

**COMBATING THE DECENT WORK DEFICITS IN AGRICULTURAL PRODUCTION  
SYSTEMS**

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## **ABSTRACT**

Farm workers and smallholder farmers face some of the worst working and livelihood conditions. This calls not only for economic upgrading but also for social upgrading which needs to be addressed in an interdisciplinary way. To identify, quantify and develop strategies in combating decent work deficits, we need to address the methodology for measurement of decent work deficits in agricultural systems and interventions that would improve agricultural production modes in a sustainable way. Further, there is need to design strategies that address power constellation at the nodal point of agricultural production systems and implementation of the decent work agenda in supply chains. Various trade and investment rules, regulations and treaties constrain environmental and social sustainability in agriculture, a clear understanding of which is crucial in addressing the pertinent question of decent work deficits. The objective of this paper is to contribute to the body of knowledge and policy proposals geared towards combating decent work deficits in smallholder agricultural production systems based on review of available literature and situational analysis and an assessment of the decent work deficit situation in Kenya's dairy farming systems.

## **LIST OF ACRONYMS**

FAO	Food and Agriculture Organization of the United Nations
HACCP	Hazard Analysis Critical Control Point
ILO	International Labour Office
ILRI	International Livestock Research Institute
OECD	Organization for Economic Cooperation and Development
UN	United Nations
WHO	World Health Organization

## INTRODUCTION

### 1.1 The decent work agenda

The decent work concept was adopted at the World Summit in for Social Development in 1995 as a means to promote the creation of sustainable employment (FAO, 2011). More recently, in the United Nations Sustainable Development Summit in Nairobi, Kenya on 25th September 2015, decent work was adopted as one of the 17 goals that make up the 2030 Agenda for Sustainable Development. Decent work sums up the aspirations of people in their working lives. It involves opportunities for productive work that delivers a fair income, security in the work place, social protection, social integration, freedom for people to express their concerns, to organize and participate in decisions that affect their lives, equality of opportunity and treatment for all men and women and prospects for personal development (ILO, 2006).

During the last two decades, public policy and academic attention has increasingly focussed on the quality of employment. The dual processes of globalization and liberalization have exerted pressure on labour market flexibility and improvement of working conditions (Burchell *et al.*, 2014). The production environment in agri-based industries in developing and less developed countries are characterized by a supply of labour that outstrips its demand resulting in low productivity of labour and under-employment. Many jobs therefore do not offer secure and decent incomes to support sustainable livelihoods and have been considered as precarious work. In most rural areas, the situation is aggravated by the highly informal nature of labour, a predominance of casual labour, labour force fragmentation, information asymmetry and uncertainties and specificity in agricultural production which greatly influence transaction costs.

### 1.2 General objective

The general objective of this paper is to contribute towards combating decent work deficits in agricultural production systems based on review of available literature and situational analysis.

### 1.3 Statement of the problem

Farm workers and smallholders face some of the worst working and livelihood conditions. This calls not only for economic upgrading but also for social upgrading which needs to be addressed in an interdisciplinary way. To identify, quantify and develop strategies in combating decent work deficits, we need to address the methodology for measurement of decent work deficits in agricultural systems and interventions that would improve agricultural production modes in a

sustainable way. Further, there is need to design strategies that address power constellation at the nodal point of agricultural production systems and implementation of the decent work agenda in supply chains. Various trade and investment rules, regulations and treaties constrain environmental and social sustainability in agriculture, a clear understanding of which is crucial in addressing the pertinent question of decent work deficits

This paper is based on review of literature from a wide spectrum of disciplines with the aim of addressing itself to aspects of decent work deficits and approaches in combating decent work to draw recommendations and conclusions.

## **REVIEW OF LITERATURE**

### **2.1 Definition of decent work**

Decent work sums up the aspirations of ordinary people in their working lives. It involves opportunities for work that is productive and delivers a fair income for the farmer and his employees, security in the work place and social protection for families, prospects for personal development and social integration, freedom for people to express concerns, organise and participate in decisions that affect their lives and equality of opportunity and treatment for all women and men (FAO, 2011; ILO, 2007). Anker *et al.* (2002) elaborates on ten thematic areas of decent work which include employment opportunities, adequate earnings and productive work, decent hours, combining work, family and personal life, work that should be abolished (mainly child labour and forced labour), stability and security of work, equal opportunity and treatment in employment, safe environment , social security and social dialogue.

### **2.2 Measurement of decent work deficits in agricultural production systems**

Among the major challenges to evaluation of decent work is how to harmonize data so as to evaluate decent work across sectors and economies. In a study on conceptualizations of decent work, Di Ruggiero *et al* (2015) identified several challenges of decent work assessment. These includes, challenges associated with promoting one agenda, complex intersection between decent work and other disciplines such as health and health concepts, emphasis on economic and pro-market interest verses the social dimensions of work and relative emphasis on individual verses collective responsibility for decent work. This study concluded that broader discourses are continually contributing to re-framing decent work in different contexts.

Ankers *et al.* (2003) developed a set of statistical indicators for measuring decent work which were adopted by the ILO and are also constantly under review. Theoretical conceptualizations of decent work have however been defuse (Burchell *et al.*, 2014) and therefore, to address all the dimensions in an integrated way, the International Labour Office (ILO) in Geneva developed four strategic objectives which were adopted by the United Nations (UN) system as the basis for more just and stable framework for global and rural employment (FAO, 2011). These objectives include; 1). Employment creation and enterprise development, 2). Social protection, 3). Standards and rights at work and 4). Governance and social dialogue; which can be used as the criteria for measurement of decent work deficits.

### **Agriculture in Sub-Saharan Africa and Decent work**

The current state is that there is a steady decline in food production per capita. The growth in food production of about 1.3% per year for SSA has not measured to the population growth of over 2.5% for the region. Therefore food consumption per person has been declining. United Nations (UN) estimates 30 million Africans out of 650 million (by 2003) face famine threat. This figure is likely to be up with increasing drivers to this scenario due to increased civil strife, after effects of conflicts, internal displacement of people and returning refugees, droughts, food deficits, corruption and mismanagement of resources and diseases e.g. AIDS and malaria.

In SSA, agriculture is the single entity to alleviate hunger, social upheavals, improve nutrition, poverty etc, but only if decent work is addressed. The fundamental rights, access to jobs and living wages, social protection and social dialogue are the pillars of decent work. Some of the examples of the pillars in smallholder farming systems in SSA include;

### **Social dialogue**

In SSA countries, provisions of platforms to engage in productive tripartite dialogue to find peaceful solutions to the social and economic challenges facing the smallholder farmers is far from being attained. These include rights to collective bargaining, non-use of child labour, forced labour, non-discrimination in employment and occupation, equal remuneration, occupational safety and health and being unionizable. In most food value chains, especially cereals, dairy and meat, unscrupulous cartels have taken over the show of fixing prices, deciding to reject farmer's milk, sale to farmers poor quality feeds and drugs etc. There is no platform where farmers can

participate in these decisions. There is rising abuses of worker's rights especially in flower industry eg in Kenya, where women workers are vulnerable to exploitation in form of sexual harassment, no maternity leave, overcrowded housing and low pay. Child labour especially in the rural sectors for example in SA is being used. In Zimbabwe, the fate of about 300,000 farm workers and their dependants who faced forced displacement from farms have uncertain settlements.

Wages in agriculture are the lowest compared to other sectors, yet agriculture is the largest employer and economy in Africa. In Kenya for example, agricultural sector provides 251,000 jobs which contributes to 15% of total waged employment. However, Kenya human rights commission (KHRC) reports that some farmers pay their workers less than \$25 per month. In Zimbabwe, farm workers are the lowest paid. Their working conditions were seriously affected by the structural adjustment programmes and now globalization. When global prices fall, farmers' pass over on farm workers in the form of reduced wages and job retrenchments. In SA, this led to reduced or no fixed period of contracts, casual, seasonal or temporary workers. There is a complete drop in permanent employment. Governments in SSA keep on promising on minimum wages to agriculture workers but most farmers do not adhere to this. In Kenya despite the promises, there is no procedure of following up on these promises, so farmers keep paying farm workers the lowest wages. A casual labourer in Kenya is supposed to be paid Ksh400 per day according to the labour laws but no farmer pays his/her workers this much.

### **Social Security**

In Africa, most natural schemes cover employees in the formal sector only. In SSA, only about 10% of the population is covered by social security, 90% of the informal workers are not. The reason being the dominance of rural settlement, informal employment and self employment. In Kenya, KHRC and COTU have developed some standards in comparison to those in formal sector like wages above the government minimum, six days working week for 46 hours and overtime rates paid for additional hours, 21 days paid leave a year, 2 months paid maternity leave, paid sick leave for one month's service and the employer to provide reasonable housing or pay rent.

In Zimbabwe, government still regards health and education of farm workers as the responsibility of their employers. Employers in turn keep social costs of production low to



maximize profits. According to the employers, health, housing, and social amenities are a financial burden. Workers receive no protection from the government against unscrupulous employers, especially after retirement and this has led to nutrition, sanitation and illiteracy problems to be high.

In SA, farm workers are now fully recognized and protected by law and collective bargaining rights. However, implementation is still a problem. Farmers are not honest, child labour is still being practiced, gap between female and male wages exist and social security provisions such as unemployment benefits, medical services, pension or provident funds not put in place.

### **Social protection**

In SSA, most agricultural workers and self employed farmers are not catered for in the social protection schemes. Because of low pay and low incomes they cannot afford voluntary pay in the systems of social protection. Their total spending on health is not more than 10US\$ per head per year. Their revenues are irregular as their income is based on sale of farm produce. Most of them are unfamiliar with insurance system. Because of these factors, provision of basic social protection requires political good will for agricultural workers.

### **Diseases**

These undermine labour force and human capital, productivity and food security of national development. AIDS has killed at least 7 million agricultural workers since 1985 and it is estimated that up to 25% could be lost in SSA by 2020. In Kenya, 58% of staff deaths in ministry of agriculture is caused by AIDS. In Malawi, 16% are living with AIDS (ILO, 2003)

### **The emerging social dialogue in SSA**

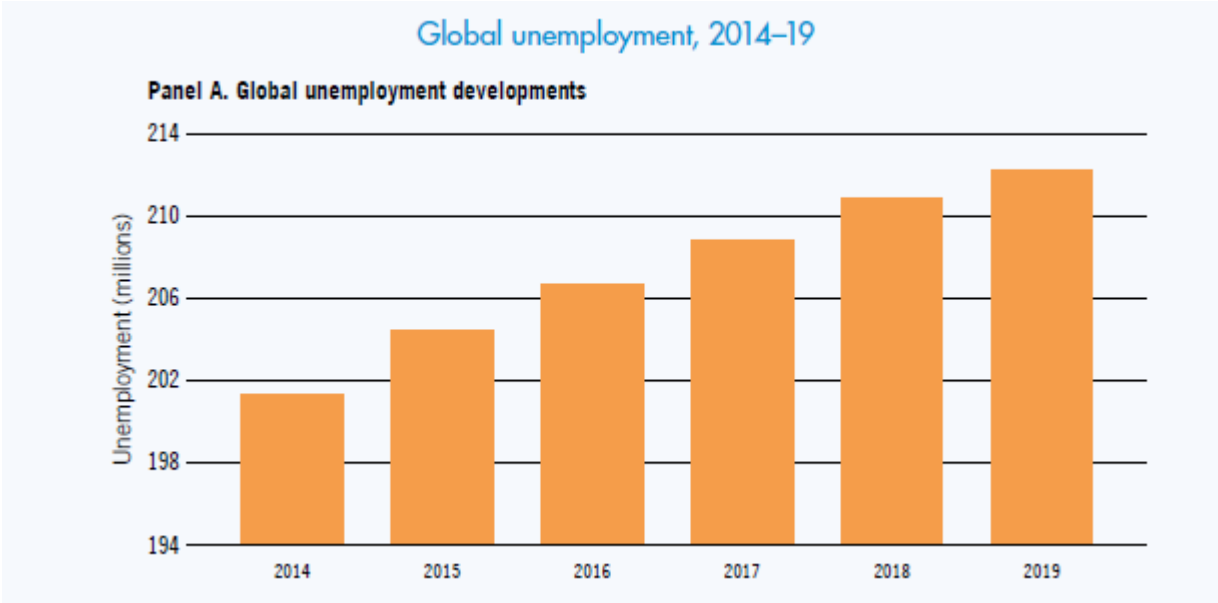
In Africa, one party governments merely pretended to be bargaining with organizations. Now, democratization process going on is changing this scenario as most leaders appear to be committed to dialogue. Now civil society and trade unions are in talking terms with the governments to find solutions because political instability is reducing.

By creating the new partnership for Africa's development (NEPAD), part of the African Union (AU) aims is to enhance economic development and good governance. This is a positive direction. SA has set up a comprehensive legislative system to protect and promote decent work,

including agricultural industry. There are a number of local initiatives including community based health insurance schemes coming up and through formation of cooperatives.

**2.4 The global transition; labour, economic and social implications for smallholder farmers**

In the last few years, climate change has been gaining research and political attention around the globe as a result of increasing public awareness triggered by an increase in devastating effects of extreme weather events. Climate change shows the profound link between the environmental challenge, social and economic order with global unemployment having risen to 34 million (ILO, 2010). Lack of quality employment remains a major problem for most economies as shown in Figure 1. Such trends provide a good insight into the nature of labour markets in the developed countries. However, they are not very relevant in developing and least developed countries where up to 80% of workers are employed in the informal labour market where self employment represents 70% of informal employment (ILO, 2010).



**Figure 1. Global unemployment trend (ILO, 2010)**

Employment creation therefore remains a key focus for many governments especially those whose agriculture is mainly rain-fed.

In the rural economy, climate change is likely to affect employment in a number of ways. With a greater incidence of increased precipitation, poor productivity is anticipated as a result of crop damage and disease. This is bound to have detrimental effects on rural labour availability (ILO, 2010). It is also likely that this could be a possible cause of migration in search of alternative

employment. The World Health Organization (WHO) predicted a decrease in productivity of labour especially for workers who carry out their activities outdoors. WHO postulated that increase in temperatures associate with climate change will lead to an increase in respiratory and water-borne disease as well as malnutrition (WHO, 2003). Damage to vegetation either through prolonged draughts or by water or wind currents is likely to result in soil degradation leading to declining productivity.

Poor adaptation to climate change poses a major threat to agricultural production in many African countries (Arimi, 2014). Development and dissemination of agricultural technology is important in militating the effects of climate change and informing climate change adaptation strategic decisions. Climate change directly alters precipitation and temperature patterns which are the key natural inputs in agricultural production (Arimi, 2014). Among technologies that were identified in this study as climate change adaptation strategies included use of chemical fertilizers to maintain soil fertility, planting adaptable seed varieties, planting draught resistant crops such as cassava and shifting planting dates.

## **2.5 Sustainable agricultural production for employment and enterprise creation**

Trends in global population growth with an increase in urbanization and a bulging middle class have resulted in shift in food demand, food prices as well as food preferences in favour of energy dense foods (Tilman *et al.*, 2011). There are growing concerns about the negative impacts of modern agriculture on human health and stability of the natural environment and resources. These include greenhouse gas emissions, biological diversity, water quality, carbon sequestration, human health, livelihoods and food security associated with declining pollinators (Delonge *et al.*, 2016; Horrigan *et al.*, 2012). The question of long term impact of sustainable agricultural practices *vis-a-vis* conventional/industrial agriculture on social and environmental sustainability is an important decent work research issue which touches on precarious work, social security and welfare of agricultural workers and smallholders.

Sustainable agriculture approach attempts to make better use of natural resources to meet human needs while conserving the environment and using minimal inputs (Thanh and Yapwattanaphun, 2015). Sustainable agriculture is broadly defined as the use of farming practices and technologies that; 1) maintain and increase productivity and profitability while ensuring provision of food on a sustainable basis, 2) reduce pollution and other negative externalities, 3) rebuild ecological resources and make efficient use of natural capital resources (Bianco, 2016).

In general, there are three pillars of sustainability in agriculture, that is; profit, stewardship of natural capital and improvement of quality of life.

Practices that promote sustainable agriculture include 1) marketing, 2) diversification and 3) innovations on cost saving. There is a wide diversity of marketing techniques which include; processing on farm, creating value added products, creating brand identity, market research to match product demand, direct selling to consumers, delivery to consumers or vendors and franchises. Diversification of agricultural enterprise such as in integrated crop-livestock systems often increases resilience through increasing income streams and also improves food security status. Innovations that save on production costs make farm processes more efficient and clean. Such innovations include for example the use of green energy and integrated management systems which reduce tillage, promote use of on-farm nutrient sources and control of pests using plant diversity. A good example of such innovations is the 'push-pull' technology used in the control of the parasitic weed *Striga hermonthica* and repelling the stem borer moth in Kenya (Fischler, 2010).

## **2.6 Value chain governance and smallholder productivity**

Value chain governance refers to a dynamic feature of value chains that characterizes the relationships or linkages among stakeholders in the value chain. Typically, governance defines how power and gains (income, wages, opportunities, strategies, technology and information) are distributed throughout the chain. (Gereffi and Fernandez-Stark, 2001). Improving coordination of the different actors reduces transaction costs, helps to ensure the quality and safety of products and stimulates the development of marketing strategies (Adetonah *et al.*, 2015). The organizational forms in agricultural production networks define the platform for governance, power dynamics and representation in decision making therefore exerting influence on access to markets, leverage for policy interventions, technical support from other value chain actors and knowledge and capacity acquisition.

Integration of small enterprises into the value chain enables them to become competitive by increasing their operational efficiency, reduction of transaction costs and self-upgrading along the value chain. The transaction cost approach in new institutional economics is often used to evaluate value chain and/ or institutional governance with the transactions being the units of study (Williamson, 1981). The approach postulates that the central objective of an institution is to minimize transaction costs. Production and marketing decisions have implications on

transaction costs and by extension on incomes. Participation in value chains provides smallholder producers the opportunity to participate in the money economy and influence market behaviour in terms of commodity quantities and price.

### **2.7 Globalization of agricultural value chains; are smallholder producers affected**

Globalization implies the extension of the market as a result of reduction of transaction costs of trading internationally (Romano, 2006). Increased global food trade and virtual food markets have significantly resulted in an increase in the volume of food and food commodities that move across the globe annually. Among the major challenges to agricultural employment creation associated with globalization in least developed countries is the stagnation or decrease in food prices as a result of increased competition despite enhanced access to food (Leon and Soto, 1995; FAO, 2004; Romano, 2006). Globalization has been associated with entry of multinationals which are profit oriented producing for the export market. In such situations, social protection and working conditions of workers is often compromised. These investments also shift labour from subsistence production and may have negative effects on smallholder agricultural productivity (Rousseau *et al.*, 2015).

The other concept of globalization refers to standardization quality control and quality assurance in agri-processed products. Consumers as well as policy makers today are very concerned about bio-safety, bio-security, traceability of food and food products. Private standards for producers such as good agricultural practice (GlobalGAP) are currently applied by buyers in Europe. Food safety criteria in GlobalGap is based on Hazard Analysis Critical Control Point (HACCP) principles (Asfaw *et al.*, 2010). It is therefore imperative that agricultural producers must be compliant with global market standards to ensure the safety of consumers.

Among the benefits of globalization of value chains include the positive influence on both volumes and prices of commodities, institutionalization of information flow and value co-creation (Handayati *et al.*, 2015) with consumers/clients and related firms.

### **2.8 Innovation platforms: an approach in combating decent work deficits**

As seen in the previous section, an increase in population and diminishing natural resource base which has been augmented by the effects of climate change necessitates innovative approaches to achieve increased food production, sustainable natural resource use and environmental conservation. Historically, research and development agencies have used a number of

approaches to disseminate technical knowledge to farmers. These include; 1) linear technology transfer in the 1950s where scientists were considered the inventors and farmers as adopters with the objective of improving production of a single commodity, 2) farming systems approach in the 1970s which involved interdisciplinary scientific research conducted on farms with the scientist being the key source of knowledge and 3) the farmer participatory approach in the 1990s where farmers were co-creators of knowledge. This approach ignored the role of institutions as stakeholders. However, these approaches were unsuccessful or had limited success particularly near pilot testing sites (Makini *et al.*, 2013). The innovation platforms approach was introduced in the late 1990s and gives significance to institutions and policies that are seen as obstacles in adoption of improved farming methods.

An innovation platform is a forum that brings together relevant stakeholders with a specific and common interest. Each stakeholder has a complementary role in generation of knowledge that yields socio-economic benefit (Homann-Kee *et al.*, 2013). Knowledge that is co-produced by the scientist and farmers recognises the relevant strengths and limitations of scientific and local forms of knowledge and fosters integration of these forms of knowledge in designing solutions to production problems (Ingram, 2010). An innovation platform is therefore a strategic concept for sustainable improvement of agricultural productivity. Among strategic roles played by these platforms would include advocacy for policies that shape national policy (Makini *et al.*, 2013), funding of research in agriculture, capacity development, creation and development of communication channels and organizational forms that influence power dynamics and representation in decision making functions.

In agriculture, focus of innovation platforms is usually the value chain (Makini *et al.*, 2013). The stakeholders in an innovation platform jointly interact to identify problems and opportunities, seek and apply solutions, learn and seek for more solutions (Adenkule *et al.*, 2010). Makini *et al.* (2013) describe 4 phases in the formation of innovation platforms. 1) The initiation phase involves familiarizing with the challenges affecting productivity and profitability. Relevant information can be obtained from literature reviews, secondary data, focus group discussions, key informant interviews and market analysis. 2) Stakeholder mapping 3) Development of action plans and implementation and 4) Participatory monitoring and evaluation to ensure that set milestones are achieved.

Innovation platforms are however subject to a number of challenges that include; high cost of facilitation and research expertise, the likelihood of members unwillingness to work together, difficulty in monitoring and evaluating, the long time it take to have visible outcomes (Homann-Kee *et al.*, 2013)

### **Decent work deficits in the dairy industry in Kenya as a case study**

Kenya has the largest dairy subsector in eastern and southern Africa with a *per capita* production of approximately 90 litres (Murage and Ilatsia, 2011). Over the years, the growth of Kenya's dairy sector has been steered greatly by supportive policy implemented in the country (Waithaka *et al.*, 2002). Other factors include the favourable climate for dairy farming and the historical importance of milk in the diet of most Kenyan communities (Thorpe *et al.*, 2000).

Dairy production in Kenya is mainly practiced by smallholder dairy farmers keeping one to three cows who account for over 80% of domestic milk production (ILRI, 2008). Dairying is an attractive livestock enterprise in Kenya for income generation and food security in addition to contributing to the sustainability of smallholder crop–dairy systems through nutrient cycling to fertilize soil, employment creation and provision of farm household nutrition. Dairying supports an estimated 625000 smallholder producer households. According to the Kenya National Dairy Master Plan (K-NDMP, 2012) projects, about 60% of the milk produced was consumed in the domestic market. Milk marketing is mainly informal and is sold raw directly to the consumer. Smallholders retain approximately 40% of milk produced mainly for household consumption (70%) and calf feeding (30%) while the rest is marketed via informal markets, cooperatives, self help groups and processors. These attributes have made dairying a preferred choice for addressing rural poverty.

Smallholder dairy farming plays a major role in poverty alleviation in Sub-Saharan Africa (SSA). A study by Brokken and Seyoum (1992) reported that the major objectives of dairy development policies in SSA are to improve nutritional standards, improve rural dairy producers' incomes and to create gainful employment in rural areas since dairy production is labour intensive. Dairying is also important as a means to accumulate capital for emergency cash needs and manure production (Bebe *et al.*, 2003).

This sub-sector however is faced with a number of challenges which expose it to decent work deficits. Such challenges include; availability and high cost of improved dairy cattle breeds (Musalia *et al.*, 2010), weak adoption of breeding technology (Waithaka *et al.*, 2002; Thorpe *et*

*al.*, 2000), poor breeding practices (Bebe *et al.*, 2003; Gamba, 2006), limited access to milk storage and milk cooling facilities and seasonality in production (Waithaka *et al.*, 2002). Other technical constraints include poor access to credit and farmer education through extension.

Decent work deficits in the dairy sub-sector can be evaluated using the framework of the key pillars of decent work that include; access to employment, employment security, labour rights and social dialogue.

The average cost of wage labour for wage earners in dairy farming in Western Kenya and Rift Valley as reported by Muthui (2013) was Kenya Shillings 13.10 per hour. Wage rate for household labour based on the opportunity cost was significantly higher (KES 30.30 per hour). The mean number of hours worked by household workers was  $7.6 \pm 2.9$  hrs per day while for hired labour was  $8.9 \pm 2.3$  hrs per day. Production circumstances had significant influence on cost of household labour with lower values for milk deficit Western Kenya region. An important question in regard to decent income is; how does this compare with statutory requirements for minimum wage rates? In 245 households, there were a total of 569 dairy cows with 154 household workers and 93 wage earners.

In creation of employment opportunities, It is estimated that from every 100 litres of milk marketed by small scale producers in Kenya, 1.2 jobs (formal and informal) are created along the dairy value chain (Murage and Ilatsia, 2011). Muthui (2013) recorded a mean daily milk production of 8.5 litres of milk for cows in Rift valley with a mean productive herd life of 1263 days implying an average production of 10735 litres of milk per cow in its herd life. This indicates great potential for creation of employment opportunities.

There are however some barriers to entry most important being the large requirement for capital. Weak access to capital among many smallholders acts as a negative force which in-turn is related to low returns as a result of low investment in technology. The decent work concerns include inability to sustain decent wage for employees as well as increasingly difficult working conditions associated with lack of mechanization. Most employees are also employed on non-permanent basis as a result of the seasonal fluctuation in production reflecting on the informality of work; a job security concern.



Research in agriculture has shown that in many agricultural activities, there are cultural constructs with gendered task allocation. Dairy production in Kenya is not an exception to gendered task allocation especially so in rural areas. In some communities, women never participate in any commercial activities related to livestock while it is their duty to collect feeds, feed animals and ferry milk to the market. This skewed task allocation represents a situation of unequal opportunities to employment or income; a decent work concern. Most of the labour provided by women under such circumstances is also unpaid for. Child work is uncommon in the more intensive dairy production systems but is common among pastoral communities and among smallholder dairy farmer especially so during school holidays.

Though it is a statutory requirement that all employees are covered under the government's National Health Insurance Fund by employers, this is rarely the case for most workers in the dairy industry. Likewise majority of employees have no written contractual arrangement during hiring. Most employees have extended working hours without the benefit of paid leave which is a statutory requirement. These border on infringement of labour rights. Further still, due to work arrangement that is predominantly short tenure and technical barriers such as distance and time, collective bargaining for workers in the dairy industry has not been practical.

Safety at work for most employees in the dairy industry is dependent on the housing structures for livestock as well as provision of protective clothing. Most dairy establishments are wanting on the latter thereby exposing workers to injury.

Important governance structures and institutions along the dairy value chain in Kenya include:

- Producer organization - roles include training, marketing and provision of credit
- Kenya dairy board (KDB) - statutory regulation of milk marketing and hygiene through licensing milk traders and processors
- Kenya stud book (KSB)- registration of cattle
- Kenya National Artificial Insemination Service (KNAIS) - provision of superior dairy genetics
- Research institutions such as Universities, Kenya Agricultural and Livestock Research organisation (KALRO) - research, training and extension services.

## CONCLUSION AND POLICY IMPLICATIONS

Paradigms that influence change in the quality of work among smallholder farmer either directly or indirectly result in decent work deficits that render employment precarious. Such paradigms include climate change, globalization, demand driven livestock revolution. To militate the negative effects of these paradigms, producers have to develop adaptation strategies to improve or maintain productivity. Practicing sustainable agriculture may address social, economic and environmental challenges associated with smallholder agricultural production. Participation in value chains improves entry into value chain, reduces transaction costs and improves participation in nodal activities thereby improving incomes. The inclusive nature of innovation platforms provides opportunities to stakeholders to participate in policy formulation, participation in the research process and dissemination of research findings, to influence power dynamics through representation in these platforms, develop value chains and facilitate communication.

To combat decent work deficits and increase job creation in smallholder agriculture, there should be emphasis on policies that address social, ecological and economic issues affecting productivity. Such policies should be directed towards:

- Improving access to inputs such as improved seeds, feeds, technical skills through training and extension services, hence improving on production efficiency.
- Improving market access of agricultural produce through farmer owned organizations which significantly reduce transaction costs during marketing.
- Work safety through better facilities and reduced exposure to chemicals.
- Improving/ modernizing infrastructure to improve product quality and work environment.
- Social aspects including capacity building through interaction with other actors, social benefits such as access to credit, education, asset ownership and employment benefits such as paid leave, sick/maternity leave, social security and membership of saving and credit schemes such as Savings and Credit Cooperatives. Smallholder platforms should help in providing for these social benefits from agricultural activities.

- Equal treatment of women and youth in the workplace, eliminate all forms of discrimination so as to improve on productivity of labour.
- Policy to address ecological concern should focus on issues such as recycling of biological waste to improve soil fertility, water conservation, coping strategies to climate change and reduction in use of chemical fertilizers.
- Value addition to improve incomes of micro and small enterprises through self-upgrading along the value chain
- Government policy on creating work opportunities in the agriculture sector through adequate financing
- Policy on control of child labour and work that should be abolished.

In other words, to address the challenges of decent work in agriculture in SSA, there must be a balance between the economic survival of farms and the protection of the fabric of rural civil society. Strategies for on-farm transformation that take into account the complex relationships between farm workers and employers must be developed. The development of forms of “social contract” that will allow growth of ways to compete and protect the adequacy; sustainability and dignity of the far worker livelihoods must be envisaged. The social contract will include organized labour, organized agriculture and state.

#### **REFERENCES**

- Adenkule, A. A., Fatunbi, A. O. and Jones, M. P. (2010). How to set up an Innovation Platform. A Concept Guide for the Sub-Saharan African Challenge Programme. Forum for Agricultural Research in Africa. Accessed on <http://faraafrica.org/> on 3rd May 2016.
- Adetonah, S., Coulibaly, O., Ahoyo, R., Sessou, E., Dembele, U., Huat, J., Houssou, G., Vodouhe, G. and Loko, J. (2015). Analysis of Gender and Governance of Value Chain-Based Systems on Rice and Vegetable Crops in Southern Benin and Mali. *Open Journal of Social Sciences*, 3: 134-141.
- Anker, R., Chernyshev, I., Egger, P. and Mehran, F. (2003). Measuring Decent Work With Statistical Indicators. *International Labour Review*, 142(2): 147-214.

- Arimi, K. (2014). Determinants of Climate Change Adaptation Strategies used by Rice Farmers in Southwestern Nigeria. *Journal of Agricultural and Rural Development in the Tropics and Subtropics*, 115(2): 91-99.
- Asfaw, S., Mithofer, D. and Weibel, H. (2010). Agrifood Supply Chain, Private-Sector Standards and Farmers Health: Evidence From Kenya. *Agricultural Economics*, 41: 251-263.
- Bianco, A. (2016). Green Jobs and Policy Measures for a sustainable agriculture. *Agriculture and Agricultural Science Procedia*, 8: 346-352.
- Burchell, B., Sehnbruch, K., Piasna, A. and Agloni, N. (2014). The quality of Employment and Decent Work: Definitions, Methodologies and Ongoing Debates. *Cambridge Journal of Economics*, 38: 459-477.
- Delonge, M. S., Miles, A. and Carlisle, L. (2016). Investing in the Transition to Sustainable Agriculture. *Environmental Science and Policy*, 55: 266-273.
- Di Ruggiero, E., Cohen, J. E., Cole, D. C. and Forman, L. (2015). Competing Conceptualizations of Decent Work at the Intersection of Health, Social and Economic Discourses. *Social Science and Medicine*, 133: 120-127.
- FAO. (2011). Guidelines on How to Address Rural Employment and Decent Work Concerns in FAO Country Activities. FAO, Rome. Accessed <http://www.fao-ilo.org> on 6th August 2015.
- FAO. (2008). The State of Food and Agriculture, Biofuel Prospects, Risk and Opportunities. FAO, Rome. Accessed 29th October 2015 on <http://www.fao.org/docrep/011/.htm>.
- FAO. (2004). The State of Agricultural Commodity Markets 2004. FAO, Rome.
- Fischler, M. (2010). Impact Assessment of Push-Pull Technology Developed and Promoted by ICIPE and Partners in East Africa. ICIPE, Nairobi, Kenya.
- Gereffi, G. and Fernandez- Stark, K. (2001). *Global Value Chain Analysis: A Primer*. Centre on Globalization, Governance and Competitiveness, Durham, North Carolina, USA.
- Handayati, Y., Simatupang, T. M. and Perdana, T. (2015). Value Co-creation in Agri-chains network: An Agent-Based Simulation. *Procedia Manufacturing*, 4: 419-428.
- Homann-Kee, T. S., Adekunle, A., Lundy, M., Tucker, J., Birachi, E., Schut, M., Klerkx, L., Ballantyne, P. G., Duncan, A. J., Cadilhon, J. and Mundy, P. (2013). What are Innovation Platforms? Innovation Platforms: Practice Brief 1. ILRI, Nairobi, Kenya. An ILRI working paper accessed on 6th May 2016 on <http://r4d.dfid.gov.uk/pdf/outputs>

- Horrigan, L., Lawrence, R. S. and Walker, P. (2012). How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture. *Environmental Health Perspectives*, 110(5): 445-457.
- ILO, (2013). Decent work in Agriculture. International workers symposium on decent work in agriculture
- ILO. (2006). Decent Work FAQ: Making Decent Work a Goal. ILO, Geneva. *Accessed on <http://www.ilo.org> on 2nd September 2015.*
- ILO. (2007). The Decent Work Agenda in Africa: 2007-2015. A Report at the 11th African Regional Meeting in Addis Ababa, Ethiopia in 2007. ILO, Geneva.
- ILO. (2010). Climate Change and Labour; The need for a Just Transition. *International Journal of Labour Research*, 2(2): 119-204.
- Ingram, J. (2010). Technical and Social Dimensions of Farmer Learning: An Analysis of the Emergence of Reduced Tillage Systems in England. *Journal of Sustainable Agriculture*, 34(2): 183-201.
- Leon, J. and Soto, R. (1995). Structural Breaks and Long-run Trends in Commodity Prices, Working Paper Number 1406, Policy Research Department, Washington DC. The World Bank.
- Makini, F. W., Kamau, G. M., Makelo, M. N. and Mburathi, G. K. (2013). A Guide for Developing and Managing Agricultural Innovation Platforms. Kenya Agricultural Research Institute, Kenya.
- Muthui, N. J. (2014). Estimating Benefits Of Dairy Insemination And Replacement Practices Of Smallholders In Western Kenya. *An MSc. Dissertation Presented to Egerton University.*
- Romano, D. (2006). Agriculture in the Age of Globalization. A Paper Presented on August 12-18th 2006 at the International Association of Agricultural Economists Conference, Gold Coast, Australia.
- Rousseau, K., Gautier, D. and Wardell, A. (2015). Coping with Upheavals of Globalization in the Shea Value Chain: The Maintenance and Relevance of Upstream Shea Nut Supply Chain Organization in Western Burkinafaso. *World Development*, 66: 413-427.
- Thanh, N. V. and Yapwattanaphun, C. (2015). Banana Farmers' Adoption of Sustainable Agricultural Practices in the Vietnam Uplands; The Case of Quang Tri Province. *Agriculture and Agricultural Science Procedia.*, 5: 67-74.

Tilman, D., Balzer, C., Hill, J. and Befort, B. L. (2011). Global Food Demand and the Sustainable Intensification of Agriculture. *Proceedings of The National Academy of Science*, 108(50): 20260-20264.

WHO, (2003). *Climate Change and Human Health; Risks and Responses*. WHO, Geneva.

Williamson, O. E. (1981). The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology*, 87(3): 548-577.