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# PHYSICAL DEFECTS LEADING TO REJECTION OF CATTLE HIDES AT THE RECEPTION OF THE HIDES/SKINS STORES IN SOROTI MUNICIPALITY

**BY**

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## DECLARATION

I, **EKOL JOEL DANIEL**, hereby declare that this dissertation is out of my original concept and has never been submitted to any University or institution of higher learning for any academic award.

Signature.....  Date.....1st - 09 - 2014.....

## APPROVAL

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## DEDICATION

I dedicate this dissertation to my Father and mother; Mr. Okello Francis Ekol, and Mrs. Margaret Okello, my fiancee Mrs. Lydia Abonyo and my daughter Acham Emerald, lovely Brothers and Sisters, and friends.

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I take this opportunity to utter my gratitude to the Almighty God for the gift of life all through.

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| | |
|---|---|
| ABPALI | A Blue Print for the African Leather Industry |
| CFC | Common Fund for Commodities |
| E.g. | For example. |
| EC | European Commission. |
| EDRI | Ethiopian Development Research Institute |
| ESALIA | Eastern and Southern Leather Industry Association |
| ESGPIP | Ethiopia Sheep and Goat Productivity Improvement Program. |
| FAO | Food and Agriculture Organization. |
| GDP | Gross Domestic Product |
| IPPC | Integrated Pollution Prevention and Control |
| ITC | International Trade Centre |
| LLG | Leatherline Leather Guidebook |
| LMA | Livestock Marketing Authority. |
| MAAIF | Ministry Of Agriculture, Animal Industry and Fisheries |
| UBOS | Uganda Bureau Of Statistics |
| ULA | Uganda Leather Alliance. |
| UNBS | Uganda National Bureau of Standards |
| UNIDO | United Nations Industrial Development Organization |
| USD | United States Dollars |

## ABSTRACT.

A study to examine the prevalence of physical defects on cattle hides was conducted from March to April 2014 with the objective of identifying the major physical defects that lead to the rejection of cattle hides upon grading at the reception of the three hides and skins stores in Soroti municipality. A total of 360 ungraded hides (120 hides from each store) were randomly selected and examined visually for defects. The study showed that there were different physical defects on cattle hides. The overall prevalence of defects on the examined hides was 93.1%. With wound defects having the highest prevalence (56.7%), flay cuts (53.9%), scratches (39.2%), brand marks (17.8%), gouge marks (15%), Veininess (11.4%), hair slip (9.2%) and incorrect shape/ putrefaction (5.2%). Defects of pre-slaughter origin had the highest prevalence (54.8%), followed by peri-slaughter (40.7%) and lastly post-slaughter defects (4.4%).Most of the hides examined lied in grade 2 (53.6%) followed by grade 3/rejects (39.4%) and the least number of hides lied in grade 1 (6.9%). Wound defects were responsible for most of the rejects (67.6%) followed by flay cuts (57%), scratches (43%), brand marks (40.1%), hair slip (23.2%) and incorrect shape (10.6%). The study concluded that there was a statistically significant difference ($p<0.1$) between presence of defects on hides and rejection. Statistical analysis on data also showed that there was a statistically significant relationship ($P<0.1$) between rejection and defects of pre-slaughter, peri-slaughter and post-slaughter origins. Therefore, there is high chance that rejection of hides may be dependent on origin of defects.

The study recommended that livestock owners, abattoir and slaughter slab workers and hide collectors be made aware of the prevalence, causes and prevention of hide defects. There is also need for rigorous training on safe handling and processing of hides in order to mitigate the physical defects on cattle hides.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background

Hides and skins are raw materials for the tanning industry. They are renewable and easily perishable resources (Arugna, 1995). Their production is dependent on the management, rearing and disposal of the livestock population (Mahmud,2000 and Zemene, 2012).The hides produced in Africa are viewed in the poor image perspective due to various production constraints including poor handling and poor preservation of the hides (Jabbar *et al.*, 2002)

Defects are damages from whatever cause to the raw/cured hides/skins that are most likely to cause value depreciation of the leather produced from the hides/skins (ITC, 2002). Defects on raw hides are important both in the domestic and export marketing of hides as they persist throughout the course of tanning and therefore affect the production and marketing of semi-processed materials (A Blue Print for the African Leather Industry (*ABPALI*), 2002).

Several factors contribute to the huge downgrading and rejection of hides in the east African region countries (CFC, 2005). According to a report by *ABPALI* (2002), defects occur as a result of a variety of causes during the life of the animal (pre-slaughter), during slaughter (peri-slaughter) and also after slaughter (post-slaughter). Of these, pre-slaughter defects exceed the combined effects of the other defect origins.

Pre-slaughter defects constitute a range of damages associated with intrinsic factors, husbandry practices and diseases, for example, brand marks, wounds/scars, scratches, among others (CFC, 2005). It has been estimated that loss of value due to such defects is 40% for Africa in general (Jabbar *et al.*, 2002).Peri- and post-slaughter defects contribute to about a third of the defects in hides (King, 2002). In Soroti, the dry environment dominated by savannah grasslands with thorny acacia species (Egeru, *et al.*, 2009), are the possible causes of scratches on the hides of the live cattle. Horn rakes usually occur in crushes, fights and during transportation which produce actual punctures in the most valuable part of the hide (Jabbar, *et al.*, 2002).

In most of the African countries, cattle are slaughtered in poorly equipped slaughter points, such as concrete slabs under trees or hoisting carcass using poles and unsuitable knives are used, hence

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