

Southern Illinois University Carbondale

OpenSIUC

Publications

Department of Geography and Environmental
Resources

6-2017

Alternative Agriculture Characteristics in Zimbabwe: Experts Views

Plaxedes Chitiyo
p_chitiyo@uncg.edu

Leslie A. Duram
Southern Illinois University Carbondale, duram@siu.edu

Follow this and additional works at: https://opensiuc.lib.siu.edu/gers_pubs

Recommended Citation

Chitiyo, Plaxedes and Duram, Leslie A. "Alternative Agriculture Characteristics in Zimbabwe: Experts Views." *Journal of Geography and Earth Sciences* 5, No. 1 (Jun 2017): 41-49. doi:10.15640/jges.v5n1a3.

This Article is brought to you for free and open access by the Department of Geography and Environmental Resources at OpenSIUC. It has been accepted for inclusion in Publications by an authorized administrator of OpenSIUC. For more information, please contact opensiuc@lib.siu.edu.

Alternative Agriculture Characteristics in Zimbabwe: Experts Views

Plaxedes T. Chitiyo¹ & Leslie Duram²

Abstract

Policy makers, Non-Governmental Organizations, and environmental experts advocate for alternative agriculture to revive the agricultural sector in Zimbabwe and address climate change and environmental degradation. However, alternative agriculture is underdeveloped and the concept lacks clarity within the country's context thereby undermining its expansion. Using qualitative research design comprising of semi-structured interviews with eight experts actively involved in alternative agriculture promotion in Zimbabwe, this study was conducted to identify key attributes of alternative agriculture and the associated activities in the country. Findings from the study revealed that consumer food perceptions and international agencies marginalized alternative agriculture. To counteract marginalization, advocates were actively developing local markets that never existed before. These findings provide vital information that may inform policy and assist further development of alternative agriculture in developing regions.

Keywords: alternative agriculture, policy, markets, environment discourse

1.0 Introduction

Alternative agriculture has the potential of resuscitating Zimbabwe's agricultural sector that accounts for 12-18 % of the Gross Domestic Product and is a source of livelihood to approximately 70 % of the population, but has been underperforming due to economic, environmental, and political challenges (World Bank, 2013; World Food Program, 2016). This is because it comprises of environmentally friendly practices which include organic farming, sustainable agriculture, permaculture, natural farming, crop rotation, low input agriculture, and direct markets, to protect human and environmental health, reduce costs, and enhance nutrient cycling and long-term environmental sustainability (Cleveland, Carruth, & Mazaroli 2015; Henneron et al., 2015; Smith, Williams, & Pearce 2015; Zhenzhong, Schumilas, & Scott 2015). Alternative agriculture initiatives in Africa tap into such practices to address food shortages, environmental degradation, poverty, and HIV/AIDS (Bennett & Franzel, 2013; Mandere, Anderberg, Ato Armah, & Abaya, 2011; Marongwe, Nyagumbo, Kwazira, Kassam, & Friedrich, 2012; Mutsamba, Nyagumbo, & Mafongoya, 2016). Success of initiatives relies on supporting policy framework that educates farmers and provides research funding for marketing, crop and livestock production, and natural resources management (Duram & Larson, 2001; Fernandez, Goodall, Olson, & Méndez, 2013; Ingram, 2007; USDA, 2012). Due to lack of government policy support, alternative agriculture remains underdeveloped in many African countries including Zimbabwe with most initiatives driven by Non-Governmental Organizations (NGOs) that assist farmers to access high premium alternative markets in the Global North (Anseeuw, Kapuya, & Saruchera, 2012; Ayuya et al., 2015). Bolwig, Gibbon, & Jones, 2009; Huber, Schmid, & Möller, 2016; Kleeman & Abdulai, 2013

¹ Visiting Assistant Professor, Center for Environmental Research and Education, 600 Forbes Avenue, Duquesne University Pittsburgh, PA 15282. USA

² Professor, Department of Geography and Environmental Resources, 1000 Faner Drive, Southern Illinois University Carbondale, IL 62901, USA.

Apart from lack of supporting policy, Zimbabwe's agricultural policies have undermined alternative agriculture development due to conventional agriculture emphasis and a strong bias towards large scale commercial farms (LSCF) over small scale farms (SSF) with extension services, training, markets and financial resources supporting LSCF (Alumira & Rusike, 2005; Anseeuw et al., 2012; Campbell, Bradley, & Carter, 1997; Government of Zimbabwe, 2013; Zimbabwe Government, 2014; Rukuni, 1994; Scoones et al., 2010; Wolmer & Scoones, 2000). The year 2000 Land Reform Policy increased smallholder farmers' numbers and diversity through distribution of remaining LSCF from first phase of Land Reform (1980-1999) (Anseeuw et al., 2012; Helliker, 2011; Moyo, 2011; Moyo & Yeros, 2005; Scoones et al., 2010; Scoones et al., 2011). Alternative agriculture provides diverse opportunities for smallholder farmers to engage in with the assistance of NGOs and relief organizations seeking long-term solutions to food insecurity, climate change, and environmental degradation (Andersson & D'Souza, 2014; Anseeuw et al., 2012; Govere, Foti, Mutandwa, Mashingaidze, & Bhebhe, 2009; Mukute, 2009). Different forms of alternative agriculture currently exist in Zimbabwe with the major ones including sustainable utilization of non-timber forest products (NTFPs), permaculture, agroforestry, conservation, organic, and biodynamic agriculture (Anseeuw et al., 2012; Bio-Innovation Zimbabwe, 2013; Kaite, 2013; Marongwe et al., 2012; Phytotrade Africa, 2013; ZOPPA Trust, 2012). Despite these various forms of alternative agriculture, the concept lacks clarification as seen by the lack of product differentiation within local markets hence the need to identify the key attributes of alternative agriculture within the Zimbabwean context (Ngwenya, 2013).

1.1 Conceptual framework

Because alternative agriculture is an ambiguous term that means different things to different people, various theoretical constructs surround the concept (Barkey & Wilson, 1992; Cleveland et al., 2015; Crosson, 1989; Henneron et al., 2015; Zhenzhong et al., 2015; Smith et al., 2015). Perceptions towards alternative agriculture may depend on natural and cultural context where respective actors are located, or can be explained through interpretivist-constructivist perspective where it is socially constructed and interpreted by people experiencing it giving rise to differences in its definition geographically and socially (Chaippe & Butler, 1998; Guba & Lincoln, 1989; Neesham, McCormick, & Greenwood 2017). It is against this background that the motivation for this study emerged where a constructivist approach was used to determine what alternative agriculture means in Zimbabwe (Charmaz, 2017).

1.2 Purpose of study

This study seeks to identify key attributes of alternative agriculture in Zimbabwe, as well as explore how alternative agriculture is shaped by these attributes. This information will shed light on current alternative agriculture activities and explain why farmers and NGOs are engaged in activities they are engaged in. Alternative agriculture research is scant, site, and form specific, with most research focused on conservation agriculture (Svotwa, Baipai, & Jiyane, 2009; Anseeuw et al., 2012; Marongwe et al., 2012; Mashingaidze Twomlow, Madakadze, Mupangwa, & Mavunganidze, 2017; Masvaya, Nyamangara, Descheemaeker, & Giller, 2017; Mutsamba et al., 2016; Thierfelder, Cheeseman, & Rusinamhodzi, 2012). Even more so, the very little research that exists has failed to give deeper insights and explain why alternative agriculture and the associated markets are underdeveloped despite the various forms that exist apart from attributing this solely to a lack of supporting government policy framework. Since NGOs, the private sector, and environmental consultants are active players in alternative agriculture development in Zimbabwe, this study utilized these experts' insights to answer the following research questions:

1. What attributes define alternative agriculture in Zimbabwe? and
2. How are these attributes shaping alternative agriculture activities in the country?
3. How has alternative agriculture evolved in Zimbabwe?

2.0 Methods

2.1 Data collection and sampling

Data were collected using semi-structured interviews where eight experts active in promoting alternative agriculture in Zimbabwe were interviewed for one hour each through Skype and telephone from July 19th to October 18th 2013 (Table 1) (Hanna, 2012; Holt, 2010).

Table 1. Study Participants

Participant	Occupation	Other important information
1	Independent Consultant	Organic agriculture pioneer, researcher and farmer.
2	Regional Manager (NGO)	Three years working experience in sustainable agriculture.
3	Director (Trading Trust)	Ten years sustainable agriculture experience.
4	Director (Trust)	Extensive experience in organic agriculture
5	Program Officer (Private Company)	Four years organic agriculture experience.
6	Director (Private Company)	Over 20 years experience in biodiversity.
7	Country Coordinator (NGO)	Coordinates sustainable agriculture activities.
8	NGO Director / Farmer	Organic farming pioneer with over 50 years experience.

Selection of participants was through snowball sampling where experts in alternative agriculture in the country identified other participants for the study. Participants were active in research, training, and leadership in alternative agriculture in Zimbabwe. Recruiting participants was a difficult exercise with many hours devoted to internet searching for contact details as well as email and telephone follow ups; hence, eight out of 16 potential participants participated in the study. The Skype interviews were audio-recorded, transcribed verbatim, and transcription copies were sent to participants for clarification. The interview protocol was pretested to test the smoothness and order of questions prior to interviews (Cachia & Millward, 2011; Holt, 2010).

2.2 Data Analysis

A coding key with defined categories was developed prior to data transcription and open coding was used where each line of transcribed data was assigned appropriate codes thereby dividing data into meaningful analytical units (Rubin & Rubin, 2012). All coded excerpts with the same label were extracted, sorted, summarized, and results compared (Rubin & Rubin, 2012). The analysis started with preset categories, but other categories emerging from the data were added through iterative data analysis process. Major themes became major categories and were subdivided into smaller categories (Ryan & Bernard, 2003; Taylor-Powell & Renner, 2003). Relationships between categories were determined by comparing the different categories and themes identified in the analysis (Ryan & Bernard, 2003; Saldana, 2009; Taylor-Powell & Renner, 2003).

3.0 Results

Table 2. Main themes from interview analysis

Research question	Themes
1. What attributes define alternative agriculture in Zimbabwe?	1. Marginalization (policy, consumer perceptions) 2. Modern up-to-date practices.
2. How are these attributes shaping alternative agriculture activities in the country?	1. Export oriented and project-based 2. Creativity and market development
3. How has alternative agriculture evolved in Zimbabwe?	1. Land reform policy 2. Environmental discourse

3.1 Research Question 1: What attributes define alternative agriculture in Zimbabwe?

3.1.1 Marginalization

According to participants, alternative agriculture is that form of agriculture that is marginalized not only by the government but by international development organizations such as Food and Agriculture Organization (FAO) and United States Agency for International Development (USAID). Participant 4 said "Zimbabwe agriculture, when it comes to policy it just recognizes conventional farming." International organizations such as FAO and USAID promote conventional agriculture by providing inputs and resources to farmers and being actively involved in policymaking.

We still have a lot of efforts that are happening around commercialization of the smallholder sector. So a lot of funding that is available from donor institutions especially the USAID is really about commercialization of agriculture in Zimbabwe, a very strong focus on promoting multinational industries in terms of their provision of chemical fertilizers, hybrid seeds (Participant 2, 2013).

Consumer food perceptions strongly influenced by conventional agriculture with some consumers viewing "food as food" regardless of how it is produced also marginalized alternative agriculture (Participant 3, 2013). In addition, consumers are currently concerned about getting enough food to eat resulting in indifference towards alternative foods (Participant 7, 2013). Negative consumer perception towards alternative food products has resulted in indigenous wild harvested teas being viewed as "bush teas" and drinking them as "embarrassingly rural" (Participant 6, 2013). Wild fruits, such as baobab, are viewed as fruits for children or desperate poor people despite "export demand for them in developed countries such as the United States" (Participant 6, 2013). The situation is exacerbated by changing consumer food preferences with many young people preferring "fast food" (Participant 1, 2013). ...this friend who had been in Senegal for 10 years and has just come back couldn't believe the amount of fast foods restaurants that have opened up in Harare. So Zimbabweans, especially the young ones, are going the western junk food route (Participant 1, 2013).

3.1.2 Modern up-to-date practices

Alternative agriculture is also regarded as a set of modern up-to-date practices that provide "new concepts and practices in agriculture" with long-term goals and vision for the future that promote sustainability (Participant 1, 2, & 3, 2013). These concepts and practices ensure ecosystem enhancement where soils are conserved and little or no synthetic chemicals are used, which is good for the health of the plants and the farmers (Participant 6 & 8, 2013). Less reliance on external inputs benefits most farmers who "do not have financial resources" (Participant 3, 2013). A holistic approach is also employed where practices do not just focus on economic benefits as with conventional agriculture but consider economic, environmental, and social aspects.

3.2 Research Question 2: How are these attributes shaping alternative agriculture activities in the country?

3.2.1 Export oriented and project based initiatives due to marginalization

Marginalization of alternative agriculture has resulted in export-oriented initiatives. Because of a lack of a policy supporting framework, negative food perceptions and indifference, alternative agriculture local markets are underdeveloped. For farmers to get maximum benefits, they export their products to areas like Germany where alternative products are appreciated and consumers are willing to pay a premium for such products and NGOs facilitate the market linkages (Participant 3 & 4, 2013).

3.2.2 Creativity and market development

The view of alternative agriculture as a set of modern up-to-date practices that provide novel sustainable practices has created opportunities for farmers to be creative and explore different crops with the assistance of NGOs and private companies. Some farmers are engaged in production of "sugar snap peas, munch too peas, and organic tobacco" while others are active in indigenous teas and fruits (Participant 1, 5, & 6, 2013). Because farmers were not getting adequate incomes due to economic decline, they had to be creative and engage in alternative agriculture. In the 1990s and 1980s, people were pretty blinkered they grew maize because that's what you did and you know maybe they grew a bit of cotton because that's what you did: no one really thought about it (Participant 6, 2013). To expand the market base, some private companies conduct market research to establish local markets for alternative products, are involved in processing, packaging, and branding alternative products such as essential oils, teas, fruits, and food ingredients (Participant 5 & 6, 2013). Farmers have been linked to direct markets in their locality (e.g., schools, hotels, wholesalers, and supermarkets), the goal being "to try sell all on the local market first and once the local market is saturated, then move on to the export market" (Participant 5 & 6, 2013).

3.3 Research Question 3: How has alternative agriculture evolved in Zimbabwe?

3.3.1 Land reform

The year 2000 land reform policy significantly increased the number of smallholder farmers transforming the country to “a country of smallholder farmers” thereby enabling once marginalized smallholder farmers to participate in mainstream markets and become “the food producers for the country”. (Participants 1, 3, & 6, 2013). Companies sought small-scale producers to engage in organic certification and other crops such as Zumbani and Makoni tea were explored for France and USA export markets (Participant 6, 2013).

3.3.2 Environmental Discourse

Alternative agriculture has been a vehicle in kick-starting discussions about environmental issues such as climate change and Genetically Modified Organisms (GMOs) thereby influencing environmental discourse in the country. Climate change and GMOs discussions have highlighted the potential of alternative agriculture in addressing environmental problems in the country. Through promotion of labor saving technologies, irrigation, and maximizing production, NGOs help farmers “mitigate against climate change” (Participant 2, 2013). Alternative agriculture enables NGOs and private companies to raise awareness of dangers associated with GMOs since Zimbabwe is divided 50/50 on adoption of GMOs (Participants 1 & 2, 2013). Alternative agriculture has also evolved from mere sustainable practices to having advocates such as “Food matters Zimbabwe” group which was established in 2013 where members discuss and share ideas on environmental issues (Participant 1, 2013). Some participants were preparing for the first organic fair and bee keeping conference in 2014 at the time of interviews.

4.0 Discussion

Significant findings from the study were that alternative agriculture in Zimbabwe was marginalized not just by government policy but also by FAO and USAID. This sentiment raised by participants may be due to FAO and USAID's strong focus on commercialization of smallholder agriculture to increase farmers' incomes, emergency inputs schemes, and conventional agriculture-related research (FAO 2015; USAID 2012). FAO and USAID are also actively involved in agricultural policy formulation and monitoring in many African countries, including Zimbabwe, since most governments lack the capacity (Angelucci et al., 2013; FAO, 2015). Being in close association with government policies that sideline alternative agriculture, despite active involvement in sustainable agriculture initiatives, FAO and USAID find themselves been viewed as contributors to marginalization of alternative agriculture. This same applies to indifferent and negative consumer food perceptions towards alternative agriculture.

However, economic decline in the country linked to poor agricultural policies, as well as the rise in fast food preferences which ultimately result in export oriented initiatives and underdeveloped local markets may also explain the negative consumer behavior (Basera, Mutsikiwa & Dhliwayo, 2013; Chigwada & Chidzonga, 2009; Dzama, 2013; Mataranyika, 2016; Mkono, 2012; Moyo, Ngulube & Kazembe, 2016; Shumba & Zindiye, 2016; World Food Program, 2013; World Food Program, 2016). Despite marginalization, creativity and market development have emerged from marginalization of alternative agriculture. Because alternative agriculture is viewed as a set of modern practices that are sustainable, farmers, NGOs, and private companies have explored different crops and products other than traditional crops such as maize. Research indicates that alternative agriculture markets are underdeveloped in Africa with product differentiation lacking in most instances (Friedberg & Goldstein, 2011; Ngwenya, 2013). Existence of underdeveloped markets motivated some companies and NGOs to conduct market studies to expand these markets.

The 2000 land reform policy enabled a diverse group of participants to enter the mainstream markets through land redistribution (Anseeuw et al., 2012; Helliker, 2011; Moyo et al., 2009; Wolmer & Scoones, 2000). These land reform beneficiaries ranged from civil servants, army, police, former farm workers, and rural and urban dwellers (Moyo, 2011; Moyo & Yeros, 2005; Scoones et al., 2010). Export companies sought these smallholder farmers for organic certification (Participant 6, 2013). A ten-year study by Scoones et al. (2011) indicated that some land reform beneficiaries were operating lucrative farming enterprises. Land reform effects, such as economic decline linked to the loss of commercial farming land, collapse of conventional agriculture service industries, and proliferation of NGOs and private companies with a development agenda, worked in favor of alternative agriculture development resulting in different forms that exist (i.e., biodynamic, certified organic, permaculture, NTFPs, and conservation agriculture) (Anseeuw et al., 2012; Bio-Innovation Zimbabwe, 2013; Govere et al., 2009; Kaite, 2013; Phytotrade Africa, 2013).

Apart from being influenced by the 2000 land reform, alternative agriculture was a significant vehicle in initiating and influencing environmental discourse in the country. It evolved from being just a set of sustainable practices in the 1980s to drive important discussions on climate change and GMOs (Kramer, 1989; Rukuni, 1994). Alternative agriculture provides an opportunity for its advocates to demonstrate that through promotion of sustainable water-saving technologies, building soil fertility, and use of local resources, farmers can mitigate against climate change. Advocates have formed groups such as Food Matters Zimbabwe where they share information about climate change and GMOs, which is later disseminated to the public with a goal of influencing policy change. Most of the research on alternative agriculture is site, form specific, and does not provide information on how alternative agriculture has evolved in the country over the years (Hlatywayo, Mhlanga, Mazarura, Mupangwa, & Thierfelder, 2016; Mashingaidze et al., 2017; Masvaya et al., 2017; Mutsamba et al., 2016; Otzen, 1995; Svatwa et al., 2009; Thierfelder et al., 2012). The evolution of alternative agriculture has also led to tangible initiatives that never existed before i.e., the first Organic food fair in Zimbabwe in 2013 and Organic Bee Conference in 2014.

These activities further assist in advocating for sustainable food production practices in the country, informing consumers in the process, which is vital in alternative agriculture development. Although the study yielded new significant findings, limitations exist with the major one being the small pool of participants. The recruitment of participants was affected by the prevailing political and economic environment where people were afraid to speak freely due to lack of freedom of expression in the country (Chawarika, 2011; Jafari, 2003; Singh, 2015). For this reason, the results of this study may not be generalized. For future research, a diverse group of participants is highly recommended for a much broader view of alternative agriculture in Zimbabwe.

4.0 Conclusion

Although alternative agriculture has provided tangible benefits such as improved livelihoods, increased crop yields, environmental restoration, and community development in many developing regions, including Africa, it is still marginalized in Zimbabwe (Bennett & Franzel, 2013; Pretty, 1999; Pretty, Toulmin, & Williams, 2011). Results of this study demonstrated that not only is it marginalized by government policy but also by negative and evolving consumer perceptions. However, these challenges have forced farmers, NGOs, and private companies to be creative and actively involved in creating markets that never existed before by experimenting with different crops and products. The year 2000 land reform transformed the country into a country of smallholder farmers who are engaging in different forms of alternative agriculture, participating in lucrative Global North export markets thereby developing their communities with the assistance of NGOs and private companies. Alternative agriculture has also shaped environmental discourse in the country raising awareness about climate change and GMOs.

5.0 References

- Alumira, J. D., & Rusike, J. (2005). The green revolution in Zimbabwe. *Electronic Journal of Agricultural and Development Economics*, 2(1), 50-66.
- Andersson, J. A., & D'Souza, S. (2014). From adoption claims to understanding farmers and contexts: A literature review of Conservation Agriculture (CA) adoption among smallholder farmers in southern Africa. *Agriculture, Ecosystems & Environment*, 187, 116-132.
- Angelucci F. J. B., Gourichon, H., A. Mas Aparisi, A.M. & Witwer, M. (2013). *Monitoring and analyzing food and agricultural policies in Africa*. MAFAP Synthesis Report 2013. Rome: FAO.
- Anseeuw, W., Kapuya, T. & Saruchera, D. (2012). Zimbabwe's agricultural reconstruction: present state, ongoing projects and prospects for reinvestment. [Online]
:http://www.afd.fr/webdav/site/afd/groups/Agence_Afrique_du_Sud/public/Dossier%20Assia%20Sidibe/Vf%20etude%20juin%202012.pdf (September 12, 2013)
- Ayuya O.I., Gido, E.O., Bett, H.K., Lagat, J.K., Kahi, A.K. & Bauer, S. (2015). Effect of certified organic production systems on poverty among smallholder farmers: empirical evidence from Kenya. *World Development*, 67, 27-37.
- Basera, C.H., Mutsikiwa, M. & K. Dhliwayo, K. (2013). A comparative study on the impact of ambient factors on patronage: A case of three fast foods retail brands in Masvingo, Zimbabwe. *Researchers World*, 4, 24-32.

- Barkley, D.L., & Wilson, P.N. (1992). Is alternative agriculture a viable rural development strategy? *Growth and Change*, 23(2), 239-253.
- Bennett, M. & Franzel, S. (2013). Can organic and resource-conserving agriculture improve livelihoods? A synthesis. *International Journal of Agricultural Sustainability*, 11(3), 193-215.
- Bio-Innovation Zimbabwe, (2013). Bio-Innovation Zimbabwe. [Online]: <http://bio-innovation.org/> (November 20, 2013)
- Bolwig, S., Gibbon, P. & Jones, S. (2009). The economics of smallholder organic contract farming in tropical Africa. *World Development*, 37(6), 1094-1104.
- Cachia, M. & Millward, L. (2011). The telephone medium and semi-structured interviews: a complementary fit. *Qualitative Research in Organizations and Management: An International Journal*, 6, (3), 265-277.
- Campbell B.M., Bradley, P. & Carter, S.E. (1997). Sustainability and peasant farming systems: observations from Zimbabwe. *Agriculture and Human Values*, 14(2), 159-168.
- Chawarika, B. (2011). *Challenges faced by NGOs in the political harsh climate of Zimbabwe: the effects on sustainability and promotion of human rights* (Master's Thesis, Department of Global Studies, University of Gothenburg, Sweden).
- Charmaz, K. (2017). The power of constructivist grounded theory for critical inquiry. *Qualitative Inquiry*, 23(1), 34-45.
- Chiappe, M.B. & Butler, F. C. (1998). Gendered elements of the alternative agriculture paradigm. *Rural Sociology*, 63(3), 372-393.
- Cleveland D.A., Carruth, A. & D. N. Mazaroli, D.N. (2015). Operationalizing local food: goals, actions, and indicators for alternative food systems. *Agriculture and Human Values*, 32(2), 281-297.
- Crosson, P. (1989). What is alternative agriculture? *American Journal of Alternative Agriculture*, 4(1), 28-32.
- Duram, L.A. & Larson, K.L. (2001). Agricultural research and alternative farmers' information needs. *The Professional Geographer*, 53(1), 84-96.
- Dzama, T. (2013). Service encounters in the fast food industry-case of Midlands province. *International Journal of Marketing, Financial Services & Management Research*, 2, 171-192.
- FAO, (2015), Zimbabwe and FAO partnering for sustainable agriculture and policy development. [Online]: <http://www.fao.org/documents/card/en/c/95b89e3f-62c8-4689-a4e5-119dc4acd281/> (October 5, 2016)
- Fernandez, M., Goodall, K., Olson, M. & Méndez, V.E. (2013). Agroecology and alternative agri-food movements in the United States: toward a sustainable agri-food system. *Agroecology and Sustainable Food Systems*, 37(1), 115-126.
- Freidberg, S. & Goldstein, L. (2011). Alternative food in the global south: reflections on a direct marketing initiative in Kenya. *Journal of Rural Studies*, 27(1), 24-34.
- Govere, I., Foti, R., Mutandwa, E., Mashingaidze, A.B. & Bhebhe, E. (2009). Policy perspectives on the role of government in the distribution of agricultural inputs to farmers: Lessons from Zimbabwe. *International NGO Journal*, 4(11), 470-479.
- Government of Zimbabwe, (2013), The 2014 budget statement: Towards an Empowered Society and a Growing Economy. [Online]: <http://www.herald.co.zw/2014-national-budget/> (December 20, 2013)
- Guba, E. G. & Lincoln, Y.S. (1989). *Fourth generation evaluation*. Newbury Park: Sage Publications.
- Hanna, P. (2012). Using internet technologies (such as skype) as a research medium: a research note. *Qualitative Research*, 12(2), 239-242.
- Helliker, K. (2011). Zimbabwe's land reform: myths and realities. *Journal of Contemporary African Studies*, 29, 349-351.
- Henneron, L., Bernard, L., Hedde, M., Pelosi, C., Villenave, C., Chenu, C., Bertrand, M., Girardin, C. & Blanchart, E. (2015). Fourteen years of evidence for positive effects of conservation agriculture and organic farming on soil life. *Agronomy for Sustainable Development*, 35(1), 169-181.
- Hlatywayo, R., Mhlanga, B., Mazarura, U., Mupangwa, W. & Thierfelder, C. (2016). Response of maize (*Zea mays L.*) secondary growth parameters to conservation agriculture and conventional tillage systems in Zimbabwe. *Journal of Agricultural Science*, 8(11), 112-126.
- Holt, A. (2010). Using the telephone for narrative interviewing: a research note. *Qualitative Research*, 10(1), 113-121.
- Huber, B., Otto, S. & Möller, C. (2016). *Standards and regulations*. In H. Willer, J. Lenourd (Eds.). *The world of organic agriculture: statistics and emerging trends* (pp 139-146). Bonn: Research Institute of Organic Agriculture.

- Ingram, M. (2007). Biology and beyond: the science of "back to nature" farming in the United States. *Annals of Association of American Geographers*, 97(2), 298-312.
- Jafari, J. (2003). Attacks from within: Zimbabwe's assault on basic freedoms through legislation. *Human Rights Brief*, 10(3), 6-10.
- Kaite,(2013), Kaite Trust.[Online]: <http://interim.kaite.Bio-Innovation Zimbabwe /kaite-trust/>(November 12, 2013)
- Kleemann, L. &Abdulai, A. (2013). Organic certification, agro-ecological practices and return on investment: evidence from pineapple producers in Ghana. *Ecological Economics*, 93, 330-341.
- Kramer, E. (1989). The early years: extension services in peasant agriculture in colonial Zimbabwe 1925-1929. *Zambezia*, XXIV(ii), 159-179.
- Mandere, N., Anderberg, S., Ato Armah, F. &Abaya, S.W. (2011). Assessing the contribution of alternative agriculture to poverty reduction and employment creation: a case study of sugar beet cultivation in Kenya. *African Journal of Agricultural Research*, 6(2), 440-450.
- Marongwe, L.S., Nyagumbo, I., Kwazira, K., Kassam, A. & Friedrich, T. (2012). *Conservation agriculture and sustainable crop intensification: a Zimbabwe case study*. Rome: FAO
- Mashingaidze, N., Twomlow, S., Madakadze, I.C., Mupangwa, W. & Mavunganidze, Z. (2017). Weed growth and crop yield responses to tillage and mulching under different crop rotation sequences in semi-arid conditions. *Soil Use and Management*, 1-17.doi:10.1111/sum.12338
- Masvaya, E.N., Nyamangara, J., Descheemaeker, K. &Giller, K.E. (2017). Tillage, mulch and fertilizer impacts on soil nitrogen availability and maize production in semi-arid Zimbabwe.*Soil and Tillage Research*, 168, 125-132.
- Mataranyika, M, (2016), Zimbabwe Nando's operator bets on Africa's fast food appetite. [Online]: <http://www.fin24.com/Companies/Retail/zim-nandos-operator-bets-on-africas-fast-food-appetite-20160928>(October 6, 2016)
- Mkono, M. (2012). Slow food versus fast food: A Zimbabwean case study of hotelier perspectives. *Tourism and Hospitality Research*, 12(3), 147-154.
- Moyo, S. & Yeros, P. (2005). *Land occupations and land reform in Zimbabwe: towards the national democratic revolution*. London: Zed Books Ltd.
- Moyo, S. (2011). Three decades of agrarian reform in Zimbabwe. *Journal of Peasant Studies*,38(3), 493-531.
- Moyo, C., Ngulube, P. &Kazembe, C. (2016). Preserving knowledge about indigenous cuisine for posterity in Zimbabwe. *Indilinga African Journal of Indigenous Knowledge Systems*, 15(1), 136-152.
- Mukute, M. (2009). Cultural historical activity theory, expansive learning and agency in permaculture workplaces. *Southern African Journal of Environmental Education*, 26,150-162.
- Mutsamba, E.F., Nyagumbo, I. &Mafongoya, P. (2016). Termite prevalence and crop lodging under conservation agriculture in sub-humid Zimbabwe. *Crop Protection*, 82, 60-64.
- Neesham, C., McCormick, L. &Greenwood, M. (2017). When paradigms meet: interacting perspectives on evaluation in the non-profit sector. *Financial Accountability and Management*, 33(2), 192-219.
- Ngwenya, P, (2013),Sustainable agro-food strategies in Zimbabwe: sovereignty, community and eco-social transformations.PartI[Online]:<http://sustainableagriculturezimbabwe.wordpress.com/2013/08/29/sustainable-agrofood-strategies-in-zimbabwe-sovereignty-community-and-eco-social-transformations-part-i/>(August 29, 2013)
- Phytotrade Africa,(2013), Phytotrade Africa. [Online]: <http://phytotrade.com/about-us/>(November 13, 2013)
- Pretty, J. (1999). Can sustainable agriculture feed Africa? New evidence on progress, processes and impacts. *Environment, Development and Sustainability*, 1(3), 253-274.
- Pretty, J., Toulmin, C. & Williams, S. (2011). Sustainable intensification in African agriculture. *International Journal of Agricultural Sustainability*, 9(1), 5-24.
- Rubin, H.J. & Rubin, I.S. (2012). *Qualitative interviewing: the art of hearing data*. London:Sage Publications.
- Rukuni, M. (1994). *The evolution of agricultural policy: 1890-1990*. In M. Rukuni & C. K. Eicher (Eds.), *Zimbabwe's agricultural revolution* (pp 15-39). Harare: University of Zimbabwe.
- Ryan, G.W. &Bernard, H.R. (2003). Techniques to identify themes. *Field methods*, 15(1), 85-109.
- Saldana, J. (2009). *The coding manual for qualitative researchers*. Los Angeles: Sage
- Scoones, I., Marongwe, N., Mavedzenge, B., Murimbarimba, F., Mahenehene, J. & Sukume, C. (2011). Zimbabwe's land reform: challenging the myths. *Journal of Peasant Studies*, 38(5), 967-993.

- Scoones, I., Marongwe, N., Mavedzenge, B., Murimbarimba, F., Mahenehene, J. & Sukume, C. (2010). *Zimbabwe's land reform: myths & realities*. Harare: Weaver Press.
- Shumba, K. & Zindiye, S. (2016). Proceedings from GAI international Academic Conferences Proceedings: *Franchising in a volatile business environment: a case of the fast food industry in Harare, Zimbabwe*. Amsterdam.
- Singh, M.K. (2015). Human rights situation in Zimbabwe. *Global Journal of Engineering, Science & Social Science Studies*, 2, 161-181.
- Smith, L.G., Williams, A.G. & Pearce, B.D. (2015). The energy efficiency of organic agriculture: a review. *Renewable Agriculture and Food Systems*, 30(03), 280-301
- Svotwa, E., Baipai, R. & Jiyane, J. (2009). Organic farming in the smallholder farming sector of Zimbabwe. *Journal of Organic Systems*, 4(1), 8-14.
- Taylor-Powell, E. & Renner, M. (2003). Analyzing qualitative data: University of Wisconsin-Extension, Cooperative Extension. [Online]: <https://learningstore.uwex.edu/assets/pdfs/g3658-12.pdf> (May 5, 2016)
- Thierfelder, C., Cheeseman, S. & Rusinamhodzi, L. (2012). A comparative analysis of conservation agriculture systems: benefits and challenges of rotations and intercropping in Zimbabwe. *Field Crops Research*, 137, 237-250.
- USDA, (2012), Grants: sustainable agriculture research and education program. [Online]: <http://www.nifa.usda.gov/fo/fundview.cfm?fonum=1130> (February 14, 2015)
- USAID, (2012), Zimbabwe agricultural income and employment development Annual Report #2. [Online]: http://pdf.usaid.gov/pdf_docs/PA00K6RD.pdf (October 5, 2016)
- World Bank, (2013), Agriculture. [Online]: <http://search.worldbank.org/data?qterm=agriculture+GDP+zimbabwe&language=EN&format> (February 13, 2013)
- World Food Program, (2013), WFP Reaches 1.2 Million People Amidst Funding Shortages. [Online]: <http://www.wfp.org/node/3586/4194/640237> (February 15, 2014)
- World Food Program, (2016), Zimbabwe Current issues and what the World Food Program is doing. [Online]: <https://www.wfp.org/countries/zimbabwe> (October 6, 2016)
- Zhenzhong, S., Schumilas, T. & Scott, S. (2015). Characterizing alternative food networks in China. *Agriculture and Human Values*, 32(2), 299-313.
- ZOPPA Trust, (2012), ZOPPA. [Online] Available: <http://www.zoppa.org.zw/> (May 20, 2012)