INTRODUCTION

In line with the Millennium Development Goals, the Universal Declaration of Human Rights and the 2020 vision of Food for All, the right to food is entrenched in Section 27 of the Constitution of the Republic of South Africa, 1996. This right provides that every citizen has the right of access to sufficient food and water, and it states that the state must by legislation and other measures, within its available resources, avail to the progressive realisation of the right to sufficient food.

ABSTRACT

The Constitution of the Republic of South Africa, 1996 contains clear guidelines within which government has to determine its policies and how the administration of the public sector has to be conducted. South Africa, as a developmental state, has policies in place to guide development and service delivery, however, surveys and debate on policy and practice indicate that government is not adequately meeting developmental goals as a result of a failure in implementation.

Agriculture Extension is critical for the implementation of government’s strategic priorities and programmes of action especially for the Food Security Policy Programme. The purpose of this article is to provide an overview of the extent to which Agriculture Extension Education in higher education institutions reflect the policy agenda.

The overarching aim is to raise awareness of the need for skills development and professionalism to be incorporated into Agriculture Extension curricula for the successful implementation of the Food Security Policy. The article supports a need for academic debate on Food Security Policy and discussion on monitoring and evaluation as a key theme for contemporary curricula as a point of enquiry for effective policy implementation.
In 2002 the Integrated Food Security Strategy (IFSS) was approved by Cabinet as the strategy that would integrate the many previously isolated policies tackling the challenge of food insecurity in South Africa. According to the National Department of Agriculture (NDA), a food security policy was motivated by the many food security programmes by different government departments. Whilst the overarching aim was to streamline and harmonise the existing strategies, the vision of the IFSS is to attain physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times to meet their dietary and food preferences (NDA 2002).

The NDA is the convener of the Food Security Policy. This has resulted in a focus on agriculture as a mechanism for reducing poverty and rate of food insecurity, through interventions by development practitioners, agriculture extension and community extension officers. Despite the national food secure status within South Africa, about 35% of the population is estimated to be vulnerable to food insecurity (Statistics South Africa 2000). The NDA recognises the need to fast track food security policy implementation as they have failed to meet household food security targets, and have further failed to deliver the transformation agenda of the policy (DOA 2009).

The purpose of this article is to provide an overview of the extent to which Agriculture Extension Education in higher education institutions reflect the policy agenda. The overarching aim is to raise awareness of the need for skills development and professionalism to be incorporated into curricula for the successful implementation of the Food Security Policy. The article further supports a need for academic debate on Food Security Policy and discussion on monitoring and evaluation as a key theme for contemporary curricula as a point of enquiry for effective policy implementation.

**FOOD SECURITY**

The South African government defines food security as: physical, social and economic access to sufficient, safe, and nutritious food by all South Africans at all times to meet their dietary and food preferences for an active and healthy life (NDA 2002:15). Vogel and Smith (2002:317) call for political commitment and transparency in all spheres of government for effective policy implementation. They argue further that food security is a fundamental human right and as such should be a fundamental responsibility of government to provide it.

**Food security strategy**

The vision of the Integrated Food Security Strategy (IFSS) is to attain universal physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times to meet their dietary and food preferences for an active and healthy life. This statement is also a definition of food security by the Food and Agricultural Organisation of the United Nation (FAO 2001). Its goal is to eradicate hunger, malnutrition and food insecurity by 2015. The strategic objectives to realise this goal and the vision of the IFSS are to:

- increase household food production and trading;
- improve income generation and job creation opportunities;
- improve nutrition and food safety;
- increase safety nets and food emergency management systems;
● improve analysis and information management system;
● provide capacity building; and,
● hold stakeholder dialogue (NDA 2002:6).

The expected outcomes of the IFSS include greater participation by the food insecure, adherence to the principles of good governance and improved monitoring and evaluation systems. The policy framework calls for intervention through targeting and is grounded in the idea that food security interventions will succeed from an analysis that is grounded on accurate information and the impact of which – in eradicating hunger, malnutrition and food insecurity – needs to be constantly monitored and evaluated (NDA 2002:13-14).

Whilst the overarching principles of this approach is that food security objectives are an effort of all concerned departments, the leadership for the IFSS vests in the NDA which has resulted in a focus on agriculture as the main opportunity for success in obtaining food security. This, according to Drimmie and Ruysenaar (2010:325), is evidence of the apartheid residual memory which focused on production issues of white commercial farmers with little consideration for the majority black subsistence farmers. Altman, Hart and Jacobs (2009:356) reiterate this, and emphasise that whilst the policy tends to focus on commercially oriented production, there are about four million people (2,5 million households) engaged in some kind of own production, 300 000 to 400 000 are full-time subsistence farmers. Agriculture for these households is a livelihood strategy.

Despite the national food secure status within South Africa, about 35% of the population is estimated to be vulnerable to food insecurity (Statistics South Africa 2000). The NDA recognises the need to fast track food security policy implementation as they have failed to meet household food security targets, and have further failed to deliver the transformation agenda of the policy (NDA Annual Report 2008/2009).

Challenges for Policy Implementation

Public policy is essentially government’s plan and programme of action. Public administration and management provide a focus on the financial and human resources and provide for the logistical arrangements needed to generate intended outcomes (Cloete and Rabie 2008:57). Whilst it is the business of government to facilitate the transformation of society into a more desirable situation (Cloete and Rabie 2008:56), it is the responsibility of the public service to implement policies to facilitate such change.

Nair (2008:75) in his overview of food security within Africa contends that it is necessary for governments to take a more systemic approach. Vogel and Smith (2002:315) support the call for closer relationships among government, the private sector and civil society to improve policy implementation. Bird, Booth and Pratt (2003:42) argue that policy problems exacerbate the situation of food security due to lack of co-ordination and an inappropriate skills base. Steyn and Labadarios (2003:347) reiterate this by referring to the lack of capacity at the local levels as the main impediment to successful implementation of programmes.

Rosegrant and Cline (2003:1918) in commenting on food security on the global level, emphasise the need for investment in research for real success with policy implementation. Fraser-Moleketi and Van Dyk-Robertson (2005:573) argue in support for a learning approach in policy implementation. They emphasise that it is necessary to concentrate on the core values and
principles for success and not the methods on their own. Duvel (2004:9) suggests that in order to improve the current levels of policy implementation, training and development in monitoring should be undertaken due to the poor level of education and training of staff responsible for the implementation of policy. He further argues that together with striving towards higher levels of professionalism through more effective selection of staff, that it is necessary for tertiary institutions to play a more decisive role regarding developing an appropriate skills base.

Department of Agriculture: Roles and Responsibilities

Prior to 1994, extension services were aimed at white commercial farmers. As a result universities and training institutes that taught and engaged in research, focused on commercial farming. Food security, rural household livelihoods and subsistence farming did not feature prominently.

The reforms offered in 1998 were aimed at targeting more effectively, raising accountability, realigning expenditure, and dealing with issues of gender and equity. The areas of action to address the issues included improving the links between research and extension, training and retraining of staff and considering new methods of delivery. This transformation in strategy and training was geared inwards. Thus, it was aimed at changing the way in which the NDA operated (2008).

Research and Development within the Department of Agriculture

Post 1994 the NDA embarked on a strategic framework to broaden access and participation in agriculture through the Broadening Access to Agriculture Thrust (BATAT) process. This process identified a number of research and development challenges, viz:

- lack of policy and long-term strategic management in research and the linkage mechanisms between agricultural research institutions and their clients;
- lack of clarity on how linkages should be strengthened to improve the farmer-extension researcher linkages; and
- the need to design and establish suitable institutional linkages to support effective co-ordination and prioritisation of research needs at all levels (DOA 2008:3).

A White Paper on Science and Technology, 1996 establishes a framework for science and technology which reinforces the need for innovation and action through multiple role players. In 2001 The Strategic Plan for South African Agriculture with its core strategies of access and participation, competitiveness and profitability and sustainable resource management aims at realising the vision of a united and prosperous agricultural sector. These changes provide a foundation for the South African National Research and Development Strategy of 2002 which entrenches the move towards a focus on research, innovation and change (DOA 2008).

National Agricultural Research and Development Strategy

Currently the National Agricultural Research and Development strategy (NARS) identifies a number of stakeholders in agricultural research and development. The most significant category for the purpose of this article is that higher education and development institutions are identified as having a role and responsibility in curriculum development, training, research (pure and adaptive) and transfer of technology (DOA 2008).
The first decade of democratic change was slow as part of the radical paradigm shift. In the second decade of democracy the calls for increased effectiveness and efficiency, service delivery, co-ordination, resourcing and meeting the needs of the population are getting more pronounced. Within the context of agricultural research and development there are many challenges ranging from the need for increased support to improved institutional arrangements to address these challenges. As part of a solution for some of these problems, the attainment of a “cadre of qualified, experienced and motivated world-class agricultural research and development specialists, managers and policy makers to lead South Africa towards achieving the long term goals of food security, poverty alleviation…” is required (DOA 2008). As part of their mandate outlined in the NARS, the NDA is tasked with supporting training at higher education institutions and is assigned the role of monitoring and evaluation as a mechanism for ensuring that an effective skills base is available for policy implementation. Higher education institutions are mandated with the task of capacity building and curriculum development in Agriculture Extension with monitoring and evaluation as a focus (DOA 2008:22).

**MONITORING AND EVALUATION**

Evaluation or programme implementation “implies that evaluation is carried out in government circles or different countries under a variety of activities such as auditing, inspection, management analysis, monitoring, planning, policy analysis, programme analysis and research” (Dassah and Uken 2008:175). Problems with monitoring and evaluation are associated with the questions, Who? What? How? When? and what resources will be available for the process?

Hadley and Maes (2009:1223) argue that the lack of knowledge about the nature of food insecurity is “rooted in methodological shortcomings.” This, they argue further is compounded by the lack of an appropriate monitoring system. According to Dassah and Uken (2008:183) Africa has been late in the adoption of monitoring and evaluation. This is partly due to the state of economies and the struggle to design appropriate social development programmes. Further, they do not have results based systems in place, combined with weak information networks, a lack of an evaluation culture impacts on levels of performance and thus the levels of success in policy implementation (adapted from Dassah and Uken 183:184).

**Government Wide Monitoring and Evaluation**

In 2005, the President of South Africa made a commitment towards a system of monitoring and evaluating public service delivery. This paved the way to the Government Wide Monitoring and Evaluation System (GWM&E) and the National Treasury Framework.

The GWM & E aims at providing a framework for monitoring and evaluation principles, standards and practices. This programme launched in 2007, does not provide prescriptive procedures regarding the questions How? When? Who? and What? will be monitored and evaluated. As a result, some departments still operate with no formal monitoring and evaluation system. This has an impact on the levels of success and / or failure in policy implementation.

The Ministry for Performance, Monitoring and Evaluation was established in 2009 in the Presidency with the task of driving improvement in government performance through a focus on outcomes. In 2009 a Green Paper Improving Government Performance: Our Approach
was issued. According to this Green Paper, the performance management system will complement the GWM & E system. Whilst this is ideal, the reality is that the lack of capacity in the public service means limited applicability of such efforts. For the implementation of Food Security Policy interventions, this means that public officials tasked with implementing the policy are limited by their capacity and ability to interpret policy through improved practice. This places a strain on the level of professionalism displayed by the implementers of policy. A discussion on the importance of professionalism now unfolds.

PROFESSIONALISM

Professionalism is often associated with ethical standards and moral behaviour. Whilst instilling values, morals and acceptance of norms depend heavily on culture and religion, the issue of professionalism is more about pride in work produced, and is about meeting more than minimum standards, achieving more than before, being accountable for duties and responsibilities. Being professional, means balancing accountability and autonomy (Tau and Mathebula 2005:355).

Wenzel (2007:57) argues that fast tracked, accelerated delivery does not work. Rather that less is more, and that SMART (specific, measurable, attainable, relevant, time-bound) action is needed to obtain success in service delivery. This SMART action needs to be coupled with professionalism and the necessary training. In line with this Babu (2001:26) emphasises the need to develop appropriate course material to improve the implementation of policy.

Duvel (2004:9) remarks that there is a low level of knowledge or skills base amongst extension workers. Duvel (2007:79) conducted a national survey of the perceived importance rank order of accountability and extension relative to other factors needed for improved extension:

This survey found that there is increasing pressure for extension to become more professional (Duvel 2007:91). In this regard, training together with an effective monitoring and evaluation system are needed. However, Dassah and Uken (2006:716) are of the view that monitoring and evaluation is low and that training opportunities in South Africa are inadequate (Wissink 2006:317).

The call for incorporating policy into curricula is not a new one. Van Rooyen, Barnard and Van Zyl (1996:713) argue that there must be an integration of training, research and extension for specialists to be more capable to implement the agenda post 1994. Bembrigde (1994:6) calls for higher educational institutions to broaden their curricula to support the new agenda by way of considering “new ways of knowing as well as new kinds of knowledge” in order to improve policy implementation. Wallace (1997:27) also encourages academics and higher educational institutions to broaden the content and approach of their curricula in order to integrate agricultural policy into extension approaches.

Role of Higher Education

Like the policy guidelines for the NDA, there has been a parallel transformation since 1994 in the system of higher education. These transformations have resulted in calls for increased participation, greater institutional responsiveness to policy priorities and new partnerships between higher education and the broader society.
According to Kuye (2007: 2) higher education in a post 1994 era is required to obtain and sustain higher levels of economic growth, improve the educational standards of the masses, institute socio-economic change and development, enable good citizenship by empowering citizens to participate in a meaningful manner in the democratic processes, develop knowledge bases and contribute to citizens utilising opportunities and allowing them to compete internationally in a quest for excellence in delivery. Reform, according to Kuye, calls for a closer alignment of academic and vocational learning, and should follow an outcomes-based approach to allow cross-field outcomes. This is emphasised by Killen (1999) who argues that the current educational policy in South Africa supports a competency based approach which emphasises accountability and effective learning. The Outcomes Based Education system has now been reformulated into this approach. The Minister of Higher Education and Training, in the Strategic Plan 2010/11 – 2014/15, clearly states that the mandate for higher education and training is “to ensure that the skills needed to drive our country’s economic growth and social development are delivered at an increasing rate”.

These reforms in education require curriculum reviews. Auriacombe (2000:7) describes these as a combination of three types of competence namely: practical (knowing how to do things and the ability to make decisions; foundational (understanding what they are doing and why); and reflective (learning and adapting self-reflection, applying knowledge appropriately and responsibly).

It thus can be summarised that the Agriculture Extension curriculum ought to be focused on effective learning that promotes accountability by virtue of being competency based. The key indicators of competency, according to Worth (2008:65), can be derived from agricultural policy which encompasses the Food Security Policy.

South Africa is still very much in transition. For the effective implementation of policies, curricula need to reflect these changes. Thus, higher education institutions need to be demand driven. The link between policy and training / research is shaped by the political context and thus the impetus of public officials towards such change. Clay and Schaffer (1984) refer to this as the potential “room for manoeuvres” in negotiating the context and of such change. Kirsten, May, Hendriks, Lyne, Machethe and Punt (2003:50-51) through a systemic investigation of the agricultural growth – poverty relationship, concluded that the agricultural

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**Table 1 Perceived importance of Factors Impacting on the Agriculture related projects**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean weighted percentage</th>
<th>Rank order position</th>
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<tbody>
<tr>
<td>More training</td>
<td>55,3</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
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<tr>
<td>More accountability</td>
<td>53,7</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
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<tr>
<td>More resources</td>
<td>52,9</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
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<tr>
<td>Improved management</td>
<td>48,9</td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
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<tr>
<td>Better staff selection</td>
<td>47,6</td>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Better extension approach</td>
<td>44,7</td>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
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<tr>
<td>More commitment</td>
<td>41,4</td>
<td>7&lt;sup&gt;th&lt;/sup&gt;</td>
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Source: Duvel (2007:79)
sector can play a role in poverty alleviation and food security. Their recommendations could help unlock the potential within government, monitoring and evaluation programmes.

Curricula overview of selected higher educational institutions in KwaZulu Natal Province: an agriculture extension focus

This discussion focuses on those Higher Education Institutions (HEIs) within KwaZulu-Natal offering Agriculture and/or Agricultural Extension as a qualification. It is important to note that the purpose of this article is to assess the extent to which curricula integrate policy issues into their content.

At University of KwaZulu-Natal, in the College of Agriculture, Engineering and Science, several of the disciplines offer Agriculture Extension. A study conducted by Worth (2008:204) to identify curriculum markers for Agricultural Extension examined the Bachelor of Agriculture (B Agric), the Bachelor of Agriculture Honours, and the Bachelor of Science in Agriculture, found that the qualifications are designed to develop the capacity of practitioners such as Extension Officers and community development facilitators who work in agricultural and rural development for Non-Governmental Organisation (NGO) and public service sectors and for agri-business and private sector companies involved with farmers and rural communities. An analysis of the course content indicates that there are no required Agricultural Extension courses in any of the specialisations [www.ukzn.ac.za]. The study by Worth (2008:210) also indicates that none of the courses offered dealt directly with policy analysis. Extension, implies that the curricula offers a broad based understanding of the project process but not the policy process and what the implications are for those tasked with extending information to communities.

Table 2 Agriculture Extension Offerings

<table>
<thead>
<tr>
<th>Institution</th>
<th>Offering(s)</th>
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<tr>
<td>University of Kwazulu Natal (PMB)</td>
<td>B Agriculture</td>
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<td>B AgricMgmt</td>
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<td></td>
<td>B ScAgric</td>
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<tr>
<td></td>
<td>Bachelor of Agricultural Management Honours</td>
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<td></td>
<td>Bachelor of Agriculture Honours</td>
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<tr>
<td></td>
<td>Post-Graduate Diploma in Rural Resource Management</td>
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<tr>
<td></td>
<td>Post-Graduate Diploma in Food Security</td>
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<tr>
<td></td>
<td>Master of Agricultural Management</td>
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<tr>
<td></td>
<td>Master of Agriculture</td>
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<td></td>
<td>Master of Science in Agriculture</td>
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<tr>
<td></td>
<td>Doctor of Philosophy in Agriculture</td>
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<tr>
<td></td>
<td>Doctor of Science in Agriculture</td>
</tr>
<tr>
<td>University of Zululand</td>
<td>B Agric</td>
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<tr>
<td></td>
<td>B ScAgric</td>
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<tr>
<td></td>
<td>B Consumer Science: Extension and Rural Development</td>
</tr>
<tr>
<td>Durban University of Technology</td>
<td>No offering in Agriculture Extension</td>
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<tr>
<td>Mangosuthu University of Technology</td>
<td>ND Agriculture</td>
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<td></td>
<td>ND Community Extension</td>
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</table>
The Post Graduate Diploma in Food Security is unique in that its course offering is directly related to implementation of the Food Security Policy by way of Extension. Further, this programme cuts across disciplines and has a focus on research. In this programme, professional development, with critical skills development is a core focus of the curricula.

Agricultural Extension at University of Zululand is divided between two departments, namely Department of Consumer Science and of Agriculture. Both departments are part of the Faculty of Science and Agriculture. The main extension offering is in the Department of Consumer Science (Worth 2008:271). The *B Consumer Science* is a four-year qualification with the aim to integrate knowledge and skills from consumer sciences and agriculture. The qualification equips the learner to provide education, training and other extension services with special emphasis on resource management and food security (including food production, food processing and nutrition). The *B Sc Agric* builds capacity among the learners to enable them to be self-employed in these same fields. An analysis of their curricula indicates that students who study for the Consumer Science qualification have more exposure to Extension, but once again this does not facilitate learning in policy analysis.

Mangosuthu University of Technology (MUT) has two offerings relevant to this article, namely, *National Diploma in Agriculture* and *National Diploma in Community Extension* within the Faculty of Natural Sciences. The Community Extension programme offers both Extension and Agriculture Extension as major subjects. In addition, Human Ecology is offered which in its curricula provides for a systems view to development intervention. The *National Diploma in Agriculture* focuses on the science of agriculture and extension in its traditional form.

**Evaluation**

Further to the formal qualifications offered by the HEIs, there are diverse training programmes in capacity and skills development in Agriculture Extension. A key shortcoming is that none of these institutions offer policy process and analysis, nor appear to offer monitoring and evaluation as opportunities for learning and change under the Agriculture Extension programmes. The University of KwaZulu-Natal Food Security programme offers a multi-disciplinary approach to Food Security Policy implementation which is unique within the province. There is insufficient focus on policy monitoring, evaluation and comparative content. This adversely affects those entering the public service tasked with the implementation of policy without being mentored into being aware of those critical systemic issues. Higher education institutions must question the systemic issues related to the policy process (Cloete and Rabie 2006:67).

The University of KwaZulu-Natal is the only institution in KwaZulu Natal that offers post graduate studies in Agriculture Extension. The offerings in the Table above may include policy as a key theme, however, with the exception of the Food Security programme, there is lack of a multidisciplinary and multi focused approach. Perhaps, this is the case even though the module names do not reflect this.

**Recommendations for teaching Agriculture Extension**

Higher Education Institutions offering Agriculture Extension ought to network with Public Administration Leadership and Management Academy (PALAMA) to offer programmes and courses to enhance capacity building. Through this partnership, skills development and
professionalism could enhance the successful implementation of the Food Security Policy. The training can also be stepping stones for those already employed within the realm of Agriculture Extension.

Research, quality assurance and community engagement could help ground Agriculture Extension curricula with contemporary trends and best practices as outlined in policy. Representatives of Advisory Boards comprising senior practitioners, leading academics and researchers in the field, farming communities, the NGO sector and the private sector need to play a more prominent role in the quality assurance process. Service learning, internships or work integrated learning can assist in blending theory with practice. Students studying Agriculture Extension should endeavour to undertake community engagement work. A multi-disciplinary approach to Agriculture Extension with a focus on policy analysis can improve the skills base and thus the level of professionalism displayed by those tasked with the implementation of the Food Security Policy.

**CONCLUSION**

The paper highlighted the Food Security Policy and the challenges regarding implementation thereof. A discussion on the key roles and responsibilities of the NDA in its role as convener of the Food Security Policy followed. The role of HEI curriculum in contributing to an appropriate skills base and level of professionalism was explored. This article proposes key recommendations.

Finally, this article supports Worth (2008) that the current extension used generally does not equip Agricultural Extension practitioners for the imperatives of the day. Evidence from within the NDA as well as an overview of the curricula indicate that practitioners in the realm of Agriculture Extension are ill-equipped, ill-trained and ill-suited to the effectively understand and implement policy guidelines.

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