Linkages between Trade, Development and Poverty Reduction Project (TDP)

2ND TDP DIALOGUE REPORT

on

LINKAGES BETWEEN TRADE, DEVELOPMENT AND POVERTY REDUCTION

under

TDP PROJECT

held at

Shangai Restaurant Kampala Club on 12th September 2006

organized by

Consumer Education Trust (CONSENT)
Muswangali Zone, Salaama Road (1.4 km off Entebbe Road at Kibuye)
GPO Box 1433
Kampala, Uganda
Tel: +256 312 260431/2
Fax: +256 312 260432
Mob: +256 772 502441, 0752 402441
E-mail: consentug@yahoo.com, consumeducatrust@netscape.net

and

CUTS International
Centre for International Trade, Economics & Trade (CUTS-CITEE)
D-217 Bhaskar Marg, Bani Park
Jaipur 302 016, India
Tel: +91.141.2282821/2282591
Fax: +91.141.2282485
Email: tdp@cuts-international.org / citee@cuts-international.org
Web: www.cuts-citee.org

supported by
Ministry of Foreign Affairs, The Netherlands and
Department for International Development, United Kingdom

September 2006

Introduction

The first in the series of dialogues on trade, development and poverty reduction under the project, titled: **Linkages between Trade, Development and Poverty Reduction** was held on Tuesday 12th September 2006 at Shangai Restaurant – Kampala Club. Consumer Education Trust (CONSENT)[1], the project local advocacy partner, organized the dialogue in collaboration from CUTS International – CITEE, Jaipur, India with support from Ministry of Foreign Affairs, The Netherlands and Department for International Development (DFID), United Kingdom.

The dialogue attracted 17 stakeholders from different sectors who included policy makers, civil society organizations, consumers, development partners, private sector, business support organizations, academia, researchers and the media.

The Dialogue

Session Opening

The opening session was chaired by Mr. Kimera Henry Richard, Chief Executive, CONSENT, who also gave the welcoming remarks on behalf of the TDP partners (CONSENT and DENIVA) in Uganda. He led the stakeholders through the TDP project background, objectives, component activities and desired outputs at the end of the project in December 2008. He reported and appreciated the implementation of the TDP project through CUTS International as well as highlighted the support to the project from the Ministry of Foreign Affairs, Netherlands and Department for International Department, United Kingdom (DFID) with all attendant benefits.

The Chief Executive guided stakeholders through the dialogue program, objectives and expected outputs. He also:

- Informed the dialogue participants about the reviews of approach in organizing and holding TDP dialogues in Uganda in response to views expressed in the 1st dialogue in September 2005.
- Stated that in 2006 to the end of the project there would be a series of dialogues to be organized (small in setting and number of stakeholders invited) in the different regions of the country (Kampala, Mbale and Mbarara in 2006).
- Pointed out that media discourses aimed at increasing public awareness, participation and involvement in pro-poor policy advocacy, audit and collective action, would be organized.
- Noted that the challenges faced by all stakeholders, was to work and realize benefits of trade and development to societies especially the resource poor in Uganda.
-
- Emphasized, that it is very hard to realize poverty reduction when benefits of trade do not spread/reach the resource poor.
- Cautioned that challenges facing the project stakeholders was to ensure that benefits of trade are equitably shared, enjoyed by all and that social justice would only prevail through an enabling policy environment that enhances trade to work for the poor for sustainable development and active citizenship by all.
- Observed that fair trade, poverty reduction, comprehensive development and realization of the Millennium Development Goals (MDGs) are challenged by a number of aspects linked with but not limited to policy incoherent, corruption, poor accountability and governance. Others are: political instability, poor marketing, poor quality production, ignorance, weak legal and institutional framework and inadequate financing for safety nets, quality assurance systems and institutions like the Uganda National Bureau of Standards (UNBS).
- Concluded by appreciating the TDP initiatives and called for the enactment of laws that enhance standards of living for the populace, promote fair trade and boost sustainable national economic development through open dialogue and policy coherence.

[1] CONSENT is a civil society organization founded in 1997 and incorporated in 2002, strives for a socially informed, equitable and just society through empowerment of consumers, promotion of ethical practices among businesses and engagement of policymakers to enact pro-people policies for present and future generations. Designs and implements programs on awareness, capacity enhancement, constructive stakeholder dialogue, policy research and advocacy, and advisory services on socio-economic issues through partnerships. CONSENT has a distinguished record in research, policy advocacy and public awareness. The civil society organization has carried out studies on consumer policy-related issues over the last five years and through collaboration with other organizations, has worked on several social, trade and economics related projects.

Session One: Presentation

Mr. George Walusimbi-Mpanga, presented an Overview of the TDP Project Case Study report, focusing on the Impact of Trade Liberalization to the Dairy sector in Uganda. He was one of the researchers on the study team and made the presentation on behalf DENIVA *(report/ presentation is annexed)*.

Highlights of the presentation included:

- An overview of the case study on the dairy sector carried out in the districts of Ntungamo, Ibanda, Mbarara and Bushenyi in South Western Uganda.
- Incites on the objective of the study: to gather household evidence and perceptions on how the open market environment in Uganda has affected household welfare and the level of poverty in the dairy sector, particularly to farmers.
- The observation that the dairy sector had undergone both positive and negative performance since the operationalization of the Dairy Development Authority Statute and Act.

- **Highlights of the positive trends in the sector** to dairy farmers since the commencement of the liberalization process that include:
    - Increase in milk production from 365 millions liters to 1.5 million liters per annum in the districts surveyed.
    - Improvement of the dairy herds by adoption of cross and pure breeds dairy stock leading to increasing milk production in the region.
    - Increase in micro markets for the surplus production of the dairy sector.
    - Expansion of the informal distribution channels and network.
    - Benefit to consumers through increase in variety of locally produced dairy products on market at affordable prices which were not available before liberalization.

- **Highlights of negative trends that include:**
    - Increase in cost of production by over 60%.
    - Increase in costs of farm inputs.
    - Increase in milk losses at farm level.
    - Collapse of farmer cooperatives.
    - Government withdrawal of veterinary extension services and farm inputs facilities.
    - Reduction in guarantee of markets for the milk produced.
    - Reduction in farm employment in spite of the increase in milk production.
    - Weakened regulatory regime following the liberalization of the dairy sector.
    - Breakdown of the quality control systems.
    - Deterioration of the milk handling infrastructure right from the farm to the market.
    - Loss of export markets due to failures in quality control systems. He cited the case of the ban of import of fresh or pasteurized milk from Uganda in 2002 by Rwanda government to protect consumers.
    - Increase in fluctuations of farm gate prices.
    - Proliferation of substandard farm inputs like drugs.

Concluded the overview by noting the study established that:

- Liberalization has, to some extent, contributed to private sector development, and to a greater extent, to the deepening of rural poverty.
- Welfare and real incomes of most rural farming households are generally worse off than before.
- Rural farming households have minimal or no support for cost effective production and marketing.
- Liberalization opened new opportunities to the private sector.
- There is reduction in market efficiency and increasing portions of agricultural output have remained unsold.
- Liberalized market regime has failed to effectively link the producers to both local and export markets.
- Consumers seem to have lost and benefited from liberalization in the dairy sector.
- Consumer prices of agricultural produce are on the increase.
- Consumer protection and product quality has declined and unreliable with failure in the regulatory and control systems.

- Safety nets under liberalization have been weakened due to lack of complimentary regulatory and institutional support framework and resources.
- Uganda's milk is the most competitively produced in the region.

Discussions and wrap-up of overview:

Address productivity and quality issues

- Farmers should get value for their farm products given the prevailing cost of production. This should be addressed through government interventions given the agricultural sector contributions to Uganda's GDP and employment status.
- Through government interventions, agricultural extension services to farmers should be revived to promote quality production, efficiency and competitiveness in the dairy sector.
- Government and respective regulatory agencies should take urgent action to address the quality challenges and substandard farm inputs.

Monitoring and Regulatory reform

- Having noted that there are a number of unhealthy and unscrupulous practices, which include adulteration (e.g. adding chemicals like formalin to milk) government, was urged to call upon the respective authorities to take immediate action in a bid to address and contain the unscrupulous practices.
- Government, respective agencies and stakeholders need to look at domestic and regional trade and market dynamics to answer some of the dairy sector marketing challenges.

Public education and awareness

- Consumers should be sensitized to play their meaningful role in the market, specifically, to expose health hazards through public awareness and campaigns for quality production.

Policy advocacy

- There is need for Pursuit and promotion of opportunities to network and partner with different stakeholders to address the challenges in the dairy sector through packaging of the study findings and share it with policymakers, legislators, regulators, businesses, business support organizations, consumer organizations and consumers to enhance public awareness, participation and involvement in policy advocacy and development.
- Government and the respective regulatory agencies should be challenged and reminded not to relinquish the constitutional obligation of safeguarding public health. Specifically, the state/ Government should stop practices by individuals and businesses that are deleterious to proper functioning of markets and enjoyment of consumer rights.
- Civil society organizations should build capacity to develop and propose policy alternatives to address societal challenges that could lead to failure of realize the Millennium Development Goals and national development frameworks; like PEAP, among others.

Arbitration and legal redress

- Given challenges associated with litigation, mainly cost and technical capacity, it was deemed important for stakeholders, specifically consumer organizations, to team up with the legal fraternity (for legal aid) as well other resourceful civil society organizations to address sector problems that are not resolved through arbitration.

Session Two: Deliberations on National and Global Trade and Economic Trends – The Implications of the Stalled WTO Negotiations

The session was moderated in a mode that generated a lot of input from stakeholders whose contributions were in form of personal views and recommendations for comprehensive approaches with regard to advocacy issues. The session focused on domestic, regional and international trade and economic trends like domestic trade policy and regulations, East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA), European Union-Africa Caribbean and Pacific (EU-ACP) Economic Partnership Agreements (EPAs) and World Trade Organization (WTO).

Brief of outcomes from session - observations of stakeholders:

Market access

- Trade liberalization and market access does not necessarily translate into poverty reduction because without complimentary enabling policies, mechanisms and national development strategies, trade can not work for the resource-poor.
- Given the prevailing trends in the market and reality on the ground, economic liberalization is creating a class of 'outlaws,' and worse that they are not made to account for their actions.

Policy environment

- The policy environment trends in Uganda today portray the government as relinquishing its responsibility of safeguarding citizens.
- Trade policy should focus on the domestic market agenda to facilitate a linkage to multilateral trade level.
- The stalemate in the WTO Doha Development Round is a challenge to the developed countries; WTO member states, notably the EU, Brazil, and India blame the US' unwillingness to offer deeper cuts to its agricultural subsidies leading to the standoff. Developing countries remain sidelined.

Trade liberalisation, regulation

- Stalemate in the WTO negotiation may have negative effects to developing countries; developed countries could get into bilateral agreements with their developing counterparts and use them to arm-twist the poor countries into agreeing to unfavorable arrangements.
- Uganda has more to benefit from resumption of the WTO negotiations rather than any bilateral arrangements.
- The Doha Development Round was turning into a market access round from a civil society perspective; the US counter accusations to the EU and some developing countries over opening their markets to farm imports led to the current standoff.
- LDCs should not allow a possible revert of negotiations over issues agreed upon after the current WTO negotiation standoff.
- Developing countries risk lagging behind or even, worse, plunging further in extreme poverty, if unfair trends in multilateral negotiations continue.

- Civil society and the private sector in Uganda should take stock of their capacities and enhance their participation in domestic, regional and global trade policy developments.

Regional integration

- Regional agreements have had positive effect given the synergies derived from them. The EAC countries should take stock of their cost-benefit in trade before deciding on what economic grouping to belong to. In this respect, Tanzania is in SADC well as Kenya and Uganda are in COMESA. All the three are in the ESA configuration for the EPAs negotiations (EU-ACP). The private sector in Tanzania has stated that it benefits more from COMESA than SADC.
- The EAC would present its Trade policy review at the WTO as a block in November 2006.
- Civil society should develop linkages with the national and EAC legislators and the private sector to dialogue on issues at hand affecting trade and development.

Trade and development

- From a private sector perspective, the services sector has contributed tremendously to national development since liberalization.
- Sustainable development should be aimed at meeting the needs of the present without compromising the ability of future generations to meet their own needs. Therefore, policy and national development strategies should be met through coherent frameworks.

Conclusion

- Trade and markets can be important instruments for achieving socio-economic development and poverty eradication. However, they must be regulated and managed effectively to improve opportunities for the poor and protect the vulnerable. This is because trade alone can not boost growth and reduce poverty in Uganda.

Session Three: Brief Presentation of the Trade Awareness Campaign Kit and Wrap-Up of the Dialogue

The Chair briefly led the stakeholders through the draft trade awareness campaign kit. He elaborated about its goals of creating awareness, socio-economic literacy, promoting dialogue, calling for citizens' audit in political and service delivery, policy advocacy as well as empowerment for active citizenship.

The Kit objectives:

- Create socio-economic awareness amongst stakeholders so as to realize a critical mass necessary to advocate on trade, development and poverty issues for the benefit of the resource poor.
- Sensitize stakeholders to be socially informed to advocate for an equitable and just society.
- The project will highlight trade, development and poverty issues stakeholders need to advocate for addressing poverty.
- Empower stakeholders to advocate for development-oriented trade policies taking into account the interests, priorities, needs and aspirations of the resource poor so that trade works for the poor.

Expected Outcomes

- Critical mass sensitized to advocate for equitable, just, result-oriented trade and development policies.
- Trade policy framework and national development strategies that enable trade work for the poor advocated for by different stakeholders.
- Constructive dialogue, approaches, ideas and recommendations on ways to improve stakeholder effective participation, programming and poverty impacts and solutions.
- Greater clarity and acknowledgement of the differences and commonalities between stakeholders around key development issues.

Kit Content

- Trade and Development
- Trade and Agriculture
- Trade and Socio-economic trends
- Trade and Environment
- Investment in Human resource
- Investment in Health
- Investment in Infrastructure
- Investment in Good governance and Constructive dialogue
- Consumers Make Markets

Conclusion

Stakeholders were commended for putting off time to engage in the cross fertilization dialogue. Noted that the level of discussions was healthy and rich in highlighting challenges, proposals and possible alternatives to influence policy and development agendas to address concerns impeding sustainable development and poverty reduction. The deliberations were to feed into the global initiatives and future national dialogues to which they would be invited.

Summary

The dialogue ended with ways forward and attendant actions summing up the day’s discussions:

Public health and safety

- Government should invest in safety-nets and quality assurance to protect consumers from dangerous goods and services, as unhealthy populace is unproductive and a burden to the national economy.

Consumer awareness

- Intensification of consumer awareness to facilitate action and change of culture from meekness to questioning and addressing issues like corruption, poor prioritization of resources, policy incoherence in implementation of national development programs, budgeting among others.

Research and policy advocacy

- Enhancement in dissemination of research reports to facilitate informed policy options, national development strategies and their effective implementation to address development and poverty reduction challenges.
- Intensification of advocacy to influence pro-people and development policies, as well as their enactment and implementation to address societal concerns in a coherent manner to efficiently use the scare resources.
- Stakeholders need to enhance dialogue, cooperation and work with the rural poor through sharing deliberations for a multiplier effect.

ANNEX I:

TDP Dialogue Program

Tuesday September 12, 2006

0945 – 1000 Registration

1000 – 1015 Opening session

- Remarks by CONSENT

1015 – 1215 Session One

- Presentation on TDP Project Case Study Reports focusing on the Impact of Trade Liberalization to the Dairy and Maize sectors in Uganda**:** by DENIVA researchers
- Discussions served with hot and cold beverages

1215 – 1345 Session Two

- National and Global Trade and Economic Trends – The Implications of the Stalled WTO Negotiations
  - Policymaker Perspective
  - Private Sector Perspective
  - Civil Society Perspective
- Discussions

1345 – 1415 Session Three

- Brief presentation of the Trade Awareness Campaign Kit and discussions
- Wrap up the dialogue with advocacy action

1415 – 1430 Session Four

- Lunch and departure

End of Dialogue

Annex II:

TDP Dialogue List of Participants

	Name & Designation	Name of organization, physical postal, telephone, email, fax & cell contacts
Policymakers		
1.	Hon. Irene Ovonji – Odida, Member of the EALA, Representing Uganda	East African Legislative Assembly (EALA), Arusha, Tanzania Cell: 0782 292878, 0712 403683
Foreign Mission & Development Partner		
2.	Mr. Benjamin Anker, Second Secretary, Economic & Cultural Affairs	Royal Netherlands Embassy, Ph: 041 346000 Em: benjamin.anker@minbuzanl
Civil Society Organization		
3.	Mr. Ssemwogerere David Program Director	Agency for Environment and Wetlands AEW PO Box 26618, Kampala, Uganda Cell: 077 351736 Em: ssemwogerered@yahoo.com, info_aew@yahoo.com
4.	Mr. Douglas Kivumbi Program Officer	SEATINI-Uganda, Plot 101 Kira Rd Ph: 041 540856 Fax: 041 540857 Em: seatini@infocom.co.ug, www.seatini.org
5.	Ms. Rose Adokorach	VECO Uganda, Cell: 0772 930820 Em: rose.adokorach@veco.uganda.org
6.	Ms. Peninah Kyarimpa	VECO Uganda, Cell: 0772 930820 Em: peninah.kyarimpa@veco.uganda.org
Private Sector & Business Support Organizations		
7.	Mr. George Walusimbi Mpanga, Executive Secretary	Uganda Service Exporters Association (USEA) Suite G210, Baumann House, PO Box 7203, Kampala, Uganda Cell: 0752 436380 Em: georgew@servicexport.com www.servicexport.com.uganda
8.	Ms. Mawemuko Betty Legal Officer	Uganda Women Entrepreneurs Association (UWEAL) Cell: 0782 358477 Em: mawemukobetty@yahoo.co.uk
Academia & Research		
9.	Mr. Alexander Werth, Consultant	c/o Ms Uganda, PO Box 6737, Kampala - Uganda Cell: 0782 579225 Em: alexanderwerth@gmx.de
Media		
10.	Nabwiiso Samuel, Business Jounalist	Radio Kiira FM, Jinja Cell: 0752 829815 Em: nabwiisosamuel@yahoo.com
11.	Ntale Yonnus, Business Reporter	CBS FM, Cell: 0752 462223, 0712 462223 Em: ntalecbs@yahoo.com, ntaleyonnus@yahoo.com
12.	Ashah Ntabadde Business Journalist	Daily Monitor Newspaper, PO Box 12141, Kampala, Uganda Cell: 0752 503139 Em: ashanta5@yahoo.com

		www.monitor.co.ug
13.	Madinah Tebajjukira, Report	New Vision Newspaper, Cell: 0712 123368 Em: madinajat@yahoo.co.uk
14.	Moses Ssemakula, Business Report	Red Pepper, Cell: 0712 946001 Em: mosesv2000@yahoo.com
15.	Lattib Mbugga, Photographer	Red Pepper, Cell: 0772 854398 Em: mlatti@yahoo.com
CONSENT Team		
16.	Kimera Henry Richard, Chief Executive	Consumer Education Trust (CONSENT), GPO Box 1433, Kampala, Uganda Ph: 0312 260431/2, Fax: 0312 260432 Cell: 0772 502441, 0752 402441 Em: consentug@yahoo.com
17.	Shaban R. Sserunkuma, Programs Director	Consumer Education Trust (CONSENT), GPO Box 1433, Kampala, Uganda Ph: 0312 260431/2, Cell: 0772 473170 Em: shabanmail@yahoo.com

Annex III: Study Report

THE IMPACT OF TRADE LIBERALISATION ON POVERTY IN UGANDA
A Perception Study on the Dairy and Maize Sub-Sectors

FINAL REPORT

Submitted to
DENIVA for the CUTS-TDP PROJECT

By

Geoffrey BAKUNDA, PhD
gbakunda@mubs.ac.ug,gbakunda@yahoo.com,gbakunda@actade.org,
Tel: 256 (752) 401 697

February 2006

Acknowledgement

I would like to sincerely thank my Research Team headed by Mr. George Walusimbi-Mpanga for a job well done in executing the tasks involved in this study. Your diligence and perseverance in the field, doing the transcriptions and compiling this report are heartily acknowledged.

Secondly, I would like to thank all our respondents in Ntungamo, Mbarara, Ibanda, Bushenyi, Kamwenge and Iganga districts for your cooperation and patience during the lengthy interviews and focus group discussions. My appreciation also goes to Land'O Lakes, the Private Sector Foundation-Uganda and the Dairy Development Authority who provided us with background papers and offered us the benefit of their field contacts, which we found priceless.

Finally, let me extend my gratitude to the Development Network for Indigenous Voluntary Associations (DENIVA) and CUTS for sponsoring this study.

Geoffrey Bakunda
February 2006

TABLE OF CONTENTS

Executive Summary

Uganda probably has the most liberal trade regimes of any African country today. Although the economy has been effectively liberalized through both domestic and external trade liberalization the effects on household welfare have not been effectively assessed. Household evidence of poverty in Uganda has remained scanty. This CUTS sponsored study is an attempt to contribute to household evidence on the impact of liberalization on household welfare and poverty

The overall objective of this study was to gather household evidence and perceptions on how an open market environment has affected household welfare. In particular, the study examined the effect of liberalization on household production and productivity; markets, distribution channels and marketing arrangements; wages and employment; prices and price stability; technology adoption and risk and vulnerability and how these have affected the depth and breadth of poverty at household level.

Given that 70% of Uganda's population and 80% of her poor are engaged in agriculture, the study covered two agricultural sub-sectors namely; the dairy and maize sub sectors. For each of the sub sectors, the leading producing districts were selected for study. For the dairy sector, the districts of Ntungamo, Ibanda, Mbarara and Bushenyi were selected while the districts of Kamwenge and Iganga were selected for the maize sector.

The study has established that liberalisation has contributed to the deepening of rural poverty. The welfare and real incomes of most rural farming households is generally worse off than before. Most rural farming households can be termed as 'economic orphans' with little support if any for cost effective production and marketing. Secondly, it has been established that although liberalization opened new opportunities to the private sector, the incompetence of the private sector only resulted in the expansion of trade at the informal level and only limited expansion of the formal marketing of agricultural output in the two sub-sectors. Market efficiency has gone down and increasing portions of agricultural out put have remained unsold. The liberalised market regime has failed to effectively link the producers to markets both local and export markets.

Consumers seem to have both lost and benefited from liberalization. Consumer prices of agricultural produce have not gone down but instead are regarded as higher than their true value. Quality has also been declining in most cases and is still unreliable. There is no system to assure the quality reaching consumers and regulations meant to protect consumers are not implemented**.**

Liberalisation has not been accompanied by the requisite regulatory and promotional capabilities of the institutions created to do so. Though these institutions were created, they were never strengthened to implement their mandates effectively. Consequently, there have remained gaps in regulation, promotion and supportive infrastructure, which have not enabled the liberalised markets to function properly. Its apparent that government has not gained neither in terms of direct taxes nor income growth for farming households to spur consumption of indirectly taxed goods. Because of generally declining incomes for the farming households, income inequalities between urban and rural households have widened.

1.0 BACKGROUND

Uganda has probably been the most successful African example of economic liberalization in the 1990s. Uganda probably has the most liberal trade regimes of any African country today. Liberalization began way back in 1987 and included initiatives aimed at redressing imbalances in the system of allocation of foreign exchange, restoration of credibility of the monetary and fiscal policy, abolition of marketing monopolies, the reduction of administrative red – tape, and gradual introduction of a more rational tax and tariff structure. All these efforts were geared to increase competition, which would in turn improve the quality of manufactured goods, encourage the emergence of new products and promote adoption of new production techniques.

Around the early 1980s, the Government of Uganda (GoU) identified five major food crops, namely maize, beans, groundnuts, sesame and soyabeans, as non-traditional agricultural exports (NTAEs). The parastatal Produce Marketing Board (PMB) was mandated to procure and market these commodities. The primary objective of PMB was to procure, store, grade and sell food to deficit areas, thereby ensuring food security. Any surplus was then to be sold outside the country. Beyond food security, these crops were to be promoted as export crops for the generation of foreign exchange. However, marketing under the PMB-controlled era was characterized by several flaws including diversion of crop finance, lack of prompt payment and inability to reach the rural farmers.

Following these and other related shortcomings, government decided in the early 1990s to open up the marketing of agricultural produce to competition. The objective was to improve efficiency, restore price incentives and consequently generate producer confidence. Under the liberalized marketing system, farmers were generally paid cash for their produce. However, government set no price and hence the price paid to the farmer was generally that offered by the buyer. The marketing of agricultural produce could therefore take place either on the farm, at the buyer's store, rural market, mill and in the urban market.

Although liberalization of trade and agriculture has been associated with 'poverty reducing' growth, on average over 6.5% annually during the period 1991-2000 and over 5% growth during the period 2001 and 2005, and annual per capita income increased from US $ 186 in 1991/1992 to about US $ 272 by 2000 and US $ 325 in 2005 (UNDP, 2002; GOU, 2005), household evidence of such reduction has remained scanty. On the contrary, the incidence of poverty has remained high. Although the incidence of poverty fell from 56% in 1992 to 35% in 2000, the proportion of the national population living below the poverty line in 2003 was 38.8% corresponding to 9.8 million Ugandans. By 2005, this level had not changed (GOU, 2005). Of importance to note is that poverty fell more in urban areas than in rural areas (Morrissey et al., 2003). Similarly, income inequality has risen since 2000 as demonstrated by the change in the Gini Coefficient Index from 0.395 in the UNHS 1999-2000 to 0.428 in the UNHS 2002-2003[2]. Uganda's Human Development Index (0.493) is 146th of the 177 reported countries with per capita income of US$ 300 or less in 2003 according to national authorities. Analysis of these studies show that poverty has increased during the period 2000-2005 from 39% to 49% among households especially those engaged in agriculture and especially for the proportion of those in crop agriculture whose numbers grew from 39% to 50% over the same period.

Since the launching of Uganda Vision 2025 and the adoption of the Poverty Eradication Action Plan (PEAP) in 1997 as the framework for development planning in Uganda, efforts have been made to understand better the causes and effects of poverty. However, as elsewhere in the world, the studies so far conducted are not exhaustive and more work remains to be done. Household evidence of poverty has remained scanty and in particular the poverty impacts of liberalization have not been effectively assessed.

2.0 PURPOSE OF THE STUDY

The objective of this study was to gather household evidence and perceptions on how the open market environment in Uganda has affected household welfare and the level of poverty.

[2] UNHS refers to the Uganda National Household Survey.

3.0 ANALYTICAL FRAMEWORK

Trade Liberalisation

The analytical framework used in the background report which relied mainly on literature and secondary data was carried through to the fieldwork phase that captured and analysed primary data. Trade liberalization, in theory, is regarded as the reduction of the official barriers to trade which distort the relative prices of tradable and non-tradable goods and those between different tradables (Winters, 2000). Trade Liberalization has two major dimensions that is, external liberalization and domestic liberalization which are often implemented together. In practice, however, the challenge is that even if all the distortionary policies are identifiable, which is rarely the case, it is difficult to gauge the overall degree of trade liberalization because one does not know how effectively the policy changes have been implemented nor how the various changes interact at a detailed level.

Trade liberalization, particularly external trade liberalization involves opening up an economy which exposes it and its component households to increased risks. Liberalization exposes households and firms to new risks although it is argued that the long term effect can be to reduce overall risk, particularly in the case of external trade liberalization, since world markets have many players and tend to be more stable than domestic ones. Trade liberalization increases risk either by undermining existing stabilization mechanisms (either autonomous or policy based) or because residents consciously switch to a portfolio that offers higher average rewards but greater variability.
Trade liberalization recognizes that effective trade, ordinarily, is preceded by effective production and that in assessing its impact, it is important to distinguish between the process and outcome effects of trade liberalisation.

Households and Poverty

Consistent with Winters, 2000, the 'farm household' is regarded as the most useful for assessing the poverty impact of liberalization. The farm household potentially undertakes most production in a largely agriculturally dependent economy such as Uganda. Price changes due to liberalization directly impact on household welfare. Household responses to a liberalized regime affect the extent to which welfare shocks can be mitigated and the extent to which shocks on one market are transmitted to others and hence onto other individuals/households (Winters, 2000).

Markets, Distribution Channels and marketing arrangements

If the internal distribution sector is not competitive, the pass through of price changes may not be complete, perhaps completely frustrating the liberalization. Merely replacing the marketing boards is not sufficient. Attention has to be paid to what replaces them.

Moreover, if changes in domestic marketing arrangements lead to the disappearance of marketing institutions, households can become completely isolated from the market and suffer substantial income losses. This is obvious on markets on which to sell cash crops but can also afflict purchased inputs and credit. For instance, if official marketing boards provided credit for inputs and against future outputs, and post liberalization private agents do not, no increase in output prices will benefit farmers unless alternative borrowing arrangements can be made.

Wages and Employment

The loss of jobs is probably the most common reason for the precipitate declines into poverty. How labour markets work is critical. In an economy which is labour abundant, freer trade gravitates towards higher wages in general. Thus, an increase in prices of a good that is labour intensive in production is likely to result in an increase in real wages and vice-versa, having a corresponding impact on poverty. However, formerly employed people may be thrown into unemployment and technological improvements in mode of production may lower labour requirements.

In general, while assessing the impact of Trade Liberalization on poverty, Winters et al. (2000) Framework that identified five areas of analysis and asking corresponding questions was used. These areas and some of the questions are:

i) *Economic Growth and Stability:*
- Did trade liberalization enhance growth in the sector and hence alleviate poverty?
- Did trade liberalization boost productivity in the sector?
- Is the sector less stable?

ii) *Households and Markets*
- Did border price shocks get transmitted to poor households?

- Were markets created or destroyed?
- How well did households respond?
- Did the spillovers benefit the poor?
- Did trade liberalization increase vulnerability?

iii) *Markets*

- How did trade liberalization affect prices?
- How have prices affected household income?
- How much of any price change got transmitted to the poor?
- Do markets exist at all?

iv) *Wages and Employment*

- Did liberalization raise wages or employment?
- Is transitional unemployment concentrated on the poor?

v) *Government Revenue and Spending*

- Did liberalization cut or increase government revenue?
- Did falling tariff revenues hurt the poor?

The following sections attempt to answer some of the above questions sector by sector. Where some issues are cross cutting such as relating to growth and stability, they are addressed in relevant sections. Broadly, the analysis covers sub-sectors in Agriculture, Manufacturing and Services.

4.0 APPROACH TO THE STUDY

4.1 Selection of the sectors for survey

Given that 70% of Uganda's population and 80% of the poor are involved in the agricultural sector (GOU, 2005), it was considered important that the sub-sectors for study be chosen from the agricultural sector. The sub-sectors selected for the study were the dairy sub-sector and the food crops sub-sector where Maize as a food crop was particularly targeted. The dairy and the food crops sub sectors are some of the sectors that were substantially liberalized in the mid-1990s and in which a significant number of rural households directly or indirectly participate. The two sub-sectors have traditionally represented both a source of food and a source of income for many households. Both sub-sectors therefore contribute substantially not only to livelihood security and development but also to national food security. Moreover, each of the sub-sectors has an external interface as milk and other dairy products as well as maize have been trade internationally particularly within the region. Apart from that, there was little information about these two sub-sectors particularly about the impact on poverty since liberalization. Few studies related to these sectors, if any, have been undertaken and their inclusion was more likely to increase the value of this study.

4.2 Sampling and Data Collection

For each of the selected sub-sectors, 'areas of concentration' were earmarked and field visits undertaken to those areas. The areas of concentration represented those districts with the highest production according to national statistics (UBOS, 2004; DDA, 2003). Consequently for the dairy sector, the districts of Ntungamo, Mbarara and Bushenyi were selected for study. The three districts represented the most productive among all the districts in Uganda active in the production of milk and related products. For the maize sector, districts covering the main maize producing areas were covered. These were the districts of Iganga, Bugiri and Kamwenge as they ranked highest in maize production in 2002/2003 (UBOS, 2004).

Data collected was mainly qualitative relying on the primary responses obtained from households and key stakeholder agencies and institutions. However, effort was made to collect both qualitative and quantitative secondary data on each of the sectors considered useful for assessing the poverty impact of liberalization. A participatory approach was adopted in collecting primary data. In particular, in-depth interviews, focus group discussions, focused observation were used to collect the primary data. The selection of respondents was purposive. From each district headquarters, a list of the major farmers, traders and other stakeholders who included mainly local NGOs and local farmer groups was identified together with their location. Visits were then undertaken with the help of local guides. In all, a total of 22 dairy farmers and 19 maize farmers were visited during the data collection exercise. In addition, visits were made to 2 NGOs and 3 farmers groups in the dairy sector. In the maize sector, 2 farmer groups and 3 private buyers including a trading consortium were visited.

4.3 Data processing and analysis

Winters (2000) framework for assessing the poverty impacts of liberalization was used as the guiding framework during both the data collection and data processing and analysis. Data collected was analyzed using qualitative data analysis techniques suggested by Huberman (1994). These included but were not limited to data summary sheets, memos, tables and matrices as well as flow charts and diagrams. All responses from respondents were recorded on tape recorders and later transcribed. This allowed for preparation of narrative summaries. Information was analysed objectively and emerging themes relating to the framework variables isolated. This allowed for assessment of the perceived influence of a liberalized economic and business environment on key variables that impact household welfare.

5.0 EMPIRICAL EVIDENCE

5.1 Introduction

This section reports the results of field work undertaken in the Dairy and Maize sub-sectors in Uganda. As earlier indicated, the evidence is based on in-depth interviews and focus-group discussions with farmers, staff of community based organizations (CBOs) providing support services, as well as government officials in the areas surveyed. Primary data has been validated where possible with secondary sources. In the whole exercise, liberalization was taken as an outcome of government policy measures in the 1990s that opened the economic environment to free market forces and which affected production, marketing and distribution in various sectors. The agricultural sector was the most affected since it was the dominant sector of the economy at the time, contributing over 70% of GDP in 1995.

During the whole field exercise, focus was mainly on identifying the perceptions of farmers and key stakeholders, particularly regarding how the liberalized environment has affected variables that impact on household welfare and poverty.

5.2 Impact of Liberalisation on Poverty: Evidence from the Dairy Sector

The dairy sector is one of the sectors that had been under government control for sometime with the Uganda Dairy Corporation (UDC) dominating most of the buying of milk from farmers.

The Uganda Dairy Corporation had a network of milk collection and bulking centers scattered all over the country and was responsible for both setting the price of milk and buying this milk from the farmers. The price set by the UDC acted as the reference price on which other minor players pegged their prices. The period considered post liberalization is when independent and formal organizations came up to challenge the UDC as regards price and other market dynamics such as time of payment and these organizations started buying milk in large quantities competing with the UDC. They set up Milk Collecting Centers (MCCs) and established more formal channels for the buying of milk. The first major private operators entered the dairy sector in 1992 following the governments economic and market liberalisation policies. Five operators were licensed to set up milk processing plants and this marked the beginning of a competitive era in the sector. However, legal and institutional development lagged behind the operation of market forces and the Dairy industry Act was enacted in 1998 and the Dairy Development Authority mandated to regulate the sector established in the year 2000. In addition, largely due to the lack of sufficient funds, the DDA has not been able to perform its roles, including, the promotion of market research in dairy produce and the improvement in quality and promotion of private enterprise in production among the others.

5.2.1 Impact of liberalization on Household Production and Productivity

i) *Increase in milk production*

Over the period 1995-2005, milk production in the districts surveyed (Ntungamo,Mbarara, Bushenyi, Ibanda) increased tremendously doubling in most cases. Most farmers reported increases in milk output from 20 to 60 litres and by corresponding magnitudes. In order to respond to positive market signals immediately following liberalisation, farmers invested in acquiring more exotic breeds of animals that could afford them higher yields with the same piece of land. A common observation from farmers was that "it is changing from local breeds to cross breeds." Some farmers sold off their indigenous herds outright while others cross bred their indigenous herds with exotic breeds to improve the quality of the herds while maintaining the disease-resistant qualities of the indigenous animals. Additional evidence from dairy farmers in Ntungamo district suggests that the increase in output was deliberately planned by the farmers to take advantage of positive market signals.

Exhibit 1: Some farmers' responses on changes in milk output since 1998

George Nubo, a dairy farmer in Ibaare , Nyakyera Sub-County, Ntungamo District*: "I was producing about 30 litres, I now produce 80 litres including what we take domestically. So I sell about 50 litres in the morning and 20 litres in the evening which is about 70 litres per day. I have crossbred my animals and I look after them well and also maintaining my farm very well".*

Christopher Komere , a farmer Muyogo ,Kikoni Sub-County Ruhama County*: "I used to milk 20 –25 litres per day. Now, I milk an average of 100 – 120 litres depending on season. I milk a maximum of 120 litres but I leave at least 10 litres at home for domestic use. Through training I have managed to increase my milk yields. I had 40-45 animals but I now have over 70 animals".*

Amos Nabimanya, Nombe, Nyabuhoko Sub-County in Kajara County, Ntungamo: "*I was producing 15-16 litres of milk in 1995. I would sell 10-14 litres a day and the remaining milk would be for the calves and family consumption. I now produce 70 litres, sometimes 80 litres. I sell 70 litres and 10 litres remain for our consumption. When the market improved, I also improved my farming practices, I looked for better breeds. I sold the local breeds and replaced them with exotic breeds*

Lauben Kanyesigye, the District Production Co-ordinator and District Veterinary Officer,Ibanda District and a farmer in Ibanda Town Council*:*
"We could sell about 5 litres out of the 20 liters we were milking. This was because of the big family and sometimes during the dry season we could not sale. Now we produce about 55 *liters and we sell about 35 liters"*

The general increase in output at farm level has been further reflected by the changes in national output during the period 1990-1996 and 1997-2004 as indicated in the table below.

Table1: Milk output during the period before and after liberalization

Year	Milk Output 1990-1997(million litres)	YEAR	Milk Output 1998-2004 (million litres)
1990	-	1997	
1991	365	1998	615
1992	511	1999	638
1993	548	2000	700
1994	532	2001	900.7
1995	551	2002	1,105
1996	572	2003	1350
1997	593	2004	1, 450

From the figures in Table 1, the average annual growth rate in milk production between 1991 and 1997 was 9.2% while the average annual growth rate in milk output in the period 1998 to 2004 was 15.7%.The difference in the two growth rates is statistically significant, suggesting that opening of the markets for milk and milk byproducts indeed had a positive impact on milk production at both the farm level and the national level. However, it is important to note that despite the general increase in milk output, field evidence points out that there was no corresponding expansion of the processing and marketing sub-sectors (see also Mbabazi, 2003) to absorb the massive upsurge in milk output. This was particularly in the Ankole region but also in other milk producing areas. This created a gap in demand that was compounded by the closure of most of the milk processing factories that had been established in Mbarara.

ii. *Increase in input costs and reduction in extension services*

Although there was a modest increase in farm level productivity arising from use of improved herds, increased use of acaricides, planting of improved pastures, and a general improvement in farm management methods, further improvement in farm productivity was hampered by uncontrolled increases in input costs. The prices of farm inputs such as acaricides, farm equipment and others increased considerably limiting their usage. Most agricultural inputs including fertilizers are imported. However, previously, agricultural input imports were handled by Uganda Farm Supplies Ltd, a wholly owned government company that supplied inputs at affordable prices. The liberalization of agricultural input imports and their distribution meant that the farmers had to purchase inputs at market prices as all forms of subsidies by the UDC were removed. Not only did it create uncertainly of access by farmers, it meant that farmers could only access inputs at higher market prices. Farmers have not been cushioned against market forces in connection to imported farm inputs. Field evidence shows that the prices of imported inputs have sharply risen under liberalization. For instance, field estimates show that the cost of fertilizers, drugs and acaricides have risen by more that 60% on average over the last five years. In some cases, the prices have more than doubled.

Apart from the rise in input costs, the farmers reported that they are not getting enough inputs and lack access to extension services.

In fact, the near total absence of extension services has worsened an already worse situation. Under liberalisation, all veterinary services were privatized and under the government Plan for Modernisation of Agriculture (PMA), this is likely to continue. While prior to liberalization, government used to offer training to dairy farmers, after liberalization, much of this training has been left to NGOs and CBOs which do not operate everywhere. Where the CBOs do not operate, extension services are non existent.

The absence of extension services and the high cost of inputs has forced many dairy farmers to resort to the use of generic drugs as opposed to branded ones which, more often, are not only less effective but also less cost effective. The costs of veterinary services are simply unaffordable by the ordinary farmers. Farmer evidence suggests that the increase in costs exceeded the increase in productivity, and subsequently eroded the farmers' investment in better breeds.

Mr. Geoffrey Katuffu, a farmer from Rushoroza in Ntungamo District complained that: *"In fact, the inputs are very expensive, the acaricides and other drugs like dewormers are more expensive than before….. The expense on animals is high and earnings from milk are less. They give us shs.200=per litre. When you put this money to workers and buying acaricides and maintaining the farm, you realize we are losing".*

The combination of low farm gate prices of milk together with the high input costs have made it difficult for farmers to break even. The minimal use of effective acaricides and other drugs have combined with poor extension services to hamper further increases in productivity. Farmers lack sensitization of animal feeding, treatment and yield improvement. Most animals therefore continue to produce milk below optimum yield levels.

In general, farm management has deteriorated. Most of the farmers visited reported that it was too expensive to maintain their farms in good order.

iii. Increased farm level losses of milk

While there was a general increase in farm output for milk, there was no corresponding increase in purchases farmers' milk. Liberalization of the dairy sector appears to have failed to address the fundamental issue of creating more market outlets for excess supplies during the wet season. Milk production has consistently exceeded its demand and the farmers have over the last decade since 1997 suffered increased farm level losses of milk due to inadequate demand especially during the wet seasons. Milk losses directly meant loss of sales income but have also frustrated farmers to increase yields. Knowledge of excess milk at farms made the farmers more vulnerable to exploitation by both the formal and informal milk traders.

5.2.2 Impact on Marketing and Distribution Channels

i. *Weakening of the regulatory regime*

The regulatory regime is reported to have deteriorated following the liberalization of the dairy sector in the mid-1990s. Regulation of the sector is weak.

The DDA was created in 2000.to undertake regulatory and developmental functions in the sector in accordance with the DDA Act of 1998. However, while a legal framework was put in place, this was not followed by sufficient enforcement machinery and infrastructure. It was reported that the activities of the DDA seemed to focus on the DCL largely neglecting the activities of the private players particularly the informal ones.

This has created confusion and uncertainty in the supply chain due to poor governance. Farmers are more vulnerable to exploitation than before as the behaviour of the different actors is not monitored and regulated. The DDA has limited, if any infrastructure outside Kampala, the Capital City, and has few personnel, only 21 staff in 2002 (DDA, 2003). This has created a *laissez faire* situation and implementation of policies and quality standards difficult.

Exhibit 2: Effects of openness without regulation and Support in the Dairy Sector

Dr Bernard Niwagaba, District Veterinary Officer & Production Coordinator Ntungamo District: "*Currently we must admit DDA is very thin. They had said they would recruit staff and have regional offices to help bring sanity to this sector but they have not"*
Bernard: In about a year or two they had all closed! A number of them closed and currently I think they are about two. Because there is Kachuma and …"

Bernard: *"Yes yes because we were seeing that farmers were being cheated. They were not even following any quality regulations".*

Bernard: *"So one thing is that, those processors aaah! Some fail to sale their products. The market in Uganda is still low for cheese, butter, Yogurt and what ever they were making and they had not even accessed the outside market.I remember they were requesting government to protect them and to help them and see how they can export and may be also those things also let them down. Secondly I even think they were buying poor quality milk because of their poor testing methods. I don't think it was the best quality Milk. That milk must have been adulterated. Of course once you start with poor quality milk as the raw product, I don't expect you to get a very good product after processing".*

Mr Henry Mutabaazi, the Secretary Manager, NDAFCO, complained;
"These vendors in the informal sector. Actually they now have a bigger portion of the market; we have a regulating body, which is dead like all other government institutions. At the end of the day when you look at a scenario that frequently happens here, the milk we reject here, somebody, those milk vendors, buys it. Surprisingly at a price higher than the one we offer farmers with good milk. So abariisa, find it a problem to bring their milk to us here at the NDAFCO diary".

It is apparent that a liberalized regime that has not been accompanied by appropriate institutional framework and regulatory reforms has created "confusion" in the sector leaving the weakest members of the sector, the farmers, prone to exploitation and without protection or support.

ii. *Reduced guarantee of markets for Milk*

After opening up the buying, processing and distribution of milk and milk products in the Ugandan economy, a key result that occurred was that farmers were no longer guaranteed selling their milk. It was no longer guaranteed that all the milk produced would be sold. . Prior to liberalization, the UDC, which enjoyed near monopsony conditions, was mandated not only to purchase milk countrywide but also to guarantee fair prices to dairy farmers. Following liberalisation, and the creation of DCL which was to compete alongside other private buyers and at market prices, the obligation to purchase farmers' milk ceased forthwith. DCL has the option to buy or not buy depending on whether it served its commercial interests. Competition between DCL and the private sector increased the demand for milk soon after liberalisation and farmers not only reaped higher prices but also were able to sell all their milk produced. The situation was temporary and lasted for about one year during which time new investors were also entering the market. However, the positive market signals had attracted many small and medium farmers to increase production.

Due to the 'new competition' DCL could neither guarantee regular purchases from farmers which quite often reduced the volumes purchased nor the prices farmers were paid for their milk. At the same time, the private buyers operated purely on commercial basis, had no established milk buying centres and their purchases from farmers were more sporadic than under the UDC regime.

Most of the new entrants in the sector apart from Alpha and Paramount Diaries collapsed soon after worsening the farmers' already diminished market even farther. Increased production combined with DCLs inability to sustain large purchases of milk soon created conditions where farmers could not sell all their milk.

Since about the year 2000, farmers have had no guaranteed market for milk. DCL like the other private buyers only buy when it suits them and at prices set by themselves. This has been exacerbated by the general deterioration of the milk cooling and collecting infrastructure which has neither been expanded nor improved upon. The sum total of all this has been that liberalisation reduced the guarantee of markets previously enjoyed by the farmers.

Dr. Bernard, Niwagaba, DVO Ntungamo District: *"When all the milk was being bought by Dairy Corporation it was such that the farmers were solely dependant or were at the mercy of the dairy cooperation and the Dairy Corporation was much better when its capacity was good and it almost took all the milk produced by farmers"*

"So having seen the Rwandan market closed and a few of those plants failing to come again to buy. These farmers had nowhere to take the milk and Dairy Corporation was operating in a few areas"

There was no regulatory mechanism for the new players who entered the dairy sector as buyers and traders of milk. The absence of a regulator in the procurement and milk buying exposed the farmers to unscrupulous buyers who cheated the farmers, by taking their milk and never paying for it.

ii. *Increased Importance of Micro markets*

There has been increased reliance on micro markets since liberalisation of the dairy sector. After the opening up of the dairy sector to other players, dairy farmers found themselves having to rely more on local micro markets for essential sales of milk and mitigation of prices. Under the liberalized regime, prices often plummet during the wet seasons (March-June) and (September-November) for about 7 months each year which negatively affect farmers incomes. Increasingly, the local micro markets (small towns and villages without milk) within the milk producing locality offer better prices and payment terms to the small dairy farmer as compared to the DCL which is supposed to market milk and milk by products nation wide. The farmers are paid a slightly higher (an average of Ushs. 350 a litre compared to ushs. 200 a litre) price in cash as opposed to the relatively lower DCL price which is normally paid 2-3 months after delivery and which is often the price offered by the other licensed buyers. Some of the observations from farmers are captured below.

Exhibit 3: The Growing importance of Micro- Markets in the Dairy Sector

Mr. George Nubo, a Diary Farmer Ibaare, Nyakyera Sub-County in Ntungamo District complained: *"NDAFCO[1] pays us Shs. 200 per litre but for those who sell their milk in the village the litre is at Shs.300"*

Similarly, Mr. Steven Mwine, a small farmer in the same village, producing 20 litres daily who is not a member of NDAFCO testified:

"Those who were selling to the Dairy Corporation were not earning enough, we are better off than them in terms of income. So it never attracted me to sell my milk to NDAFCO, I have been selling to people in the village here and I have never sold to the Dairy. I get Shs.300 per litre but also in the months of June- September, I get Shs.400"

Mr. Jimmy Kadoogo, the Chairman, Ibanda Milk Project Association (IMPA), Ibanda District, IMPA exclusively sells its milk to the town folk in Ibanda town, observed that:

"We sell our milk around here in Ibanda. However, we have intentions that in future we set up a

For the smaller farmers, these local micro-markets have presented a niche opportunity that should be

sell their milk to commercial traders but locally.

The increased reliance on micro markets pointed to the increasing failure in the formal marketing system to not only offer a fair price but also to harness farmers' production capacity adequately.

iii. *Expansion of the informal distribution channels and network*

The enactment of the DDA Act in 1997 and the dismantling of the Uganda dairy Corporation (UDC) into the Dairy Corporation ltd (DCL) and the establishment of the Dairy Development Authority (DDA) to regulate and promote the growth of the sector resulted in a phenomenal growth of the informal sector in the distribution chain of milk and dairy products. According to current estimates, about 80% of all milk produced is sold through the informal sector (Land O Lakes, 2003). with all its associated problems. While informal traders have generally improved access to milk by increasing the distribution intensity especially in urban markets, this informal sector has distorted the key market parameters including quality, prices, distribution, and packaging and several other problems have arisen out of their participation in the sector. First, quality control is difficult to enforce. Consumers increasingly are fed on adulterated milk as the informal traders try to maximize on their profits by adding water to increase volumes.

Secondly, due to poor storage and packaging systems, milk spoilage is high which puts consumers at greater risk. Consumers aften buy milk only to lose it later at home.

Third, because of attempts to maximize their margins, the informal traders often perpetrate price falls when milk is abundant by offering lower than market prices.

On the whole, the emergence of a large informal network has made milk marketing in Uganda difficult to coordinate and regulate. At the worst, they have not only discouraged organized investment in the sector but also led to the collapse of the few processing plants that were established soon after liberalization. This has been mainly through selling adulterated milk, making it difficult to procure economic quantities, and 'killing' demand for processed milk by selling milk at artificially low prices to consumers.

Exhibit 4: Expansion of the Informal Distribution Channels and Networks

Mr Henry Mutabazi, The Secretary – Manager, NDAFCO, complained;
"These vendors in the informal sector. Actually they now have a bigger portion of the market; we have a regulating body, which is dead like all other government institutions. At the end of the day when you look at a scenario that frequently happens here, the milk we reject here, somebody, those milk vendors, buys it. Surprisingly at a price higher than the one we offer farmers with good milk. So abariisa, find it a problem to bring their milk to us here at the NDAFCO diary"

Henry further reported;
"The milk vendors and their agents pay cash, those vendors do not insist on quality. They buy adulterated milk. What does this adulteration do? This vendor you can't compete with him because he pays cash and pays a higher price. Actually at the end of the day they have destroyed the market for processed milk. The vendor will come and buy one litre of milk. He can afford to buy it at a higher price. He will go there and add another one litre of water. And now he has 2 litres from one litre.

"Now adulteration itself has an effect on the sector. While we are saying we have a lot of milk, do we have it? That's the question. Now this man instead of transferring 15.000 litres of real milk to Kampala, he is actually transferring 7, 500, the rest is water! Thereby denying actual milk a market. the value of milk also goes down because of these people. In the end you have people complaining that there is no market kumbe the market is there but being eaten up by the water".

iv. Breakdown of the quality control systems

The end of the UDC monopoly as the only commercial buyer of milk in the milk belt led to a complete breakdown of the quality control systems. UDC hitherto was running and enforcing quality control. Following liberalization of the sector, many private traders joined the commercial milk buying and selling without the necessary knowledge, technical expertise, professional competence and integrity to handle milk for human consumption. As a result, there has been an increase in milk adulteration, and the subsequent drop in the quality of milk.

Field evidence suggests that the DDA as a regulator of the sectors seems to put emphasis on the DCL bound deliveries neglecting the informal sector who are the biggest adulterators of milk.
Subsequently, the DDA which is the regulatory authority that came with the liberalization regime has proven ineffective with its limited coverage which excludes the informal sector that currently constitutes 80% of the dairy industry in Uganda.

Bernard:
"*yes yes because we were seeing that farmers were being cheated. They were not even following any quality regulations. . They would just purchase any milk….."*

Mr Henry Mutabazi, the Secretary – Manager, NDAFCO, testified

" The government is keen at monitoring what processor do or let me say DDA the government arm for regulating milk is more keen on going from time to time to the market and check on the milk destined for a renowned processor as opposed to checking the milk which the vendors are transporting, to see what they are taking to the market. So the processors can not grossly adulterate milk, but the vendors have the freedom to do it without any risk of being caught."

v. Deterioration of the Milk Cooling, bulking and transportation infrastructure

The process of government divesting itself of the UDC included the handover of UDC's bulking and collecting infrastructure to (DCL) new players including farmers' cooperatives without adequate resources and experience in running the network. This resulted in mismanagement and collapse of this infrastructure. Consequently, there is a complete absence of proper collecting, cooling, bulking and transportation infrastructure in number areas. Farmers have to travel long distances to get to operating collecting centres. The study revealed that in the worst affected areas such as in Ngoma County in Ntungamo district, only rich farmers with their own means of transport could deliver their milk to the collecting centres, putting the majority of the small poor farmers at a disadvantage.

While DCL's plants were handed over to farmers' cooperatives, the new private sector players were only interested in the milk and did not invest in new collecting, cooling and bulking infrastructure to meet the increased production which has worsened the situation

vi. Collapse of cooperatives from the milk supply and distribution chain

Milk is a perishable commodity that cannot be easily marketed economically on an individual basis without cooperation from small farmers. However, liberalisation of the dairy sector resulted into the destruction of cooperatives from the dairy supply and distribution chain.

Since the 1960s, cooperatives were quasi government as the cooperative movement was seen as an instrument of control and a mechanism through which the rural surplus could be extracted for the benefit of the urban dwellers while at the same time improving the incomes and quality of life of the rural communities (Mbabazi, 2005). Following liberalization, most of these quasi-government cooperatives were dismantled leaving the farmers in disarray, especially with regard to milk marketing.

Cooperating farmers were allowed to sell to private traders and vendors which rendered the cooperatives irrelevant. The collapse of the cooperatives meant that the voice of farmers has been removed from the marketing system, cannot negotiate stable prices, nor purchase contracts with buyers. The cooperatives also provided support systems and cheaper access to inputs and extension services. Some milk collecting centres such as in Bushenyi district were owned by cooperatives some of which were located in the remotest areas where UDC and other buyers could not reach. With the collapse of cooperatives, remote farmers now have no easy access to milk collecting centres and other marketing infrastructure.

Generally, liberalization has been accompanied by increased vulnerability of farmers in remote areas and increase hardship in marketing their dairy output. The perishability of the product only exacerbates the problem.

However, field evidence shows some genuine efforts of reviving cooperatives by the farmers, independent of the government system within the milk producing region. This was true in the areas visited in Ntungamo and Ibanda districts as is also true in Bushenyi. In areas where such farmer cooperatives have been reestablished, such as Ibanda (Ibanda Milk producers Association (IMPA) and Ntungamo (NDAFCO), farmers have started reaping more stable prices and more regular payments.

Exhibit 5: Destruction of farmers' Cooperatives and its impact

Bernard, DVO-Ntungamo District: "*So through the Uganda farmers association some farmers in the different parts of the district the and county started farming associations Mbarara, Bushenyi they formed theirs. So when this idea was brought to our farmers, we talked with them. They consulted even our office and we said that's a good idea. A cooperative sort of movement union, whatever you choose to call it. So we assisted these farmers to start. To start and to form a new farmers association at district level which would be an apex of these other smaller associations because it was no longer existing*".

Vii. Loss of export markets

Liberalisation resulted in failure to maintain export markets hitherto enjoyed prior to liberalisation. Uganda has lost rather than gained export markets of milk. Due to the decline in milk quality arising from weak or no enforcement of quality standards, poor monitoring by the DDA, limited sensitization of farmers and the profit maximizing informal marketing networks who adulterate milk to maximize volumes and in general a deteriorating infrastructure, most of the milk exported during the period 2000 to 2002 was of erratic quality. There has been lack of consistency in the quality of milk and nobody seemed responsible nor accountable. This failure in quality control was a big factor in the loss of the export market to Rwanda. The Rwanda government banned the imports of fresh or pasteurized milk from Uganda in 2002 partly to "protect" its consumers.

Rwanda is a good market given its proximity to South Western Uganda region which is the largest milk producing belt in Uganda. Apart from the loss of markets for fresh and pasteurized milk, exports of UHT milk to neighbouring countries either ceased or declined considerably partly due to inconsistencies in quality that was shunned by the market. The DCL which was a newly formed government company from the former UDC and required to operate purely on commercial basis could not cope up with the liberalized era in which there was no government support.
The company was inefficiently managed and could not cope with the demands of the liberalized market. The observations of stakeholders regarding the causes and effects of the loss of export markets are reported below.

Dr Bernard Niwagaba, District Veterinary Officer & Production Coordinator Ntungamo District:

"*Secondly, you know we got disappointed. Farmers had started taking their milk to Rwanda. But because of too much adulteration, the Rwandese blocked it………"*

viii. Consolidation of DCL's role as the Dominant Commercial buyer
From the farmers' perspective liberalization would ideally have led to a variety of market and demand options and therefore increased their range of market options with all the attendant advantages of competition. However, liberalization has turned out to be an opportunity for the DCL to divest itself of the costly and tedious task of collecting, bulking and transporting milk from the farmers. This responsibility now entirely lies with the farmers and whenever the DCL undertakes to do what the farmers should do in the new disposition, they are charged for it with an overwhelming effect on their real incomes. In a liberalized regime the DCL has dispensed with its obligations and responsibilities to dairy farmers, i.e. it pays them lower prices (called competitive prices!), charges them for transportation (rationalization) otherwise farmers must transport their milk to Kampala

Far from creating a competitive market for milk, with the failure and collapse of other milk processors, liberalization has instead consolidated the DCL's dominant position as a quasi monopoly, the largest commercial buyer of raw milk with devastating results for dairy farmers. Whenever, its felt that the DCL is out of the market, the milk market completely fails, private buyers then cut the prices they are willing to offer farmers and quite frequently deliberately default on paying the farmers for their milk supplies.

Joy Byabashaija, (Ibanda) *observed "Sometimes the dairy closes. That is when a cup of milk sales for Shs.50. Some of us give the milk to dogs or pigs. For the private buyers, you just request them to take your milk even if he is to default payment instead of your milk going bad while looking at it*

Robinah,Niwagaba (Ntungamo) further observed that "The guarantee would be there but sometimes they break off for a week and the milk is the given to dogs. And because the private buyers know that NDAFCO is not taking the milk, they just give you Shs.50= for a cup of milk"
It is clear that although liberalisation was meant to enhance competition and create vibrant market conditions for the stakeholders particularly the farmers, market failure has been experienced season after season. The competitive conditions envisaged have not been created and farmers and other private investors (formal private sector) have made losses and closed down. Those, which are operating, are operating far below installed capacity.

5.2.3 Impact on Prices and Price Stability

i. Decline in the real prices for milk
Following the dissolution of UDC and the opening up of the dairy sector to competition, there has been a decline in the real prices, particularly the farm gate for milk. Liberalisation of the dairy sector reduced farmers to price takers. The prevailing situation is that the milk buyers including the DCL and the private buyers determine the farm gate price for milk without consideration for the farmers' cost of inputs and production.
As long as they are assured of supply, the milk buyers always offer a lower price. Prior to liberalization, the farm gate price of raw milk averaged Ushs…200 . (US cents 15) in 1995 while the consumer price in kampala of pasteurized milk was Ushs 600/= (Us cents 45). In 2004, the farm gate price of raw milk averaged Ushs 200 (US

cents 9) which sharply contrasts with the retail price for processed milk in Kampala which is Shs. 1, 200 [3] (US cents 66) per litre i.e at 16%.

The real price of milk has fallen so low that at its highest the price of milk is lower than the price of local brew called in the local dialect as "tonto" in Ntungamo where a litre of milk is cheaper than a half litre of mineral water! The sharp fall in prices has not only exacerbated farmers losses but is a major source of frustration when they compare with other less worth while activities like local brewing that do not contribute to national welfare. The following farmers' observations help to illustrate this:

Robinah (Ntungamo), "They were giving us Shs.350 but now, they give us Shs. 200= and yet we increased our milk to earn more but instead the price fell. So if you are saying "plant legumes and pastures" so as to increase the milk production, but when you get the milk, there is no price, it discourages us".

"When I see the money I get from the milk and the costs of labour and maintenance of animals, I find myself getting nothing as a farmer. Milk currently costs Shs.200=. You know "tonto",a cup of tonto is more expensive than the litre of milk here in Ntungamo. This pains us as farmers so much"

The price decline has been worse when the cost of inputs is factored into the equation. The situation has been made worse by the relative increase in production, which, considering the perishable nature of their product makes them even more vulnerable.
At the current prices farmers can barely recover their production costs, which reduce family income and welfare.

ii. Increased fluctuations of farm gate prices

Apart from the decline in real prices, the collapse of the cooperative movement following the liberalization of the sector has increased the price fluctuations suffered by the farmers. Hitherto, with UDC as the sole buyer working together with the farmers' cooperatives, a buffer system was developed whose proceeds used to cushion the farmers from price drops especially during the flush seasons. Presently, the farmers receive low prices even during the dry seasons and are offered "almost nothing" for their raw milk during the flush season, when more than half the milk yield is poured away for lack of market. In all the interviews, farmers reported that prices of milk fluctuate between Shs.100 per litre and 200 per litre and Shs.200 -350 during the wet and dry seasons respectively. Price fluctuations are worsened by the activities of vendors. In Ntungamo and Ibanda districts, the daily prices offered by vendors and other private milk traders varies widely and sometimes changes more than six times in one season.

Jimmy Kadoogo, the Chairman, Ibanda Milk Project Association (IMPA), a newly formed farmers' cooperative society in Ibanda District complained that:

"The price of milk is very unstable; it is Shs.150 per litre during the wet season and Shs. 300-350 per litre in the dry season. It increases and falls very much especially during the rainy season where the price can fall to Shs.150 per liter".

To many farmers, these fluctuations are very frustrating because without predictable incomes, they cannot plan for acquisition of inputs and other farm improvements. Their incomes are grossly affected especially when prices are very low, often times below Ushs. 100 and some of the milk cannot be bought.

On a positive note, in the last two years, the newly formed farmers cooperatives are beginning to address the problem of fluctuating prices. For instance BUDICO, a dairy farmers cooperative society in Bushenyi district has signed contracts with major buyers which has helped to guarantee its members a price of Ushs. 300 a litre for the whole year round in 2004. Other mushrooming farmers cooperatives are working hard to raise the farmers' voices and ensure farmers negotiate better prices for the milk.

iii. Market conditions and prices which do not recognize differences in milk quality

The existing market conditions do not adequately motivate farmers to exploit their full productivity potential especially with regard to quality. For instance, the prices offered do not recognize differences in the quality of milk. While tests are often made for water content and microbial levels when milk is being sold, no tests for fat content and other nutritional characteristics of milk are made. For example, milk from local indigenous cattle tends to have

[3] The Exchange rate in 1995 was Ushs. 1250 to 1 Us $ and in 2004 the exchange rate was Ushs 1800 to a dollar.

higher nutritional value yet indigenous cattle produce less milk on average 5-10 litres per animal compared to the exotic breeds which produce twice to three times as much.
Farmers who have opted to maintain the indigenous cattle are worse off than their counterparts who introduced exotic breeds.

For example, some of the farmers in Ntungamo especially in Ngoma and Kajara counties have elected to keep their indigenous herds with the result that the milk from this area has a high fat content with an impressive alcohol score (above 80%) making it the best milk for UHT production in East and Central Africa. For among other reasons poor road infrastructure and distance, these farmers are penalized for their quality of milk with the lowest farm-gate prices in the region.
Despite the high fat content of their milk, because of lack of capital, these farmers cannot engage in basic cottage value addition to turn their milk into ghee, butter, yoghurt etc. which would have earned them up to five times the price they are now offered for raw milk.

Robinah in Ntungamo, *"They were giving us Shs.350 but now, they give us Shs. 200= and yet we increased our milk to earn more but instead the price fell. So if you are saying "plant legumes and pastures" so as to increase the milk production, but when you get the milk, there is no price, it discourages us".*

Stephen Mwine, in Ngoma Sub-county, Ntungamo District testified, *"Some of us decided to remain with our indigenous breeds because they produce better milk. The milk is sweet, thick, and has more fats which makes it better than the milk from exotic cattle. But we are paid similar prices as the milk from cross breed cattle yet they produce more milk. We should be paid more per litre because our milk is more nutritious"*

Although milk from local breeds seems to have more nutritional value, the market does not recognize such differences in quality. (What was the situation before liberalization??)

5.2.4 Impact on Technology Adoption

i. *Improvement of the dairy herds*

There has been an improvement in the dairy herds in all the dairy districts surveyed. In the districts of Ntungamo, Ibanda and Kamwengye, dairy farmers undertook measures to improve farm productivity with available land resources. Following liberalization of the sector, there was a spur in demand and better prices brought about by increased competition. Farmers were encouraged to increase output to respond to the positive market signals. Five new private milk processing factories were established in Mbarara in late 1990s and farmers knew that the best way to increase output and make more money was to introduce exotic animals especially of the Friesian type whose output of milk is more than three times the output of local breeds. In the counties of Ngoma and Kajara, in Ntungamo over the last decade dairy farmers have become more settled and modernized with fewer of them being pastoral with improvements in their herds, improved pastures and they have fenced off their farms. This is reflected in their increased yields of milk.

Exhibit 6: Farmers Adoption of New Technologies

Enos Nabimanya, Nombe LC1, Nyabushenyi Parish, Nyabuhoko, Kajara Ntungamo*: "I was producing 50 litres or 45 litres, I now produce 280 litres per day and sell 220 litres daily. We have been educated by NDAFCO, we crossbreed and we were taught about better farming practices. I have since then separated the dairy animals from the rest of the animals, paddocked the land and the dairy cows are able to access better pastures that have helped to improve their milk production."*

George Nubo, of Ibaare,Nyakyera Sub-County,Ruhaama,Ntungamo District:
"I was producing about 30 litres a day, with my Nkore animals; I now produce 80 litres everyday. I have crossbred my animals and I look after them well and also maintaining my farm very well. I had 3 workers, now I have only 2 workers. I reduced them because I fenced the land"

DR. Louis Kaboine- Resident of Ibanda Town with a farm in Ntungamo Nyabuhikye, testified:
" I started with 10 local breeds. I was milking 5 animals and producing 20 litres a day. I am producing 50 litres from the 6 cows I milk.I changed from indigenous breeds to exotic breeds and also I have planted pastures. In addition, veterinary services are near to us here in Ibanda"
Justine Kagarukaho, a diary farmer in Ibanda Town:
"I cleared the farm, removed the unwanted pastures and also reduced the number of animals on the farm, keeping the better breeds. We have crossbred our animals and this helped us in increasing milk production. In addition, we also planted pastures, which we got after a DANIDA workshop. These binyaasi have improved my milk yields a lot but basically it has been the cross breeding of the animals that has helped me most."

The exotic cattle however require higher maintenance costs and farmers are expected to cover these costs from higher prices and incomes. The high demand and high prices seem to have been short lived and farmers are currently frustrated that their investments and their efforts in general are not being rewarded under the current dispensation.

ii. Withdrawal of subsidized veterinary services and farm inputs

However, the level to which the farmers would have utilized better veterinary services and inputs has been limited by the prohibitive cost of both the inputs and services. Liberalisation led to the withdrawal of subsidized veterinary services which the government used to offer at a minimal cost. These services are beyond the reach of most dairy farmers in the outlying areas.
With competitive pricing for veterinary services, most vets moved to urban centres especially to Kampala and Mbarara where they can either handle multiple clients who can afford their services or supplement their incomes with alternative businesses especially running animal drug stores. Rural dairy farmers in South Western Uganda have suffered the brunt of this policy.

There is an obvious absence in the region of vets and their services which are critical in a sector with delicate animals requiring constant and professional care for assured results. The farmers in Ibanda have given up on these services and have turned into their own vets.

The over arching cost of the subsidies has completely eroded the farmers' real incomes from milk sales.
While the nominal prices of milk seem to have increased, the increase of prices for the inputs have been bigger and faster worsening the farmers' situation and reducing the economic value of the dairy sector to the farmers.

Joy Byabashaija, (Ibanda)
“We were milking about 50 litres when the Dairy plant of Kagongo had just started. We were given a bicycle and a churn. There were even clothes given which were meant to be put on when transporting milk and they were selling to us barbed wire at a cheaper price. But when these changes started, things degenerated instead of improving. And now that things are owned by individuals, they are after making profits and they are ever complaining about increased taxes and they only want to develop themselves.

Justine Kagarukaho
“The previous market was good but this current market, because of inflation is not as good. It is not enough. You have to buy barbed wire from the hardware shop. It is no longer like then when we could get the wire and keep paying in installments, by cutting on our milk.”

In addition to the privatization of veterinary services which has increased the costs of such services, liberalization resulted into the closure of government owned farm supply shops that used to supply farm inputs at lower prices. Before liberalization, through farm supply shops, farmers used to buy inputs including wheel barrows, barbed wire, milk cans, bicycles, pasture seeds etc on credit and at reduced prices. Currently, these items are scarce, more expensive and have to be paid for in cash. All the farmers interviewed in Ibanda were still using milk cans and milking gear supplied with DANIDA’s help over 10 years ago.

The lack of effective regulation and the demise of government’s hitherto established supply mechanism through farm supply shops across the cattle belt has meant that despite the high prices farmers pay for inputs, the quality of these inputs cannot be guaranteed.
Farmers complained about the proliferation of drugs especially the generic type which though fairly priced are not as good as the branded ones they were used to and whose quality was guaranteed. Government supplied inputs used to have recommended (also subsidized) retail prices.

In the new dispensation, there are as many prices as the suppliers and the variety of drugs on offer leaving the dairy farmers the task of negotiating a fair price at the mercy of these suppliers. Jimmy Kadoogo’s testimony, a dairy farmer in Ibanda district illustrates this:

Jimmy Kadoogo,IMPA Chair,Ibanda:
“*The acaricides are now expensive. Drug companies have increased and we do not know which one is the best. There are many adverts about drugs and we get confused. Sometimes we are forced to buy a cheaper drug knowing that it is not so effective but because it’s what we can afford, we have no alternative.”*

5.2.5 Impact on Wages and Employment

i. *Farm Employment has reduced*

The number of people employed in the dairy sector in general and on dairy farms in particular has reduced despite the increase in production. The Liberalization era has seen an improvement in herds, with increasing numbers of farmers phasing out their indigenous animals and introducing high grade cross breeds. Farmers have fenced off their farms with improved pastures and abandoned the practice of having roaming herds. Traditional pastoral practices were more labor intensive than the modern approaches recently adopted. Consequently, the number of people employed as farm hands and herdsmen has decreased. The following reports from farmers illustrate this:

Exhibit 7: Changes in farm employment following liberalisation

George Nubo, Ibaare LC1, Ngoma Parish, Nyakyera Sub-County, Ruhaama County*, “I have 2 workers. I reduced them from 3 because I fenced the land”*

ii. Nominal wages increased but real wages have remained stable

The nominal wages for farm workers seem to have marginally increased, but the real incomes of these farm workers over the last 10 years appear to be stable.

5.2.6 Impact on Risk and Vulnerability

i. Risk of loss of Milk output is higher

There has been an increase in the loss of milk by farmers due to low and unpredictable sales. The supply of raw milk in the last 10 years has outstripped its demand leaving the farmers with big volumes of unsold milk. Hitherto, with production substantially low, the Dairy Corporation in collaboration with farmers cooperative societies operated bulking and collecting centres and could virtually buy all the milk produced.

The increase in production, following the liberalization of the sector, has not been followed with commensurate investment in new cooling,collecting and bulking centres.

The milk cooling and collecting infrastructure has remained largely as before with the mushrooming farmers' cooperatives trying to construct a few cooling centres in some remote places. The result has been that existing collecting centres cannot accommodate all the milk produced. For instance, NDAFCO's collecting centre in Ntungamo with a capacity of 15,000 litres per day cannot match the daily production in the district estimated at twice (more than 30, 000) and the situation worsens during the wet season. The situation is worsened by the fact that DCL, the largest commercial buyer is not regular in its purchases. The DCL chooses when to buy and is no longer under obligation to purchase farmers' milk.

Exhibit: 8: Farmers Experience with loss of Milk Output

Karissa Yoramu, The Secretary Manager of Ibanda Diary Cooperative Society-Kagongo,Ibanda *observed that:*

"*The Dairy Corporation is unreliable, and cannot regularly pick milk from the collecting centres. Whenever such failure arises; the farmers from the area in question face the risk of losing their milk daily for as long as such a delay lasts*".

"The price is not stable. It is fluctuating very much and sometimes the Diary Corporation does not take the milk for some days, claiming that there is a vehicle breakdown and as a result our milk stays uncollected for days. We use our money to cool it here at the Collecting centre, which when they eventually decide to pick the milk, we do not recover from them".

From the above, it can be seen that farmers are at a higher risk of loosing their milk output than before liberalization of the sector. Persistent milk losses due to unreliable buyers and limited cooling infrastructure capacity deny income to farmers and increase their farm losses.

ii. *Risk of loss of Milk Sales Income has increased*

Even when farmers sell their milk, they are increasingly losing proceeds from their milk sales due to non- payment and high default rates by private milk buyers. In the pre-liberalisation era, the likelihood of such losses was limited, when the UDC was the principal player in the market

Exhibit 9: Uncertainty over milk Sales receipts

Karissa Yoramu, The Secretary Manager of Ibanda Diary Cooperative Society-Kagongo,Ibanda,

"What we liked about the Diary Corporation was that they could not default to pay us. Even when they would take long, at least we would be assured that we would be paid ...... those private buyers default in the payments. They promise farmers but do not pay them".

"However, not all private milk buyers were honest; quite a few of them do not pay. The practice we have observed is that these private milk dealers come, purchase milk, either pay cash or after a week and as the farmer gets used to that arrangement and starts giving milk on credit they start prolonging the interval period between receiving milk and paying for it and then some finally disappear permanently without paying.

Dr.Bernard Niwagaba,DVO Ntungamo District:
".....ah and default permanently and change place to go to buy from another area so farmers lost ... and they would dictate also on the price. Because they would know the farmer is at their mercy"

Currently, the proliferation of private milk buyers has increased the default rates. These buyers unlike the DCL start off by paying cash, and eventually they buy on credit with shorter payment periods than the DCL but finally disappear and refuse to pay permanently.
Because most of the milk from farmers (about 80%) is bought by these private buyers the extent of the risk of losing milk incomes by the dairy farmers is higher than before.

iii. Price risk due to price instability has increased

Liberalisation has not addressed the problems related to the price spiral which the dairy sector suffers owing to seasonal price fluctuations. Prices fluctuate widely between the dry and wet seasons when prices are high and low respectively.Prices range from Ushs. 300-350 in the dry season and fall to as low as Ushs 100 a litre during the wet season when there is increased milk output due to increased availability of water and flush pastures that enable dairy cattle to produce more milk. Unlike in the pre-liberalisation days when the UDC, then mandated by government to buy milk, provided price guarantees and ensured a stable prices, today farmers face a higher risk of loss of income from fluctuating and declining prices.

"Whenever the DCL for some reason cannot buy its share of the milk, the milk market fails completely. And in the absence of the Dairy Corporation, the private buyers as the only players pay incredibly low prices for milk. ………….."

The near monopsony role of the DCL coupled with its own inefficiencies as a commercial operator puts dairy farmers at a greater risk. Prices are completely unpredictable and frustratingly on a steady declining trend as there appears to be no concrete measures from the government to ensure farmers are paid a fair price for their milk, let alone buy all of it. The risk of income loss has therefore increased.

5.2.7 Liberalisation and Changes in the Milk Supply Chain

The milk supply chain in the pre-liberalisation era had farmers selling their milk to the Uganda Dairy Corportion through their Cooperatives. The UDC would process the milk and sell it to consumers through distributors and retailers. Liberalisation led to the dismantling of the Uganda Dairy Corportion and the farmer cooperatives, the

Dairy Corporation Ltd. was formed and new investors were encouraged to compete with the DCL as processors and distributors of milk. *(Refer to Appendices i and ii).*

These changes apart from changing the character of the milk supply chain, affected the various players in the chain differently.

i Farmers' Cooperatives

Liberalisation led to the collapse of dairy farmers' cooperatives. Before liberalization, government encouraged the development of organized farmers' cooperatives, which solely worked for the benefit of their members. Further more, before liberalization government policy required dairy farmers to sell their milk produce through their cooperatives to the UDC although there were a few licensed milk traders who sold milk mainly to institutional customers. Dairy farmers would access farm inputs from Uganda Farm Supplies, a fully Government owned parastatal at subsidized rates which in turn compelled farmers to sell their milk through cooperatives to the UDC. Farmers' cooperatives used to owned milk collecting and cooling centers, undertook the bulking of milk from numerous small dairy farmers, negotiated better prices with the UDC and guaranteed credit to their members from the Uganda Farm Supplies Ltd. The policy of encouraging organized farmers' cooperatives was abandoned in the wake of liberalization.

The opening up of the dairy market and the dismantling of the UDC meant that milk could be bought from farmers without going through farmers' cooperatives. As a result, farmers' cooperatives collapsed. All the benefits that used to accrue from cooperatives to their members ceased.

Dairy farmers were therefore exposed to unregulated and unlicensed milk vendors who cheat them through extremely low prices and defaulting on payment for the milk. The farmers' cooperatives used to cushion the farmers from the seasonal price fluctuation but the milk traders currently take advantage of these fluctuations to cheat the farmers instead. The demise of the Uganda Farm Supplies following liberalization has made farm inputs too costly for the dairy farmers.

Field evidence suggests that dairy farmers are trying to reorganize themselves into farmers' groups such as Ibanda Milk Project Association (IMPA) and Ntungamo Dairy Farmers' Cooperative Society (NDAFCO) in Ibanda and Ntungamo districts respectively. However, their effectiveness as marketing channels for milk is still low because of inadequate resources. The collapse of organized farmers' cooperatives has had the effect of disenfranchising the farmers in the milk supply chain.

ii. Milk Traders

The pre-liberalisation supply chain was strictly regulated and controlled and the few traders allowed to trade in raw milk outside the processed milk supply chain had to be licensed. This regime was completely phased out with the new dispensation after liberalization. The market was opened up for any player wishing to trade in milk both raw and processed.

Under the regulated framework of the pre-liberalization era, the licensed traders could only buy milk at government fixed prices, which were often higher than the market prices; the liberalized market has allowed traders to buy milk at market prices, which are lower than the previous prices.

The post liberalization era is characterized by increased volumes of milk *which* the traders can now buy at lower prices with a positive effect on their margins. The end of the UDC monopoly and its direct procurement of milk from the farmers has reduced competition for milk at this level of the supply chain to the advantage of the milk traders and the farmers detriment.

iii. Distributors

There has been a proliferation of milk processors with liberalization. This has increased the number of suppliers of processed milk and other dairy products from one to six processors including the Dairy Corporation Ltd, Alpha Diaries, Paramount Diaries, Jesa Diaries etc.

These processors deal in a wide variety of products, which has improved supply terms to the distributors due to increased competition. In addition, the distributors have a wider range of products to offer their customers. The entry of new players in the milk processing business and the increasing competition has resulted in the introduction of more value added products previously not locally available including yogurt, cheese and butter.

However, liberalization introduced a laissez faire atmosphere in the sector. The sector is hardly restricted opening up the market to unscrupulous unlicensed milk vendors trading in unprocessed milk with all its risks. The sale of unprocessed milk was restricted in the pre- liberalisation era and all traders in raw milk were licensed. Competition from these unlicensed milk traders selling raw milk has reduced the market share for processed milk from 80% before 1995 to 20% by 2005. Moreover, this has introduced a new phenomenon of milk adulteration, which did not exist before liberalization.

In this regard, a prominent milk distributor in Kampala had this to say;

"If you want to know how much money we have lost to liberalization, you only need to compare our current sales with Kayonza Distributors (a prominent distributor of soft drinks and other alcoholic beverages, which are liberalized but well regulated). We were making more money than him 10 years ago; he is now light years ahead of us…. These fellows selling raw adulterated milk are responsible for all our problems in the milk market."

On the whole, field evidence suggests that distributors of processed milk are worse off than their counter parts in other regulated sectors.

iv. Consumers
Liberalization has increased the variety of locally produced dairy products available in the super markets at affordable prices. These products were not available locally before liberalization, they had to be imported and therefore, they were scarce and very expensive.

The prices of processed milk have considerably increased in the last ten years. The Prices of processed pasteurized milk have on average increased by 100% from Ug.Shs.600 per litre in 1995 to Ug.Shs.1, 200 in 2005 (sometimes prices drop to Ug.Shs.1, 000 in the wet season). As a result despite the risks associated with unprocessed milk, it's cheaper to buy raw milk than it is buying processed milk. In addition, both processed and raw milk are adulterated with water, which has increased the risk of milk going bad after purchase.

5.3 The Impact of Liberalisation on Poverty: Evidence from the Maize Sub-Sector

5.3.1 Introduction

Maize is an important crop that is virtually grown all parts of Uganda. Presently it is one of the most important cereal crops widely grown and is a major part of the diet of both rural and urban communities as well as institutions in Uganda. The crop occupies a strategic position in the country's food security alongside bananas, cassava and sweet potatoes. Maize also provides farm households; produce buyers, processors, exporters and transporters with income. It is therefore an important crop from both the food security and income-generation points of view. The maize sub-sector is estimated to provide a living for about 2.5-3.0 million households, close to 1,000 traders/agents and over 20 exporters. Maize has of recent become a major export crop in the regional markets, rising from about US$6.0 million in 1990 to an estimated US$11.8 million in 2000 and US$10.4 million in 2001. It is probably on these premises that Government, the development partners and the private sector attach great importance to the promotion of maize.

As with other commodities in Uganda, maize production is carried out by two groups of farmers, the predominant small scale and the emerging medium/large scale commercial farmers. Typically small scale and medium scale farmers have holdings of between 0.2-0.8ha and 0.8-2.0ha under maize respectively. In Uganda, maize production is generally characterized by low yields regardless of farm size that result in high unit costs and lead to low returns. Yield levels for maize range between 1.0 and 1.8 mt/ha (i.e 4 to 7 bags (100 kg) per acre) and unit costs are as high as Shs. 120-170 per kg.

Maize producers and traders in Uganda are faced with high production/distribution costs that compress their margins at the farm gate. At the same time, grain mills within Uganda and more generally within the region operate below full capacity because they cannot purchase adequate local supplies of maize. This circumstance drives up their unit operating costs and compresses their margins as well. The problems that face farmers, merchandises and millers are complex and systemic. The markets in which all three participants operate are thin and susceptible to large price swings. It is certainly true that physical bottlenecks exist to the operation of efficient supply chains, such as the absence of secure storage facilities, distribution/ transport technologies and shortage of rural electric power.

As far as demand for maize is concerned, prices are key determinants of marketing and its competitiveness. Due to the very volatile prices, maize export performance has tended to be erratic, with low prices working backwards, which in turn reduce production and export incentives.

Around the early 1980s, the Government of Uganda (GoU) identified five major food crops, namely maize, beans, groundnuts, sesame and soyabeans, as non-traditional agricultural exports (NTAEs). The parastatal Produce Marketing Board (PMB) was mandated to procure and market these commodities. The primary objective of PMB was to procure, store, grade and sell food to deficit areas, thereby ensuring food security. Any surplus was then to be sold outside the country. Marketing under the PMB-controlled era was, however, characterized by several flaws including diversion of crop finance, lack of prompt payment and inability to reach the rural farmers.

Following these and other related shortcomings, government decided in the early 1990s to open up the marketing of agricultural produce to competition. The objective was to improve efficiency, restore price incentives and consequently generate producer confidence.

Under the liberalized marketing system, farmers are generally paid cash for their produce. However, government sets no price and hence the price paid to the farmer is that offered by the buyer. The marketing of agricultural produce therefore takes place either on the farm, at the buyer's store, rural market, mill or in the urban market.

Even after the liberalization of the economy and diversification of the export base, trading in food staples (such as maize, beans, millet and sorghum) has mainly been confined internally or to the neighbouring countries. Most of the major grain traders look at food aid agencies, notably the World Food Program (WFP) as the main export avenue. Even across the Kenyan border, where most of Uganda's grains have found their way, very little formal export has been recorded. The high domestic production costs, coupled with high transportation costs and other transaction bottlenecks, effectively meant that Uganda could not be competitive beyond the neighbouring states. With a total regional consumption of approximately 20 million mt, Uganda can only offer 0.5% into this market. Uganda has not been able to penetrate the regional market due to lack of organized commercial exports of maize and other grains. As such, Uganda has been considered an unreliable supplier of quality grains and a supplier of last resort. This image was based on the lack of vibrant commercial sector participation and the fact that grain production is from approximately 2.0-2.5 million scattered farming families who produced at a subsistence level, with unreliable commercial surpluses.

The under-capitalization and poor liquidity of the grain-trading sector has further exacerbated the problem. This situation has been made worse by the reluctance of the banks to loan to either the productive or the speculative sectors of agriculture. The whole grain-trading sector is basically dependent on the value of property held in Kampala by the active grain traders, hardly a base for agricultural modernization.

In order to unlock the full potential that improved farm to market linkages afford, small holders must embrace new business models, be reorganized into more commercially oriented businesses and integrate their farm level production into more sophisticated supply chains that can effectively link them to potential customers throughout the region. Uganda does have a comparative advantage within the region for export of agricultural products because of good rainfall patterns (which allows for two crop seasons a year) and good soils. However, tapping into such regional markets requires the supply of products of the right volumes and quality, an efficient and effective private sector performance as well as prices that can generate farmer production incentives.

However, institutional or "software" obstacles pose an even greater obstacle: Thus, for example: i) Lack of standardized maize grading and classification standards throughout the region increases the risk of completing transactions across borders. ii) The lack of institutions for proving third party assurances of maize quality (based on regionally harmonized standards), tradability and collateral hamper grain-marketing efforts and increase trading risks to merchandisers. iii) Limited market depth and limited "tradability" of local maize on regional or international commodity exchanges causes local markets to be less liquid and more volatile than they need be.

With the retreat of government from active intervention in Uganda's maize marketing and distribution systems, both the quality and the supply of maize have declined. Still, maize remains by default the most potentially valuable staple crop that Ugandan farm producers can grow. It offers farmers the flexibility in storing their wealth and some measure of liquidity. Thus, it can be dried or stored, fed to livestock, consumed, or sold for cash.

5.3.2 Impact on Household Production and Productivity

i. *Increase in household Production of Maize*

Household production of maize has increased over the last 10 years due to an expansion in acreage.

Most maize farming households in the key maize growing districts expanded their acreage which in most cases doubled their output. Most farmers on average doubled their acreage from a range of 1-5 acres to a range of 10-20 acres. In Kamwenge and Iganga districts which were surveyed, most of the maize farmers happened to own land above 10 acres which facilitated expansion of acreage to respond to the positive market signals that followed the liberalization of the sector. In most of the maize growing regions, expansion in acreage has been facilitated by the adoption of improved technology which in almost all the cases involved the use of ox-ploughs in land preparation, planting, weeding and other farm related activities. *Exhibit 10*, Illustrates the farmers' experience and efforts to increase maize output to take advantage of the liberalized maize market.

Exhibit 10: Farmers' Efforts to Increase Maize Output

Kyanga Moses, a maize farmer in Kahungye, Kyakabimbiri Sub-County ,Kamwenge District said:

"A decade ago I was growing 4 – 5acres and got 10 bags per acre. Before the land degenerated, I would get 10 bags per acre. I recently opened up a new land and fenced it up. I harvested 160 bags of maize last season. Iam the leading producer of maize in Kamwenge"

Johnson Ndyamureeba, a maize farmer in Kahungye, Kamwenge submitted:

"Ten years go around 1995, I used to harvest 70bags on 10acres of land but today I harvest 100bags excluding the maize we eat at home.

ii. *Farm productivity increased due to adoption of new technology*

Farm productivity is the production per unit area. Farm productivity has almost doubled with the adoption of better and more efficient farm technologies especially the introduction of the ox-plough. In the past decade, farmers used a hand hoe and various other rudimentary methods on their farms which greatly hindered their productivity.

But today a growing number of farmers in the key maize growing districts have adopted the use of Ox ploughs for tilling and planting on their farms making it efficient and fast because production can go on the whole day unlike the using of hand hoes where humans get tired.

Exhibit 11: Farmers Experiences in Adopting New Technologies

Johnson Turyamureeba in Kamwenge, a maize farmer in Kahungye, Kamwenge submitted:*"Ten years go around 1995, I used to harvest 70bags on 10acres of land but today I harvest 100bags excluding the maize we eat at home. This increase is as a result of using of Ox ploughs. Before we were using hand hoes"*

Kyanga Moses, a maize farmer in Kahungye, Kyakabimbiri Sub-County ,Kamwenge District said:

"I recently opened up a new land and fenced it up. I harvest about 160 bags. It is the oxen I acquired. They encouraged me to open up new farmlands.. And the animals are mine".

Further more, in the pre liberalisation era, farmers produced much lower than they do in the present, because of that all there produce was sold in a short time. With the help of Produce Marketing Board there was no need to hold your harvested maize for long. PMB took maize produce to its various collecting stores and the farmers did not need storage facilities.

But today because of the tremendous increase in production, which is not matched with market availability and market assurance this has led to the need of having storage facilities as an individual farmer.
This has marked the increased investment in farm storage facilities in the maize growing areas. Most farmers agreed that they have storage facilities and the stores were holding their produce from the previous season. " They held between 100 – 150 bags in the stores." However, it should be noted that the adoption of more efficient technologies was occasioned by the increasing cost of farm labour and the decline in soil fertility requiring increasing usage of fertilizers.

iii. *The increasing cost of these technologies and labour is constraining further expansion of acreage and farm productivity*

5.3. 3 Impact on Marketing and Distribution Channels

i. *Loss of guaranteed market and sales for maize*

The dissolution of the Produce Marketing Board, which previously guaranteed both market and price for maize, has resulted in the loss of a relatively more guaranteed market for maize. The collapse of the PMB, has resulted in a multiplicity of small resource constrained buyers offering very low prices.

Exhibit 12: The Changing Market for Maize - Increasing Market Uncertainty

Kwesiga Christopher, Kamwenge*:*
"No there is no guarantee of selling the maize. .....i have said maize is in the store without market……Produce Marketing Board would give us better pay and we would be assured of market"

Apulinari Karinzi, Kamwenge:
"In those days we were assured of market and a stable price for the maize we produced because of the presence of Produce Marketing Board. But with their absence the market of maize has completely changed there is no assurance of market and sales for maize at all."

Kwesiga Christopher, Kamwenge:
"The previous market was motivating and we had morale. We would grow and sell our produce very well but this particular market has caused us even to plant less because it is not promising….."
WM, Iganga: "There are no contracts with any one to sell the maize. We as farmers produce and wait for anyone that comes up with money and we sell the crop. We have not signed any agreements to sell to anyone…"

Further more, field evidence shows that the external liberalisation of the maize sector opened the regional market for exports of maize from Uganda. Indeed, exports of maize grain and maize floor increased since 1995. However, the limited capacity of the produce buyers has excluded the maize producers from the expansion of the demand for maize within the East and Central African region achieved in the last 10 years. While there are two seasons of maize in Uganda, most of the East African region have one season of maize as a result of the wide spread drought in the sub region. World Food Programme (WFP) procurement from Uganda has increased from 20, 000 metric tons in 1995 to about 60, 000 metric tons by 2003 (Maize Study, 2003). The political instability in Zimbabwe has contributed to the WFP's increase in sourcing maize from Uganda. The WFP is the largest commercial buyer of grain in East Africa with annual expenditure of up to U$ 200 million per annum. Because of increased uncertainty in the market for maize and to mitigate losses of maize output, some of the able farmers have been forced to invest in improved farm storage facilities to ensure their output can be safely stored even up to the next season. During the field visits, which was approaching the harvesting season, most farmers in Kamwenge and Iganga still had unsold maize in their farm stores. Not only does this add inventory costs to farmers, but the smaller farmers with poor farm storage facilities loose a substantial portion of their unsold produce.

iii. Uncertainty in the distribution

The end to railway transportation for the maize crop from Kamwenge and the shift to the more costly and more cumbersome road transport for the crop has increased the uncertainty in the distribution network of maize.

Kyanga.Moses,*a maize farmer in Rukunyu,Kamwenge district, observed, "Before, when the train came to Kamwenge there was a verified distribution people would come from Kampala and buy maize in large quantities at a better price but those who come in trucks pay less."* Shifting to the expensive road transport, worsened by the state of the roads in Kamwenge, has increased the logistic cost of maize procurement from Kamwenge and as a result has reduced the real prices maize farmers receive for their crop.

Multiplicity of small buyers offering very low prices and yet they cannot purchase all maize produce for distribution to other areas has also led to the Uncertainity in the distribution. They buy in small quantities these quantities may be used as raw materials, sold as food and various other petty consumption but its never marketed or distributed in various other areas. The limited market available if these small buyers don't come back confirms this.

Most of the produce buyers who entered the sector at the demise of the PMB were speculators, without a long term commitment to the sector and as a result have not invested in storage infrastructure. Given the seasonal nature of the maize sector such capacity would have provided the capacity to stabilize prices during scarcity times. This lack of investment in the upstream part of the maize supply chain explains the on-farm investment in storage facilities. PMB was the only purchasing organization that maintained storage facilities that are no longer available to the sector.

5.3.4 Impact on Prices and Price Stability

i. *Decline in nominal and real prices*

There has been a tremendous decline in the price of maize comparing the past ten years and the present the change in price is almost unbearable by most farmers. The prices of maize have continued to decline in nominal and real terms and with speculators taking over the market in the wake of the collapse of the PMB, there is increased price instability from season to season. In the past decade (around 1995), a kilogram of maize in Kamwenge district was selling at 300 – 350 shillings. Today, a kilogram was reported to be selling at between Ushs. 80 – 100. And there is no price discrimination in the buying of maize. All the various buyers pay the same price for a kilogram of maize. The low price has resulted into intense frustration for the farmers and majority of the farmers are planning to give up farming because they don't see a future in maize production. Not only has the price of maize continued to decline but also the relative price of maize.

The price of other commodities has tremendously increased as compared to the price of maize. As a result farmers find it difficult availing themselves with basic and essential needs in their households. This continued decline in the relative price of maize aggravates poverty at household levels and affects the well-being of the farmers and their families.

The farmers in anticipation of better prices in a subsequent season have taken to the habit of hoarding their crop hence the increase in on farm storage facilities.

In December 2005, when the survey team visited Kamwenge, the new harvest season was about to start yet most farmers still had their harvest from the previous season.

For example, this hoarding of produce in a season has a great impact on the next season's prices. As the next season ushers in, farmers happen to be having the previous season's harvest, which increases supply and as result lowers the general price level. This clearly explains the constant fluctuations and low prices received by farmers.

Exhibit 13: The Impact of Declining Prices

Johnson Turyamureeba in Kamwenge District *: "a few years ago when a farmer sold 100 bags you would expect over 3 – 2.5 million shillings but now it is even hard to get 1 million."*

"This time, I am paid shs.100=per kilogram. It is not even enough to buy salt. For one to raise enough to buy salt, you need to sell a lot of maize. I have 100 bags and I have no where to sell the maize. I've kept the maize so that the price may increase but there is no hope"

Habibu Katambura in Rukunyu Kahungye Sub-County, Kamwenge District
:: *"Previously, we got money, which was useful. Things were not expensive as they are today."*

Gerald Kahagama, a maize farmer in Kiziba III, Kamwenge District:
"Previously I had 7 acres, then I would produce over 40=-50 bags but because of our reduced income and the increased cost of labour, I decided to reduce the acres. So I now have 5 acres. The maximum number of bags I produce now is 25 bags but even this is still reducing because of reduced attention to the farms and the farm has also lost its fertility".

Habibu Katambura in Rukunyu Kahungye Sub-County, Kamwenge District
"*The market is dying. We still have our produce in the stores. There are no buyers. Those who are there complain of high taxes*."

Apulinari Karinzi, Kamwenge District: *"The market is dying completely.The price has tremendously declined. We used to get Ushs. 250 or 300 per kilogram but now it is just Ushs. 80 a kilo and even then there are no buyers."*
Habibu Katambura, Rukunyu Kahungye Sub-County, Kamwenge District:
"Previously, we would get Shs. 250 or 300…This was during 1990-1995. Nowadays, prices can go down to as low as Shs. 50 a kilo."

On the other hand, this trend of market imperfections is partly a result of the fact that the private buyers of maize are not committed to the trade.
They simply jump in the market having speculated the gains and then quickly pull out if they perceive a change in the market.

Unlike the days of the PMB, when the board had persistent role of buying farmers' produce, the private buyers are simply "snap buyers" attracted by events in the market with no intention of creating a permanent market but one from which they would benefit.

ii. Maize prices became more unstable and unpredictable
Prices of maize, particularly farm gate prices have not only declined, but the decline has been accompanied by increasing fluctuation and instability. Prices not only change widely between seasons but there are wide intra-season variations.
Because most of the produce buyers who entered the sector at the demise of the PMB were mainly speculators, without a long term commitment to the sector, little has been to provide for stabilization of seasonal prices to farmers. As a result, little has been done to invest in storage infrastructure upstream the supply chain. Given the seasonal nature of the maize sector, such infrastructure would have provided the capacity to stabilize prices during scarcity times. This lack of investment in the upstream part of the maize supply chain explains the on-farm investment in storage facilities. PMB was the only purchasing organization that maintained storage facilities which are no longer available to the sector

Exhibit 14: Price Instability - The Farmers' Challenge

Apulinari Karinzi, Kamwenge District:
"No its in no way stable. The price keeps fluctuating now and then. In the days of the Produce Board, each season, they would fix a price after consultations and in most cases favored farmers. At least we would not complain…in most of the cases, we appreciated the prices we were getting and after a price was fixed, it would not change anyhow"

Kwesiga Christopher, Kamwenge District:
"Previously, the price was more stable and it would steadily fall but not like now. Its too much we actually don't know what to do…"

5.3.5 Impact on Technology Adoption

i. Better Farm Technologies have been adopted

In an effort to increase farm output and take advantage of the surge in demand and increased incomes soon after liberalization of the sector, a big proportion of maize farmers adopted improved farming technologies on their farms. Prior to liberalization in the 1970s and 1980s, most farm work including planting, weeding, tilling, harvesting was all done manually with the help of rudimentary tools like hand hoes, rakes, pangas, knives and many others. When you study the figures of the yields in the past in comparison to the acreage they were very low yet at the time soils were not over cultivated they were still very fertile. Today better farm technology has been adopted by maize farmers in most of the maize growing regions. In Kamwenge district in particular, majority of the farmers visited use Ox-ploughs to till land and plant.

The numbers of humans employed have reduced tremendously on these farms because its efficient and economical to use ox ploughs than employ very many people. They farms in Kamwenge employ 3 – 4 workers to work with the oxen as compared to an average of 8-10 previously employed on most maize farms.

The use of ox-ploughs in particular has contributed to the doubling of maize output in Kamwenge district since 1995. This is also true in some parts of the districts of Iganga, Bugiri and Kapchorwa in eastern Uganda. On average, each farm using ox-ploughs has been able to double its output.

Apart from use of improved tools, better farming methods also have been adopted. In most places, farmers have tried to use various other methods to help the land regain its fertility like crop rotation, mulching, use of manure but majority have adopted the use of fertilizers to improve their productivity, although they complain about the price.

Exhibit 15: Technology Adoption and Increase in Output

Habibu Katambura in Rukunyu Kahungye Sub-County, Kamwenge District:
"When I was cultivating with a hand hoe, I would grow about 3 acres. I had to acquire ox-ploughs in order to expand my acreage."

Habibu continues:
"The market is now dying. We still have our produce from last season in the stores. There are no buyers. Those who are there pay us almost nothing complaining of high taxes. The previous market was better.

Kwesiga Christopher, Kamwenge District:
"Previously, I used to have a farm size of between 4 to 7 acres. Now I have over 20 acres of maize… and this has been possible because of using ox-ploughs acquired five years ago in 2000"

ii. Cost of Agricultural inputs has risen

Cost of Agricultural inputs like fertilizers, labour, the ox ploughs, seeds et cetera has gone up during the liberalisation era. Majority of farmers on the farms visited in Kamwenge had a problem with their high expenditure on inputs for example, previously they spent 1000/= per day on paying laborers but today they pay between 1500/= - 2500/= per day. Further more, the cost of maintainace of ox-ploughs has also gone up. Following the adoption of ox-ploughs in the key maize producing districts, there has been a rise in the monthly cost of maintenance for ox-ploughs. The cost has risen from around Ushs. 80, 000/= an ox-plough around the year 2000 to about Ushs. 200,000/= in 2005. Additionally, in incase of breakdowns, ox-ploughs have to be sent to Kenya or the eastern parts of Uganda particularly in the district of Kapchorwa for repair. This substantially increases the cost of maintenance and reduces on farm profitability. The adoption of improved technology has not been accompanied by the establishment of appropriate repair and maintance facilities to support the effective usage of that technology. While the field evidence did not suggest that some farmers are reverting back to old rudimentary technologies for production, the absence of such facilities has only helped to increase farm costs, both investment costs and operational costs.

Exhibit 16: Farmers Experiences with Increasing input costs

Kwesiga Christopher, *of* Kamwenge District*:*
" I spend I million on inputs to aid the day to day running of the farm that's exclusive of Harvesting, sorting and the storing fees."
"I started by using fertilizers but they became expensive and since the returns were low because of the poor market I stopped using fertilizers are so expensive"

Habibu Katambura in Rukunyu Kahungye Sub-County, Kamwenge District, *commented:*
"Previously, we got money which was useful. Things were not as expensive as they are today. Fuel is expensive. Also spare parts for our Ox-ploughs. Going to Kampala, the transport is very high. Fertilizers are being sold around but they are also expensive. With totally no support from the government, we have to buy them ourselves on market prices which make life difficult for us as farmers"

5.3.6 Impact on Risk and vulnerability

i. *Reduced Risk of non-payment*

Before liberalisation there was a high risk of non-payment. The Produce Marketing Board, the only government mandated agency to purchase maize from farmers at the time, used to take maize grain from farmers but never paid in time. This used to put farmers at a high risk because they had to pay workers, pay for fertilizers and cover various other costs. The lack of prompt payment by the PMB had began to hinder the farmers' development. There was no certainty when payment would be received. Farmers would not receive money when they most needed it which had started to negatively affect their family welfare and investment decisions. In the post liberalisation era, the situation has changed tremendously since farmers are paid cash on delivery, which has reduced the risk of non-payment

Exhibit 17: Non-Payment-the Farmers' Nightmare

Habibu Katambura in Rukunyu Kahungye Sub-County, Kamwenge District:
They used to pay us poorly. They would default paying us, but still they were better than today's traders. With PMB we were always assured of the price and a market of our maize. Even when payment would delay, we definitely knew that we would be paid.

Habibu *Continues:*
"They used to pay us poorly, they would default paying us. With liberalization however, we can sell to various buyers as long as they are available. There is give and take, on receiving the maize the buyer pays in cash"

Ruhamire Robert of Kaziba III in Kamwenge District:
"During the time of PMB, there was something that we did not like. They would come and take our maize but would take long to pay us. They would only pay us whenever they felt like and then we would suffer. We would take the maize to Kamwenge, where they would measure it and give us a receipt acknowledging our money but they would take long to pay us or sometimes would not even bother to pay.
Today, the buyers come here and buy our maize on cash basis. There is some ease but I am not happy with the price".

According to farmers in Kamwenge and Iganga, liberalization has brought about a reduction in poor payment, which has improved farmers development.

ii. *Risk of Loss of maize grain in Storage*

Lack of guaranteed market and poor storage facilities for the produced maize has led to loss of the maize that is, maize getting infested by pests while in stores for a long time and the poor storage facilities affecting its quality thus leading to buyers rejecting it. Majority of farmers in the survey districts particularly in Kamwenge district all had maize in storage without buyers and without any expectations of getting market. Most held between 100 – 150 bags in their stores. In the pre-liberalisation era, farmers were assured of market by the Produce Marketing Board. Many farmers in the past produced without fear, but today most farmers agreed that the previous market was motivating and they had morale.

Exhibit 18: Loss of maize in storage

A maize farmer in Iganga District:
"*We would grow and sale maize very well but this particular market has caused us to plant less because its not promising. Even the little we harvest gets spoilt in stores…. Our stores here are not modern and the maize easily gets spoilt"*

Johnson Turyamureeba of Kahungye, Kamwenge District::
"I have 100 bags in store and I have nowhere to sell the maize. I have kept the maize so that the price may increase but there is no hope. It may even get spoilt before I sell it".

.

iii. *Increased Exposure to External Shocks*

Removing the ban on export of maize, prior to liberalization, government's policy on maize was to maximize food security and as such there was a ban on maize exports. The sectors were therefore local and protected from the dynamics and volatility that characterize the international commodity markets. Following liberalization, the export ban was lifted and the sector is increasingly exposed to the demand and supply conditions especially in the regional market. Maize is the most traded item in the EAC and COMESA by volume.

Although imported maize grain and processed maize were not on the list of banned imports prior to liberalization, opening up the maize market to international dynamics has increased the volume and variety of flour Imports of maize grain and processed maize flour. There is increasing interest from foreign investors, especially the big players in the regional market in Uganda's milling sector. East Africa's biggest milling business; UNGA Millers has since bought Uganda's second largest miller, Lira Millers.

- Imports of inputs-
- Purchases by the WFP ensured some level of demand

5.3.7 Impact on Wages and Employment

i. *Farm employment declined from 10 to 4 on average.*

The level of employment in the maize sub-sector has generally gone down. The average number of workers employed on most farms has been reduced. Most of the small farms that initially employed. about 5 workers have reduced them to only two while the medium sized ones which employed about 10 and more workers have also reduced them by about 60% on average. This was due mainly to improvement in technology and rising labour costs. The adoption of technology which has been relatively cheaper than the human labour caused farmers to replace the human labour with machinery.

Exhibit 19: Post Liberalization Reduction in farm labour

Johnson Turyamureeba of Kahungye,Kamwenge *says,*
"When using ox-ploughs in the initial tilling of the land, I employ 2 people but in the planting of seeds, I employ 4 workers….. previously we would use hand hoes but now we use Ox-Ploughs."

Gerald Kahagama, Kamwenge:
"I had 4-5 workers 10 years ago. I reduced my workers because my income reduced. I no longer have permanent workers because there is no money to pay them. I employ contract labour"

Apulinari Karinzi, Kamwenge:
"*Ten years ago, I had about 10 workers whom I have since then reduced; I used to spend about Shs. 300,000=(Three hundred thousand shillings) on all of them a month, I now have 4 workers who use the oxen on the farm. I pay them about Shs. 2,000 per day (60,000 every month".*

It is evident that the adoption of improved technology following liberalisation has reduced the level of employment in the maize sub-sector. The terms of employment has also changed. Most workers used to be employed on a monthly basis, earning a salary. With liberalization, workers are paid for each day worked. All employment is now on contract labour basis. While these terms of employment appear to have been beneficial to farmers who have ensured that labour remains cost-effective and higher levels of labour productivity are maintained, it has created income uncertainty for the workers.

Although the level of farm labour has generally declined, liberalization of the maize sector and the subsequent collapse of the Produce Marketing Board led to the incursion of the private sector buyers into the buying and selling of maize which increased the employment levels along the supply and distribution channels. Agents, retail buyers and wholesalers including supporting middlemen such as truck drivers have managed to secure employment for themselves along the channel

ii. *Farm wages have increased*

The wages in the maize sector have generally increased. The average worker used to earn about Ushs. 30, 000 per month. However currently, workers earn an average of Ushs. 60, 000 a month i.e. Ushs. 2000 per day worked..

Although the nominal wages have increased, the real wage measured by the purchasing power seems to have remained the same. This has been due to the increase in the inflation levels in the country and the relative fall in the purchasing power of the local currency. This has caused workers to demand for more wages as they witness no improvement in welfare in spite of the increase in wages. At the same time, the farmers themselves have not realized increased income to cover the increase in wages.

As result, farmers find that labour costs are going up while workers find that the increase in wages has not positively affected their welfare.

In the circumstances, contract labour has replaced permanent labour as farmers try to circumvent the impact of a bigger wage bill on their income. Farmers have also resorted to paying workers on a piece rate basis instead of time rate basis. Workers themselves are always demanding for a higher wage even when they know their employers may not have the money due to the very low prices of maize.

Exhibit 20: Increase in Nominal Wages at farm level

Apulinari Karinzi, , Kamwenge *says,*
"All of them,(10 workers),I used to spend about shs. 300,000=(Three hundred thousand shillings)" and then adds that, "I now pay them about 2000= shillings per day (60,000=@ per month)

Kyanga Moses, a maize farmer in Kahungye, Kyakabimbiri Sub-County *says,*
"I have about 6 workers but there those on contract basis whom I pay 1500= a day, I have already told you in a season, I spend on them about 1 million shillings excluding what I spend on harvesting, sorting and storing. This also costs me about Shs. 500,000=".

Moses went further:
"*The number of grain traders have increased, increasing employment in the grain distribution and marketing.The PMB had agents around who would take our maize and the PMB would collect from them. But now there are other traders who put up stores and start buying maize directly from us."*

Johnson Turyamureeba in Kamwenge*:*
"By 1995/6, we had started selling to private buyers –Baganda and Basoga. They would come here and buy maize directly from us. Previously we would sell to PMB and we would take the maize to the PMB."

However, the fact remains that the formal employment in the maize sector has reduced giving way to informal employment. There has been an increase in the number of grain traders to fill the gap left by the dissolution of the Produce Marketing Board.

5.3.8 Liberalisation and Changes in the Maize Supply Chain

The maize supply chain in the pre-liberalization started with typically subsistence small farmers who sold their crop in small quantities at government fixed prices to the Produce Marketing Board (PMB) through their farmer groups. The PMB would store, grade and sell maize to either the millers to eventually sell to the consumers in the domestic market or store the maize as strategic food reserves for future use. Liberalization led to the dismantling of the Produce Marketing Board (PMB) which has since been replaced by a consortium of large grain traders, the Uganda Grain Traders Ltd. (UGT). Maize trade was opened up to everybody who is interested, traders now compete with farmer groups where they still exist, buying maize from farmers at market prices since the price controls were phased out.
Secondly, the international market was opened up to Uganda's maize with the lifting of the ban on exporting maize which has extended the supply chain beyond Uganda's borders.(*Refer to Appendices v and vi,*)
The uniqueness of the maize supply chain is that each of the players in the chain has a special role they play. Though these roles have not changed much, the transformation of the supply chain as a result of liberalization has changed the fortunes of the various players.

i. The Small Holder Farmers

The maize sub-sector is currently estimated to provide a living for about 2.5-3.0 million households (PSFU, 2003)[4].Field reports indicate a national yield by these farmers of 500,000-800,000 mt of maize grain. The market for farmers' maize was guaranteed through their farmer groups and the Produce Marketing Board (PMB) which the maize at government fixed prices, which were always above the market prices.

Liberalisation opened up the market to all sorts of traders destroying the market security farmers used to enjoy. Farmers are no longer sure of a market for their produce and the prices they receive are so low, worsened by the large number of middlemen along the supply chain. Pre-liberalisation, farmers used to buy subsidized inputs, specifically high yielding seeds and fertilizers from Uganda Farm Supplies Ltd, a wholly government owned company. The end of the subsidy and the demise of the Uganda Farm Supplies following liberalization have made these too costly for the peasant maize farmers.
Field evidence suggests that most of the farmers have resorted to using farm retained seeds and have stopped using fertilizers which has resulted in a tremendous decline in their yields and crop acreage.

ii. The Maize Farmers' Groups
Liberalization has weakened the role of the farmer groups in the maize supply chain. Before liberalization, farmers groups (owned and run by the farmers themselves) used to have the exclusive role of aggregating the maize crop from the multitudes of small holder farmers. They dried, sorted, grading and stored the maize before selling it to the Produce Marketing Board (PMB). Through this consolidation of functions, the farmer groups minimized the number of middlemen along the supply chain and in the process maximized the proceeds for their members.

Though the PMB and the farmers' groups bought the maize on credit, their prices were higher. Under the liberalized marketing system, farmers are paid cash for their maize. However, government no longer sets prices and hence the price paid to the farmer is meagre in comparison.
The groups used to guarantee credit for their members to Uganda Farm Supplies Ltd, which would supply affordable inputs to the farmer on credit.
The current regime requires them to pay for the inputs at market prices and in cash. The farmers cannot afford even the most basic inputs like high yielding seeds and fertilizers. As a result, the farmers' maize yields are declining and given their scale of operation, they are more vulnerable to poverty given their low volumes and even lower prices. In Uganda, maize production is generally characterized by low yields regardless of farm size

iii. The Maize Traders
The pre-liberalisation supply chain for maize was strictly controlled and the only traders allowed to trade in maize outside the official channel running between the farmers' groups and the Produce Marketing Board (PMB) were local millers who produced maize flour for the consumption of the farmers and institutional consumers like schools, the forces, hospitals and prisons. This arrangement was completely dismantled after liberalization. The market was opened up to everybody to start buying maize. .

The post liberalization era is characterized by hordes of speculators pausing as traders. Field evidence indicates that close to 1,000 traders and agents and over 20 exporters nationwide are in the maize business. This proliferation of middlemen only serves to reduce the farmers' incomes from maize.

Before liberalization the farmers' groups which had exclusive rights to purchase maize from farmers invested in post harvest equipment (drying, sorting, grading) and storage. Liberalisation meant that these facilities were sold off, and the new speculative entrants into the sector have not invested in any of these but their haulage trucks! Field findings, indicate that despite their low incomes from maize most farmers have been compelled to invest in on farm storage to make up for the storage shortage in the sector and provide a safety net to hold their harvests in anticipation of better prices in the following seasons, as a result of the erosion of their market guarantee.

iv. Millers
At the processing level, grain milling is the most widespread power-driven small-scale industry in Uganda, in both urban and rural areas. Maize mills account for more than 70% of all grain milling activity. *(PSFU, 2003, Pg 11).*One of the most fundamental positive effects of liberalization is the explosion of milling as a value addition activity in the rural maize economy. This has created an investment avenue to the farmers, and has diversified their agrarian

[4] The Private Sector Foundation (PSF). 2003. *The Maize sub-sector Competitiveness Report*. The Private Sector Foundation, Kampala.

dependence on farming. Besides, these mills have introduced a new dimension of paid employment for people living in the maize belt and providing processed maize flour to ordinary households and institutional customers. The proliferation of private millers using intermediate technology has reduced the cost of milling making it easier for farmers to add value to their produce at a minimal cost.

The opening up of the market meant that it was easier for farmers to access maize mills because they are wide spread in the maize belt. Field evidence indicates, that prior to liberalization farmers could only eat maize in its most rudimentary form as maize cobs, but with this new dispensation, rural maize farmers can partake of the fruits of their own sweat at a very affordable price.

Fred Nkaire, a maize farmer in Iganga, observed that:
" We are now eating posho, like people in Kampala (elite urban dwellers),we could only eat millet meal before!"
It's clear that the increased value addition activities since 1995 have boosted the local consumption of maize flour. Maize flour is now more available and has remained affordable.

v. Produce Marketing Board (PMB)
Before liberalization, Produce Marketing Board (PMB)'s role in the maize supply chain was to procure, grade, market and sell maize among other commodities.
Thus the PMB had a fundamental role in the supply chain to store these maize stocks. The PMB, fixed and enforced the minimum price for maize every season. Government's primary objective in establishing the PMB was to manage the country's strategic food reserves and ensure food security. The PMB therefore strictly, enforced the government ban on exporting maize outside Uganda's borders; the PMB played the role of the regulator in the maize supply chain
The PMB was dissolved during Liberalisation, and its assets including its warehouses, stores and food silos sold off to the private sector. The privatization of the PMB's assets gave rise to new prominent players in the supply chain, the large grain traders and processors. Utilising the PMB's former facilities, they procure, sort, grade and to some extent store maize before sale.

Liberalisation opened up the maize sector to international markets and lifted the government ban on exporting maize and other grains. This policy reversal created a new export market opportunity for Uganda especially in Kenya, which suffers an annual maize shortage of between 200,000 -1.2 Million Metric tones. Field evidence indicates that Uganda's annual Maize yield was approximately .450,000 metric tonnes, in 2003, out of which 20% is lost every year to poor post harvest handling, 16% is traded informally across the country's various porous borders and only 50,000 Metric tonnes is export grade. Maize has of recent become a major export crop in the regional markets, rising from about US$6.0 million in 1990 to an estimated US$11.8 million in 2000 and US$10.4 million in 2001. The vacuum resulting from dissolving the PMB and the need to take advantage of the export opportunity led the large grain traders and processors to form a private consortium of grain traders, the Uganda Grain Traders Ltd, (UGT). UGT has invested US$ 7.8 million in an ultra modern grain-handling complex fitted with a weighbridge with a holding capacity of 30,000 metric tonnes. As a result of opening up the export market, maize has become a major export crop in the regional markets, rising from about US$6.0 million in 1990 to an estimated US$11.8 million in 2000 and US$10.4 million by 2001.

vi. World Food Program (WFP)
Liberalisation, opened up the market to the World food Program, which could not be part of the market with government's ban on exporting maize still in place.
The WFP is the biggest commercial player in the sector, with annual purchases of 120,000 Metric tonnes of maize

6.0 DISCUSSION

The foregoing field findings seem to suggest that firstly, liberalization led to the destruction of farmers' cooperatives which deprived the farmers of their only means of cooperative marketing and the benefits that accrue from it. Most farming households were left as economic orphans with no form of support both in production and marketing.

Secondly, liberalization seems to have resulted in the decline of both the nominal and real incomes of the rural farming households i.e those directly engaged in primary production. Incomes fell from unsold family output and declining prices. Since liberalization, not in any one season have farmers sold 100% of their saleable produce to the market. Costs of production have been steadily on the increase which has negatively reduced the profitability of farming activities for both large and small scale farmers.

Thirdly, Agricultural Marketing Structures and systems that assisted in transferring rural produce to organized markets were dismantled and never replaced effectively. The market structures that emerged after liberalization were largely informal with the quality of the private sector inadequate to effectively replace the structures that operated before liberalization. Liberalisation required a private sector that was sufficiently capitalized, able to make necessary investments in marketing infrastructure and with the necessary competencies to market farmers' produce effectively both domestically and internationally. This seems not to have been the case. In both the maize and dairy sub-sectors, the marketing systems are not working efficiently and effectively. It has largely remained informal and inadequate.

Fourthly, the employment level has gone down at farm level and seems to have increased in the informal trade sector. The number of people in informal trade seems to have gone up although it was difficult to quantify. Wages have increased nominally 2-3 times but their worth measured by the purchasing power seems to have remained static.

Fifthly, the biggest impact on incomes and welfare seems to have been on rural farming households. The welfare of rural farming households has significantly deteriorated. Farmers are increasingly frustrated because continuously, their efforts have not been recognized nor rewarded by market forces. They feel abandoned by the government, which hitherto assisted them. Their struggle for survival against harsh market forces, is manifested in their struggle to revive and re-establish farmers' cooperatives in form of farmers' "groups" or "associations" independent of the government. The prevailing situation is a mixture of frustration, despondency and resilience against a harsh market. Based on the foregoing, it's possible to observe, that liberalization has deepened and worsened poverty among the farming households in the maize and dairy sectors in Uganda.

Liberalisation seems to have encouraged the expansion of the informal sector in both the milk and maize sectors. Informal traders seem to have taken advantage of a *liberalization without effective regulation scenario* to maximize their trading opportunities. An increase in the market share of informal traders from 20% in 1995 to 80% by 2004 in the case of the dairy sector attests to this phenomenal growth. This has increased incomes, employment and improved the welfare for the traders' households. It's apparent that informal traders seem to have benefited most from the liberalized environment, in many cases at the detriment of farmers and the formal sector players such as the processors, distributors, retailers and consumers.

However, the formal trading sector which also emerged after liberalization including processors, distributors, retailers among others, seem to have had mixed benefits. Their opportunities were curtailed by the absence of an effective regulatory and support framework to enable them cope with the challenges of an open market. Private entrepreneurs, who were motivated to invest in the sector by the new liberal dispensation, were weak with limited experience and capital and needed nurturing and support, which have not been forth coming. Subsequently, many have made losses and closed down; those still persisting are doing so at marginal levels. Those whose businesses closed down are more likely to have descended into poverty while the risk of the rest to go the same way has increased. The formal trading sector has suffered higher risk and liberalization has increased their vulnerability.

Consumers seem to have both lost and benefited from liberalization. For example there has been an increase in the variety available to consumers of milk and other dairy products, though these are at comparatively higher prices. At the same time, the high prices for pasteurized packed milk have forced consumers to increasingly rely on raw unprocessed milk with all its health and hygiene risks. In the case of maize, the increase in maize milling activities has increased access to processed maize flour within affordable price ranges, which has improved the livelihoods and food security of both farmers and consumers.

7.0 CONCLUSIONS

i. Liberalisation – Farmers and Rural Households

Liberalisation has contributed to the deepening of rural poverty. The welfare and real incomes of most rural farming households is generally worse off than before. Most rural farming households can be termed as 'economic orphans' with little support if any for cost effective production and marketing. Like all commodities, there has been loss of relative value of most of the agricultural output.

Liberalisation has not resulted in any meaningful value-addition processes, which would have ensured that farmers produce gains value over time. Instead it has increased the vulnerability of households to exploitation

ii. Liberalisation- Traders, Employment, Market Functioning and Long Term Stability

Although liberalization opened new opportunities to the private sector, the incompetence of the private sector only resulted in the expansion of trade at the informal level and only limited expansion of the formal trade/marketing of agricultural output in the two sub-sectors. The emergent marketing structures and systems have become less effective and frustrating at least from the point of view of the producers-i.e. the farmers.
Market efficiency has gone down and increasing portions of agricultural out put have remained unsold. The liberalised market regime has failed to effectively link the producers to markets both local and export markets.

iii. Liberalisation and Consumers
Liberalisation affected consumers both positively and negatively**.** Consumer prices of agricultural produce have not gone down but instead are regarded as higher than their true value i.e. over priced. Quality has also been declining in most cases and is still unreliable. There is no system to assure the quality reaching consumers and regulations meant to protect consumers are not implemented**.**

iv. Liberalisation and Government
Liberalisation of the two sectors saved government annual crop finance subventions to the PMB and the UDC. However, although government policy has been not to directly tax agricultural produce, ordinarily, government would benefit from increased incomes to producers and traders and increased consumption arising there from. Indirect taxes on consumption would benefit government revenue. In both sub-sectors, there was no evidence of growth in incomes for households. However, incomes of the informal traders seemed to have increased resulting in increased consumption at this level. However, the growth of the informal sector meant that income from trade licenses to local governments has been minimal. Further more, liberalisation has not been accompanied by the required regulatory and promotional capabilities of the institutions created to do so. Though institutions were created to undertake regulation and promote orderly growth of the sectors, they were never strengthened to implement their mandates effectively. Consequently, there have remained gaps in regulation, promotion and supportive infrastructure, which have not enabled the liberalised markets to function properly. Its apparent that government has not gained in terms of direct taxes nor income growth for farming households to spur consumption of indirectly taxed goods. Because of generally declining incomes for the farming households, income inequalities between urban and rural households have widened.

8.0 BIBILIOGRAPHY

Bibangamba, J.R. 1996. *Marketing of Smallholder Crops in Uganda*. Fountain Publishers, Kampala.

Dairy Development Authority (DDA). 2003. *Dairy Development Authority Annual Report 2001/2002*. Kampala, Uganda.

Land'O Lakes Uganda. 2003. *Report on the Dairy Sector in Uganda*. Kampala.

Mbabazi, P. 2005. *Supply Chain and Liberalisation of the Milk Industry in Uganda.* Fountain Publishers, Kampala.

Miles, M.B. and Huberman, M.A. 1994. *Qualitative Data Analysis*. 2nd edition, SAGE Publications, London.

The Government of Uganda. 2004. Ministry of Agriculture Animal Industry and Fisheries (2004), *Performance, Monitoring and Evaluation Report* for July 2003-June 2004, Entebbe, Uganda

The Government of Uganda. 2005. *The Poverty Eradication Action Plan* (as revised), Ministry of Finance, Planning and Economic Development, Kampala.

The Private Sector Foundation (PSF). 2003. *The Maize sub-sector Competitiveness Report*. The Private Sector Foundation, Kampala.

Uganda Bureau of Statistics 2005. Statistical Abstract, 2004/2005. UBOS, Entebbe, Uganda

Winters, L. A. 2000. *Trade Liberalisation and Poverty*. Centre for Economic Policy Research and Centre for Economic Performance, London, February.

9.0 APPENDICES

Appendix i- Interview Guide – Dairy Sub-Sector

Interview Guide – Dairy Sub-Sector

1.0 Household Production

1.1 What was your daily milk yield in 1995, 10 years ago?

1.2 What is your current milk yield milk yield?

1.3 How much of the yield was for sale, 10 years ago?

1.4 How have your increased sales of milk impacted your domestic needs for milk?

2.0 Productivity and Technology Adoption

2.1 What explains your increased or reduced daily milk yields in the last 10 years? (Increased stocks, Better breeds, supplementary feeding, extension services, employing more people etc…)

3.0 Wages and Employment

3.1 How many farm laborers were employed on your farm 10 years ago?

3.2 How much did you spend on those laborers a month?

3.3 How many such laborers do you currently employ on your farm?

3.4 What is your current monthly expenditure on them now ?

4.0 Marketing and Distribution Channels

4.1 How were you selling your milk 10 years ago?

4.2 How different is your current selling channel from the one you used 10 years ago?

4.3 Do you have markets for your milk today?

4.4 How does your current milk market compare with your market for milk 10 years ago?

4.5 How do you compare the market stability for milk 10 years ago and now?

5.0 Prices and Price Stability.

5.1 What prices were paid for milk10 years ago?

5.2 What prices are you paid for your milk today?

5.3 What is the behavior of milk prices now as compared to 10 years ago? (Note: Price fluctuations)

5.4 What portion of the consumer price for milk is received by the farmer?

5.5 Has this portion increased, reduced it or has it had no effect?

6.0 Households and Markets

6.1 How do prices for milk compare from 10 years ago and now?

6.2 Do you have a stable market for your milk?

6.3 Do you have a wide choice of whom to sell your milk?

6.4 Do you have easier access to markets today than before?

6.5 Is there any guarantee that when you produce your milk you will sell it?

6.6 Do you sell your milk on Contract basis?

6.7 What type of contracts do you produce under?

Interview Guide – Maize Sub Sector

1.0 Household Production

1.1 What was your maize yield in 1995, 10 years ago?

1.2 What is your current maize yield a season?

1.3 How much of the yield was for sale?

1.4 How have your increased sales of maize impacted your domestic needs for maize?

2.0 Productivity and Technology Adoption

What explains your increased or reduced yields of maize in the last 10 years?

(Increased acreage, Better breeds, better planting materials- farm shop maize seeds, extension services, employing more people, availability of inputs, extension visits, farmer training, establishment of demonstration centers and seed multiplication, means of opening land, availability of credit etc…)

3.0 Wages and Employment

3.1 How many farm laborers were employed on your maize fields 10 years ago?

3.2 How much did you spend on those laborers a season?

3.3 How many such laborers do you currently employ on your farm?

3.4 How much do you spend on them a season now?

4.0 Marketing and Distribution Channels

4.1 How did you sell your maize 10 years ago?

4.2 Do you have markets for your maize crop?

4.3 How does your current maize market compare with your market for the same crop 10 years ago?

4.4 How do you compare the market stability for maize 10 years ago and now?

5.0 Prices and Price Stability.

5.1 What prices were paid for maize 10 years ago?

5.2 What prices are you paid for your maize today?

5.3 What is the behavior of maize prices now as compared to 10 years ago? (Note: Price fluctuations)

5.4 What portion of the consumer price for maize is received by the farmer?

5.5 Has this portion increased, reduced or has it had no effect?

6.0 Households and Markets

6.1 How do prices for maize compare from 10 years ago and now?

6.2 Do you have a stable market for your produce?

6.3 Do you have a wide choice of whom to sell your product?

6.4 Do you have easier access to markets today than before?

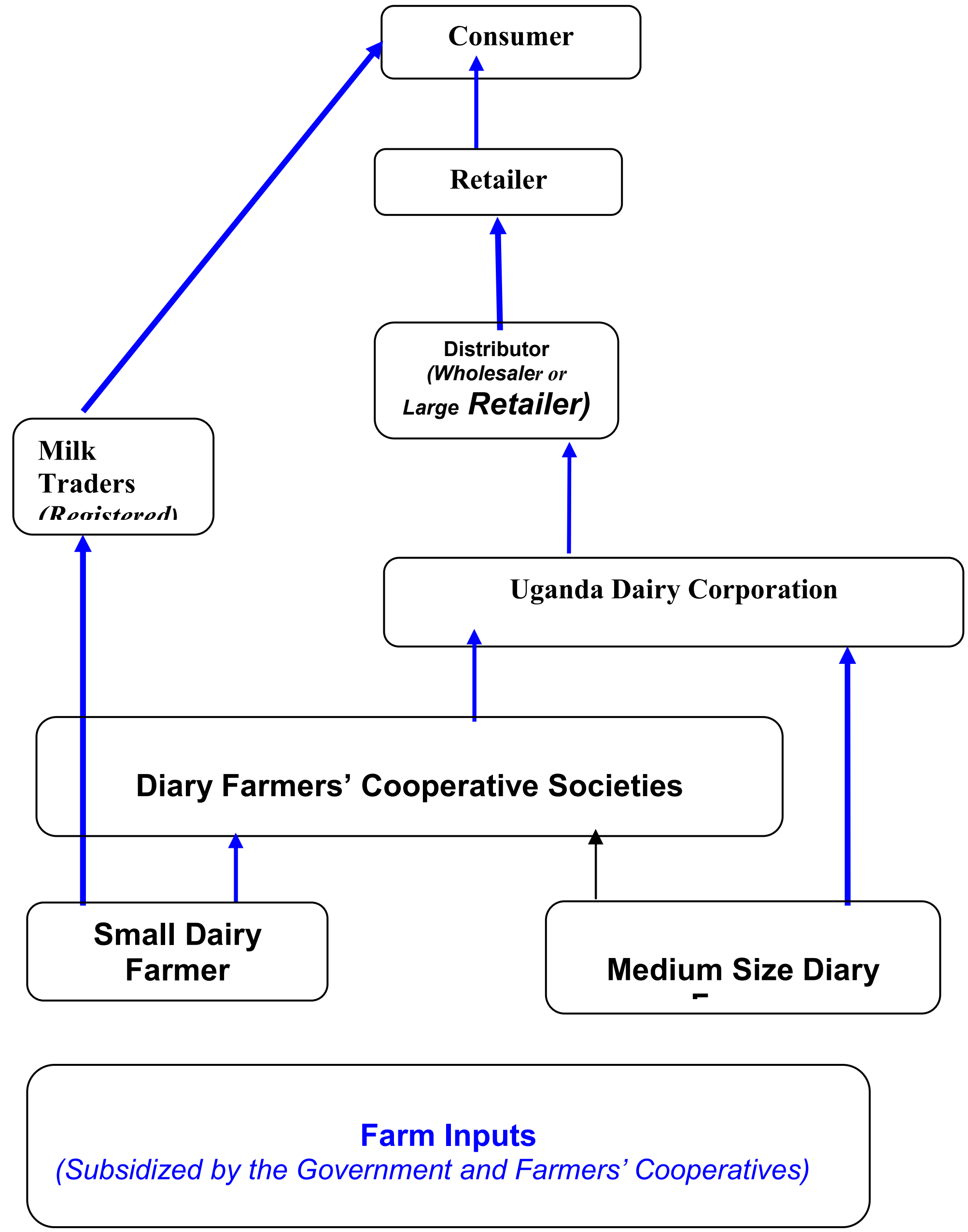
6.5 Is there any guarantee that when you produce you maize you will sell it?

6.6 Do you sell your produce on Contract basis?

6.7 What type of contracts do you produce under?

Appendix iii- Pre- Liberalisation Milk Supply Chain

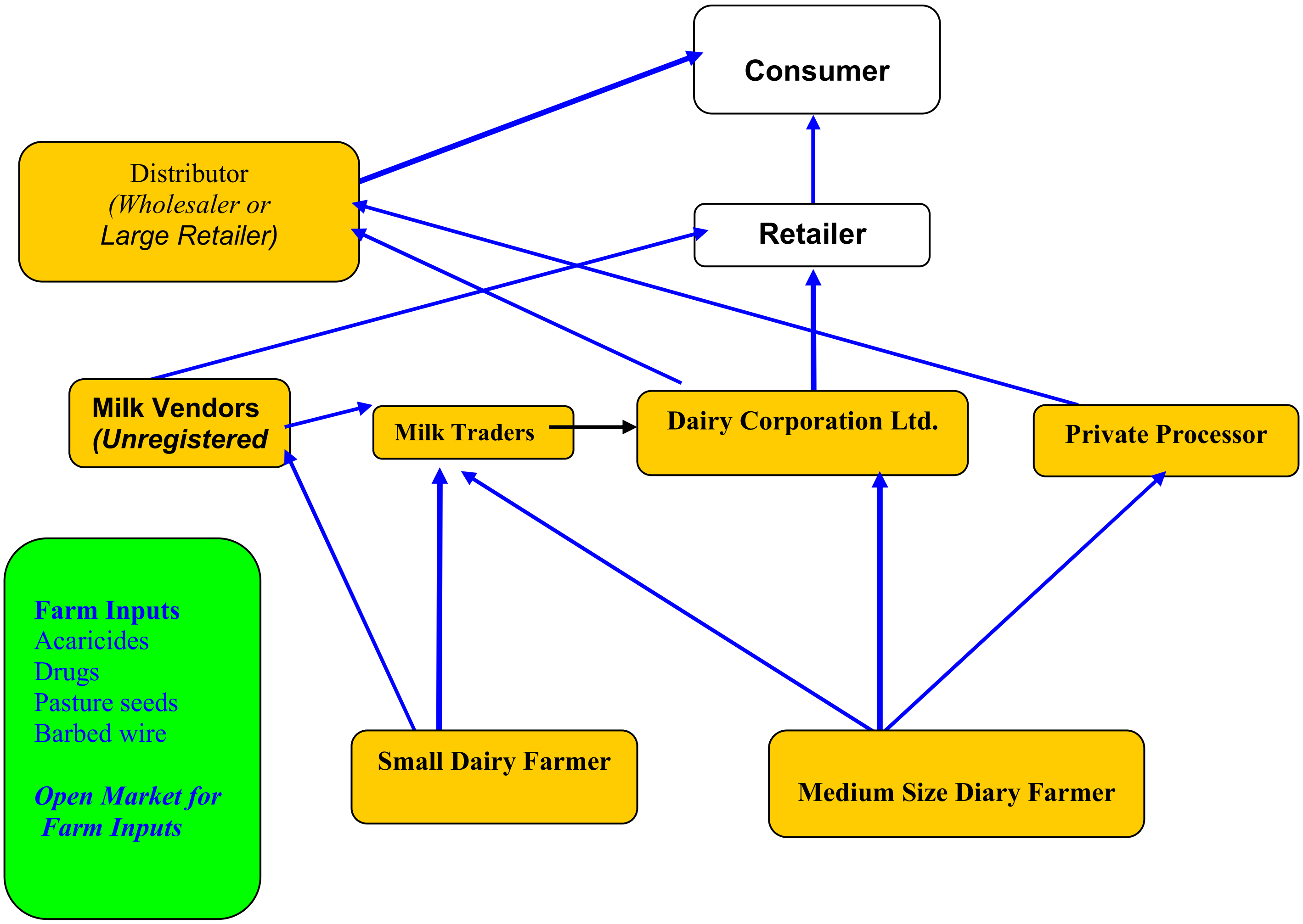
Pre- Liberalisation Milk Supply Chain



Prior to liberalization, milk would flow from the farmers often through their cooperatives to the **Uganda Dairy Corporation (UDC)** .UDC would then sell the milk to consumers through retailers .This chain accounted for 80% of all milk produced and consumed, only 20% of the milk yield was sold through licensed milk traders. Farm inputs subsidized by the Government and the Cooperatives were affordable and easily accessible through Uganda Farm Supplies Ltd. a wholly government owned parastatal.

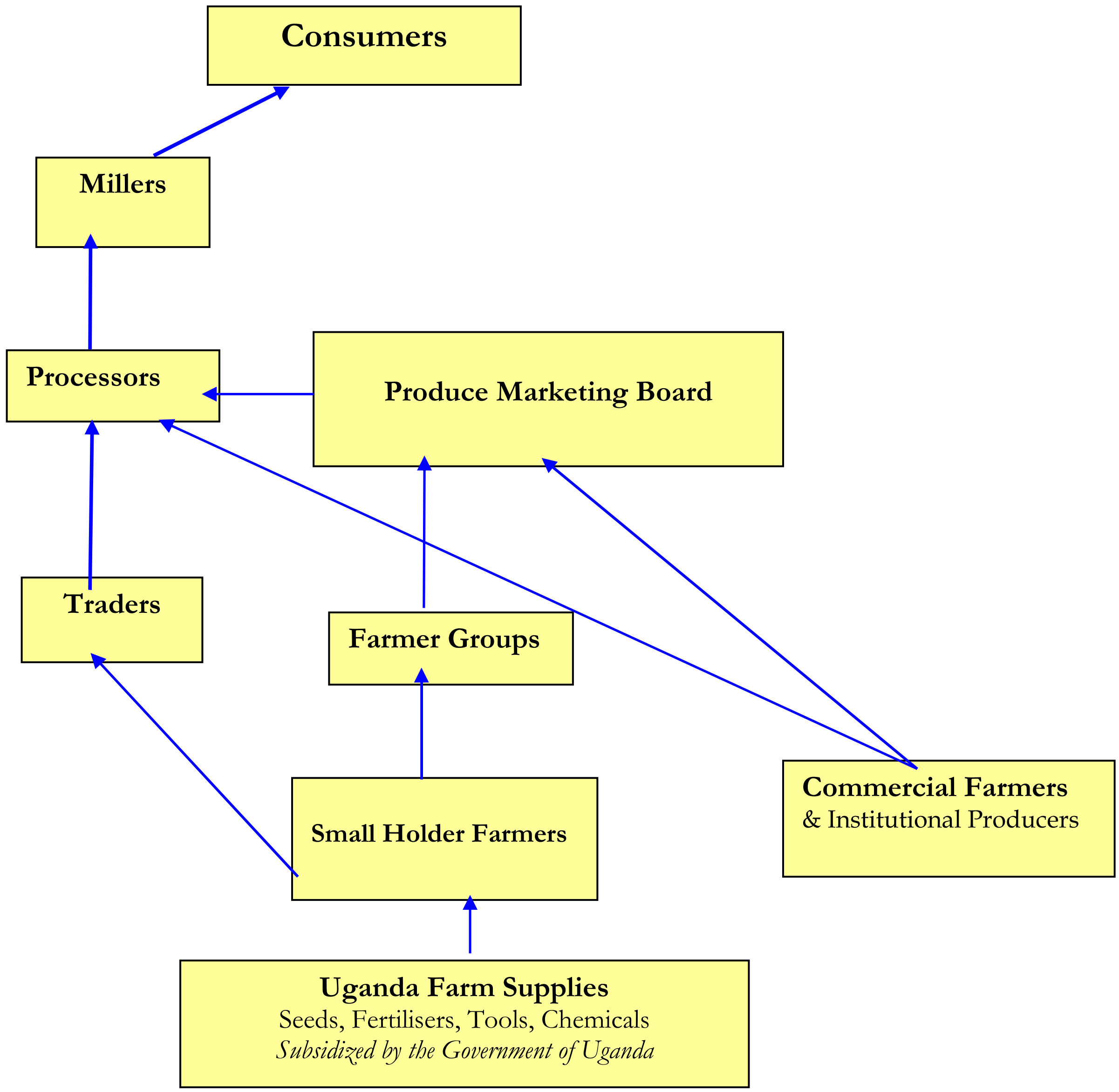
Appendix iv- Post Liberalization Milk Supply Chain

Post Liberalisation Milk Supply Chain



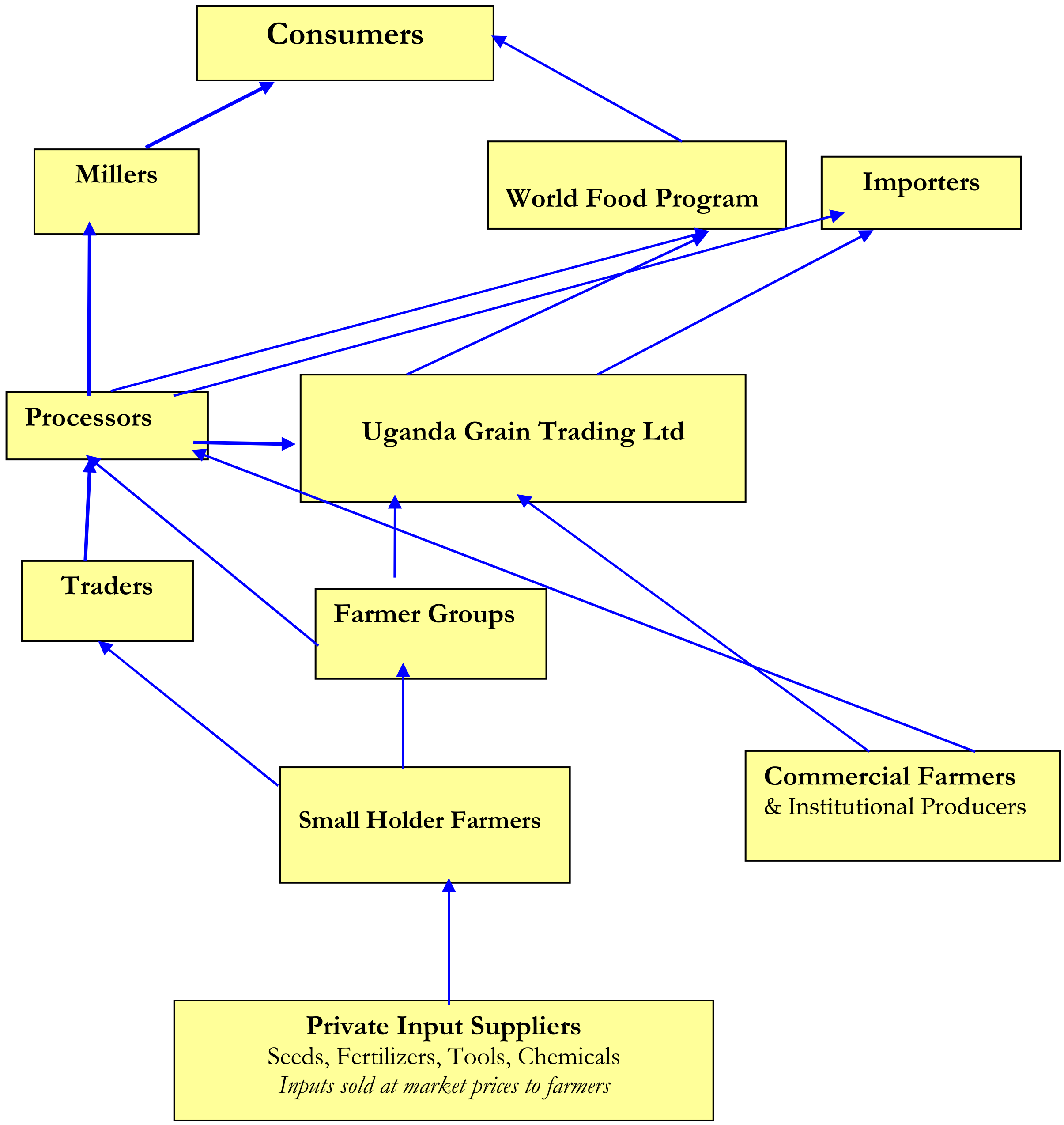
Following the liberalization of the dairy sector, Farmers' Cooperatives were phased out of the milk supply chain, middlemen increased both in number and importance along the supply chain especially in regard to processed milk.80% of the milk produced is sold through unlicensed milk vendors and consumed unprocessed. Dairy farmers now buy farm inputs from the open market at market prices. The increasing number of middlemen along the milk supply chain has reduced the price farmers receive for their milk and the consumer price for processed milk is considerably higher that hitherto.

Appendix V- Pre Liberalisation Maize Supply Chain



Prior to liberalization all maize farmers belonged to farmer groups which aggregated, dried, sorted and sold their maize crop, to Produce Marketing Board. The PMB fixed and enforced minimum prices for maize, these prices were often above the market prices. Subsidized farm inputs, high yielding maize seeds and fertilizers in particular were affordable and easily accessible through Uganda Farm Supplies Ltd.

Appendix vi Post - Liberalisation Maize Supply Chain



Following the liberalization of the maize sector, the Produce Marketing Board was disbanded and phased out of the maize supply chain. The Uganda Grain Trading Ltd was formed as liberalization increased the number of middlemen along the supply chain. The minimum prices for maize are no longer fixed by the government but by the market, and the farmers buy farm inputs from the open market at market prices. The number of middlemen along the supply chain has tremendously reduced the price farmers receive for their maize

Appendix v - Schedule of Respondents

Name of Respondent	Gender	Village	Sub-County	District
Cristopher Komere	M	Muyogo	Kikoni	Ntungamo
Robinah Nuwagaba	F	Kabagyenda	Ntungamo Town	Ntungamo

			Council	
George Nubo	M	Ibaare	Nyakyera	Ntungamo
Steven Mwine	M	Ibaare	Nyakyera	Ntungamo
Enos Nabimanya	M	Nombe	Nyabuhoko	Ntungamo
Kebirungi Grace	F	Muyogo	Kikoni	Ntungamo
Geoffrey Katuffu	M	Rushoroza	Rushenyi	Ntungamo
Amos Nabimanya	M	Nombe	Rushenyi	Ntungamo
Erica Kanyago	M	Nyabihoko	Rushenyi	Ntungamo
Maria Kyomugisha	F	Nombe	Rushenyi	Ntungamo
Dr. Louis Kaboine	M	Ntungamo	Nyabuhikye	Ibanda
Kadoogo Jimmy	M	Kyarihimbi	Nyabuhikye	Ibanda
Kasande Yunia	F	Kigarama	Bisheshe	Ibanda
Mzee Samwiri Bishaka	M	Bubare Dairy Farm	Ibanda Town Council	Ibanda
Joy Byabashaija	F	Ruhoko	Nyabuhikye	Ibanda
Justine Kagarukaho	F	Rugorogoro	Ibanda Town Council	Ibanda
Yoramu Karisa	M	Amabare ga Gooti	Kagongo	Ibanda
Apulinari Karinzi,	M	Nyakahama	Bisheshe	Ibanda
Alfred Kanyamure	M	Nyakatookye	Bisheshe	Ibanda
Gerald Kahagama	M	Kiziba	Rukiri	Ibanda
Habibu Katambura	M	Rukunyu	Kahungi	Kamwenge
Johnson Turyamureeba	M	Kahungye		Kamwenge
Kwesiga Christopher	M	Kyakahimira	Nkungu-Katoma	Kamwenge
Kyanga Moses,	M	Rukunyu Trading Centre	Kyakabimbiri	Kamwenge
Ruhamire Robert	M	Kiziba		Kamwenge
Natukunda Joyce	F	Kyakahimira	Nkungu-Katoma	Kamwenge
Yusuf Ngoma	M		Luuka	Iganga
Fred Nkaire	M		Kigulu	Iganga
Mrs. Naome Nkaire	F		Kigulu	Iganga
Lawrence Wakudumira	M		Luuka	Iganga
Abdu Migereko	M		Kigulu	Iganga
Hasifah Ngobi	F		Kiguli	Iganga
Erivania Naigaga	F		Luuka	Iganga
Sarah Nakandha	F		Kiguli	Iganga
Other Respondents		**Responsibility**		
Dr Bernard Niwagaba		District Vet. Officer & Production Coordinator, Ntungamo		
Dr Johnson Tibyabakwe		Veterinary Department, Ntungamo District		
Mr Henry Mutabazi.		Secretary, Manager, NDAFCO, from Land O' Lakes		
Mr.Arthur Mwebaza		Accountant, NDAFCO		
Lauben Kanyesigye		District Veterinary Officer & Production Coordinator, Ibanda		
Mr.GeoffreyTumwesigye		Entomologist, Kamwenge District		
Mr.Steven Bakesigaki		Fisheries Officer & Production Coordinator, Kamwenge		
Mr.G.Tukamubona		District Commercial Officer, Kamwenge District		
Mr.Esau Mulabya		District Commercial Officer, Bugiri District		
Mr.Steven Kakaire		District Commercial Officer, Iganga District		