

MISFIT AGRICULTURAL GRADUATES WHERE DID WE LOSE THE PLOT?

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The agriculture industry has the potential to fulfil the outcomes mandated in the National Development Plan (NDP) and the Industrial Policy Action Plan (IPAP). However, the graduates being produced by South African colleges and faculties of agriculture are “misfits” in the highly mechanised agriculture industry of the 21st century.

All governments have an absolutely indispensable responsibility to develop young people into citizens who will sustainably contribute to the achievement of national priorities. But

if the truth be told, as a nation we are all singularly and collectively to blame for turning a blind eye to the plight of “unemployed graduates” for so long. Surely the production of unemployable graduates should not be equated with a global phenomenon, as many try to.

Statistics SA’s Labour Force Survey for the second quarter of 2015 found that the share of employed graduates remains the highest among whites (ca. 27 percent) and Indians/Asians (ca. 23 percent). For every five employed white graduates and four employed Indian graduates, there was one employed black graduate.

In the agriculture sector, the majority of unemployed graduates are poor black youths from indigent communities who studied

at “historically” black tertiary institutions, with university councils and statutory bodies (South African Qualifications Authority, Higher Education Quality Council) all led by a black majority. Sadly, all sponsored by the black-led national government.

As the Bantu Education system intended to, the democratic state continues – unintentionally – to use education as a weapon of “mass destruction”. The consequences are currently a national crisis. Poor black youths from marginalised communities, who are the sole hope of their families, are given unprecedented numbers of state bursaries to pursue qualifications in primary agriculture. These welcome interventions are undertaken under the guise that an African child will be thrown a lifeline in scarce skills and qualifications. Upon completion, the graduates simply join the long queues of the unemployed, as the mechanised agriculture sector shuns them like the Biblical lepers.

All of us should be wondering aloud, “Where did we lose the plot?”

“BLACK-ON-BLACK” VIOLENCE

Flourishing industries generate jobs and sustainable wealth that creates more jobs and better lives for all. Industries flourish when they are responsive to social, technological, economic, environmental, legislative and political (STEELP) forces, with



Climate-smart agriculture, food security, food quality, agro-food processing and sophistication in food choices are central issues in 21st-century agriculture.

a bias towards human capital development. The 21st-century STEELP forces have brutally scant regard for generalists. Competitive industries demand specialists from highly diverse disciplines who can work productively in teams. Specialised disciplines encompass primary and secondary components of any given industry across all value chains.

On paper, South Africa has world-class policies in almost all spheres. Notwithstanding, our agricultural colleges and faculties in general – and at historically black universities in particular – continue religiously to produce generalists for labour-intensive primary agriculture.

Certain historically white institutions have climbed on the bandwagon as a “third force” to this “black-on-black” violence, developing similar programmes that serve as cash cows, milking the state with respect to the immense market of black youth with a “weak” background in science. The covert intentions legally perpetuate the Verwoerdian philosophy of primary agriculture under the rainbow colours of transformation. The standard of master’s degree programmes in primary agriculture is contemptuously low. These “transformed” institutions cannot even admit their own master’s degree graduates into PhD programmes, despite the statutory requirement that all academic programmes must allow vertical progression. The programmes are designed exclusively for use in labour-intensive agriculture, which is primitive when compared with the highly mechanised agriculture today. We see that the People’s Republic of China, for instance, which has traditionally practised labour-intensive agriculture, is rapidly mechanising in an economic boom that has produced unprecedented job and wealth opportunities.

It is not a mystery why this state-sponsored “black-on-black” violence

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continues unabated at black tertiary institutions. When strategic leadership positions are grabbed by unqualified personnel in strategic institutions like academia, in the name of affirmative action or gender balance, this signals the beginning of hopelessness in the future of a black child. Despite the numerous opportunities for staff development, most “affirmatives”

hardly aim to develop themselves to serve the country creatively, innovatively and competitively. Qualified professors are subjected to serve under unqualified non-academic heads of department. Under such conditions, academic excellence becomes foreign, if not taboo.

In short, what is happening in tertiary educational institutions under constitutional democracy is not what affirmative action originally intended. The failure of black institutions to rigorously address staffing issues and align their academic offerings with the changing STEELP realities comes at the expense of the marginalised communities they are paid to serve.

The preservation of redundant academic programmes in agriculture can also be attributed to tertiary funding policies that encourage mediocrity and promote heartlessness. All academic programmes are subsidised exclusively on the basis of outputs. The result is an unwritten policy of pass-one-pass-all within the stipulated timeframes.

Ironically, although the programmes are highly subsidised by government, they are poorly resourced. Surveys >>



Source: Hoedspruit, Limpopo province: Photo: Chris Kirchoff, MediaClubSouthAfrica.com



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conducted for this study found that laboratories were empty or non-existent. Poor students are bombarded with theory after redundant theory, while the “cash cows” are used to cross-subsidise other programmes. The impact of this on South Africa’s ability to meet national development priorities will be passed on to future generations. Will this time bomb continue ticking forever, without exploding?

VERWOERDIAN AGRICULTURE

Historically, labour-intensive primary agriculture programmes were initiated at black tertiary institutions (Universities of Fort Hare, North, Bophuthatswana, Venda, and Ngoye) to produce “jacks of all trade and masters of none” for homeland projects. I am one of the Fort Hare-trained generalists, and I should know.

Academic programmes at colleges and faculties of agriculture were strategically designed for uneconomic primary agriculture projects that served as job-creation centres in apartheid’s Bantustans. The regime meticulously ensured that every generalist in primary agriculture was employed, one

way or the other, to service labour-intensive subsistence megaprojects of sisal, tea, citrus, communal vegetable gardens, etc. – all of which were established on marginal soils with poor irrigation water. Some graduates were stationed at these massive projects as scientists! Others were responsible for animal husbandry, which included quarterly censuses, cattle dipping and other tasks, but nothing of importance. The system, from homelands to universities, was brutally monitored, controlled and evaluated. Upon completion, graduates would serve under unqualified whites – apartheid loyalists seconded to the homelands to ensure that primary agriculture projects never became competitive with private farm production in white South Africa. Nevertheless, there were no “unemployed graduates” then. The supply of graduates was demand-driven for a specific niche market.

Twenty-two years into constitutional democracy, the supply of graduates is no longer driven by market demand. Because of the funding model, quantity is the name of the game. Unregulated access, coupled with the complete collapse of the labour-intensive agricultural projects in former homelands, has escalated the production of “misfit” agricultural graduates.

Yes, the government has constitutional regulatory bodies for all levels of education but, saturated as they are with clueless “affirmatives”, it becomes a case of “send a thief to catch a thief”. The same could be said of university councils which, according to the King III Report on Corporate Governance, are expected to provide strategic leadership to their institutions. The same could be said of university managers who knowingly employ unqualified and non-productive staff in academic positions. Every five years, statutory bodies continue to give accreditation to academic programmes that should

not have persisted this long. This survey found whole departments where none of the lecturers had the requisite qualifications, yet are deeply entrenched in their positions without any consequences to the institution from the well-funded regulators.

DEVELOPMENTAL MANDATES FOR AGRICULTURE

The NDP and IPAP frameworks link agriculture to five of the Presidential Outcomes identified in the 2009 Medium Term Strategic Framework (MTSF):

- *Outcome 4.* Decent employment through inclusive economic growth
- *Outcome 5.* Skilled and capable workforce to support inclusive economic growth
- *Outcome 6.* An efficient, competitive and responsive economic infrastructure network
- *Outcome 7.* Vibrant, equitable and sustainable rural communities with food security for all
- *Outcome 10.* Environmental assets and natural resources are well protected and continually enhanced.

As can be seen internationally, the agriculture industry can contribute enormously to the achievement of these outcomes – but not through labour-intensive primary agriculture. Unfortunately, this focus on primary agriculture in South Africa and the failure to challenge policies that result in unintended consequences leave agriculture with no chance of contributing to its developmental mandates.

Primary and secondary agriculture are inseparable components of the sector. Historically advantaged universities, including Free State, Western Cape, Stellenbosch, Johannesburg, Pretoria, Tshwane University of Technology and the Central University of Technology, all have food sciences departments. As the

University of Johannesburg’s website reads, food science

incorporates many disciplines such as food microbiology, food chemistry and food engineering. Food technologists fulfil important positions in food manufacturing companies such as quality control, production management and new product development. We pride ourselves on the fact that our students are competently prepared for this exciting career and that they are well sought after in the food industry.

These demand-driven academic programmes, hailed as internationally competitive, are attracting students from developed countries. The only historically disadvantaged university with a food science and technology department is the progressive University of Venda, but its academic programmes still carry a heavy bias towards labour-intensive primary agriculture. Judging by an internet search, there are few tertiary institutions in the world that share this bias.

MAINSTREAM REALITIES IN AGRICULTURE

No industry can survive the highly competitive globalised labour market using obsolete training strategies. Similarly, in this information-dense era, no organisation can succeed by relying on information produced by others and not generating new knowledge for itself through advanced research.

In order to serve national priorities, agricultural tertiary institutions around the world have been structurally and functionally transformed, aligning academic programmes in primary and secondary agriculture with commodities value chains, and using systems-thinking to understand the interconnections of the entire agricultural sector with STEELP forces. Climate-smart agriculture, food security, food quality, agro-food



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Technological applications of “information-dense” agricultural systems are advancing in multi-purpose networks of (1) controlled mechanised farming operations (on land and in water, as in aquaculture enterprises), (2) variable rate technologies, (3) precision agriculture, (4) modelling, (5) remote sensing, (6) real-time data capture, (7) target-specific application of pest-specific pesticides, (8) marketing and consumer information and (9) product-processing and tracing. It demands multi-skilled professionals from different disciplines with holistic knowledge, understanding and wisdom in agricultural systems and their linkages to the ever-changing STEELP forces.

A quick glance at all of the historically black and some of the historically white tertiary institutions in South Africa exposes the shamelessness of accredited academic agricultural programmes.

WHAT MUST BE DONE?

Mechanise! Agricultural training institutes, particularly for the black majority, must change from the Verwoerdian mentality that misdirects all resources to primary agriculture, producing raw inputs for somebody else create wealth through secondary agriculture. Viewed with soul-searching honesty, the current high number of unemployed graduates from tertiary academic programmes means that “economic freedom in our lifetime” will remain a pipe dream.

The value chains of different agricultural commodities offer limitless crosscutting career opportunities – not only for agriculturalists but also for social and natural scientists, nutritionists, technicians, statisticians, lawyers, marketers, entrepreneurs and others – in seven thematic areas:

- mechanised primary agriculture
- mechanised value chain innovations in primary and secondary agriculture
- mechanised agro-food processing innovation
- consumer behaviour research
- socio-economic food research
- food and health extension
- marketing of agricultural produce and products.

When properly designed to meet the minimum requirements of cross-cutting and multi-skilled career opportunities, agriculture could indeed be a convergent industry for all “unemployed graduates”.

As seen in other developed countries of the world, a STEELP-clued mechanised agriculture industry in South Africa, supported by fit-for-purpose human capital, can successfully contribute to its mandated presidential outcomes. Qualified and visionary leadership is indispensable to re-engineer primary agriculture and to consolidate primary and secondary agricultural components in academic programmes that will serve the sector today and in the future. State intervention through a comprehensive “Marshall Plan” is long overdue for the agriculture sector in South Africa. [NA](#)