects. The largest gain was among sheep producers, who kept 508 percent more animals than prior to the intervention, and the number of broilers increased by 307 percent. However, livestock marketing, disease control, and marketing were less successful elements of CASP. Some 30 percent of livestock producers sold their animals at formal auctions and markets, meaning that 70 percent were considered noncommercial farmers.³⁸ More than ZAR 14 million (US\$1.2 million) was spent on the CASP between 2004 and 2018, supporting over 11,400 projects and benefiting more than 675,000 participants.³⁹ An impact evaluation of CASP, prepared by the University of Pretoria in 2015, concluded that there was some progress toward achieving its objectives.⁴⁰

National Red Meat Development Programme

In 2005, the ConMark Trust launched the Livestock Programme in partnership with NAMC to increase the production of beef to meet local demand and reduce the need for imports. The initiative sought to encourage commercialization among small livestock producers in the region. ConMark Trust closed in 2008 and NAMC took over administrative oversight of the project under a new name, the National Red Meat Development Programme (NRMDP). Through NRMDP, NAMC developed a feedlot system, established new and revived existing auction pens and abattoirs, and facilitated access to markets by negotiating pre-slaughter agreements between producers and

retailers. NRMDP also organized visits to commercial feedlots, auctions, and abattoirs, and delivered training on animal health, husbandry, and marketing. Total offtake between 2005 and 2012 grew by an average of 13 percent across five districts. More weaners were sold, and the price for cattle sold also increased by an average of ZAR 1,540 (US\$200) per animal. Producers generated ZAR 7 million (US\$912,000) in income from sales in 2012, compared to ZAR 228,600 (US\$37,000) in 2005. During the year 2018/19, over 4,000 cattle and 764 goats were auctioned through NRMDP, raising over ZAR 34 million (US\$2.3 million) for participants. Given the success of NRMDP in Eastern Cape province, the initiative has been rolled out in Kwa-Zulu Natal and North West provinces, where two feeding facilities are operational each.^{41,42,43,44,45,46}

Kaonafatso ya Dikgomo project

In 2007, ARC initiated the Kaonafatso ya Dikgomo (KyD) project, designed to foster adoption of breeding and improvement approaches, combined with better recordkeeping among emerging and small livestock producers. Farmers are trained on breeding and animal health as well as recording information such as birth, weaning weight, and weights at 12 and 18 months. This information is then transferred to INTERGIS for analysis to enable farmers to make selection and culling decisions. The project is supplemented by additional services provided through a mobile laboratory, such as bull fertility tests, synchronization of cows, artificial insemination, embryo transfer, and pregnancy tests.⁴⁷ By 2014, over 8,000 producers had benefitted from KyD.⁴⁸ The project has resulted in higher calving rates and growth in herd sizes. KyD has also been particularly successful in promoting the use of more lucrative marketing channels, such as auctions. As a result, market offtake rates increased by 16 percent.⁴⁹ Participants also benefited from thrice as many visits from extension officers as nonparticipants. Sustaining this progress will require continued investments in extension services and further commercialization among the producers, including maximizing their use of formal marketing outlets.^{50,51}

Sernick Emerging Farmers Programme

The Sernick Group is a vertically integrated livestock company, connecting feed production with livestock producers, abattoirs, and retail outlets. In 2018, the company, in partnership with the Jobs Fund administered by the Department of Finance, launched the Sernick Emerging Farmers Programme (SEFP). Through the program, 660 farmers will be given accredited training and an opportunity to exchange their old stock for higher quality cattle; and 300 of these farmers will also receive technical training on managing their own herds



and financial flows. Furthermore, 50 of the 300 farmers will have an opportunity to purchase shares in a new wholesale company, Sernick Wholesale, and rent 35 cows and a bull from the Jobs Fund Programme. Over the first year, SEFP pays for the supplements and medicines and farmers have access to the company's infrastructure to ensure that they have a firm footing. In turn, farmers will have to create three jobs each and will be financially independent themselves. The first batch of "graduates" from SEFP signed their contracts in April 2019.⁵² By November 2019, 22 farmers had received cattle and 50 farmers were undergoing training to become fully commercial producers.⁵³

Success in South Africa's livestock sector is underpinned by a vibrant private sector and national efforts to include and commercialize production from small and emerging farmers. A relatively well-established animal health system, in conjunction with better marketing and access to finance, enable farmers to prosper from livestock production. However, the sector is also facing various changes and challenges. Domestically, the sector is undergoing a structural shift as more emerging farmers, commercially oriented farmers, urban farmers, and game farmers all integrate more livestock into their livelihoods.^{54,55,56} At the same time, international trade agreements are testing the strength of nascent industries within the sector. Finally, climate change and recurring droughts – like the ones in 2015/16⁵⁷ and 2019⁵⁸ – threaten the long-term viability of the sector. Nonetheless, with more effective implementation of

policies and programs, and closer collaboration with the private sector, South Africa's livestock sector has the potential to be a standard-setter on the continent. This in turn demands an optimization of roles and responsibilities. The current reorganization at the Department of Agriculture, Land Reform and Rural Development is an opportune moment to streamline responsibilities among and within ministries, parastatals, and other entities. It is also timely to form a dedicated branch to oversee the livestock sector. Such a focused approach would reinvigorate productivity and enable a more coordinated response to the changes and challenges facing the sector today.



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