

# The role of Labour and energy saving technologies in child labour elimination in crop production

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Paper for the National Conference in Eliminating Child Labour in agriculture in Malawi

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## **Abstract**

*Raising awareness about child labour begins with a clear message about the difference between child labour and acceptable work for children. Understanding the distinction between the two is often difficult at first. Parents, guardians and families of working children often think that working on farms from a young age is the only way to transfer farming skills to children and prepare them to eventually take over the management of the farms; however, they are ignorant of the harmful effect of child labour on the physical and emotional development of children. A key message that this paper would like to portray is that education is one of the best ways to break the poverty cycle in families resulting in liberating children from child labour.*

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## **1.0 INTRODUCTION**

Child labour can be described as any work for which a child is too young or which, by its nature and or the way it is carried out, is likely to harm the health safety or morals of children. There are several types of child labour which includes house work, agricultural production and processing, petty trading such as selling water, groundnuts, eggs etc, and construction related works such as making bricks. Crop production is being mentioned to be having a greater role in having a lot of activities involving child labour that could have an effect in mental and social development. Nonetheless, child labour in Agriculture is very common. Seventy per cent of all children found in different types of child labour are found in agriculture. The number of child labourers working in agriculture is nearly ten times that of children involved in factory working such as garment manufacturing, carpet weaving, or soccer ball stitching. The numbers of course vary from country to country.

The main activities in crop production which are being mentioned to involve child labour are land preparation, planting, weeding, fertilizer and other chemical application in different types of crops. It also includes desuckering, reaping and bailing in tobacco.

### **1.1 Objective**

The main objective of this paper is about explaining some of practices in Agriculture production which address issues contributing to elimination of child labour. These best practices are about activities ranging from production to storage and utilization of different types of crops. These practices are meant also to increased productivity and returns from agriculture through crop production. The targeted crops will include maize and other common cereal crops, groundnuts and other famous leguminous crops, cotton and tobacco. These crops are being targeted since they are commonly cultivated hence they can also contribute a lot in child labour malpractices due to their labour intensiveness and other inputs.

## **2.0 USE OF LABOUR SAVING TECHNOLOGIES AS BEST PRACTICES IN CROP PRODUCTION ADDRESSING CHILD LABOUR MINIMISATION**

There are many practices in crop production; storage and utilization which contribute to the minimization and elimination of child labour. Some practices are mainly meant to provide means on reduction of use of labour in crop production while other are those which include activities that integrate some cultural methods in crop production namely conservation agriculture (CA), Integrated Pest Management (IPM). In terms of storage and utilization, there are a number of technologies which help in the reduction of amount of labour and energy.

### **2.1 Labour saving Technologies and Child labour minimisation in crop production**

Labour saving technologies are those which reduce drudgery of farm operations and reduce the number of man-days required to accomplish a specific task/production process. These technologies makes the task easier, ensures that the task is done

quicker, accomplished the task efficiently and later on eliminates the need to carry out certain tasks.

In crop production they are mainly applied in land preparation, manure making and fertilizer and other chemical application, planting, weeding (including banking), pest and disease control, harvesting, transportation of farm inputs and produce. These could either be applied by small-scale or large scale farmers.

In this case most of the tools used are farm machinery and their equipments (tractors and implements), or work oxen and their implements, herbicides, jab planters, and sprayers and even aero plane especially for large scale commercial farmers / estates; Whereas Energy saving technologies are those mechanisms used to reduce amount of energy fuel used in the production of food for utilization. However, the choice of the mechanism depends on the financial level of the concerned farmer which determines level of reduction of child labour. Labour and energy saving technologies through farm mechanization minimizes and eliminates use of labour in all farm operations as well food storage and utilization.

The Agriculture sector under the guidance of government through the Ministry of Agriculture Irrigation and water development is promoting farm mechanization, simple labour and energy saving technologies to reduce or minimize child labour engagement in crop production, storage and utilization.

## **2.2 Farm Mechanisation and child labour minimisation**

Child labourers are at risk from a wide variety of biological, physical, chemical, dust, machinery, ergonomic, welfare/hygiene and psychosocial hazards, and from long hours of work and poor living conditions. Although technological change has brought about a reduction in the physical drudgery of agricultural work in some areas, it has introduced new risks. The risks are associated with the use of sophisticated machinery, chemicals intensively, especially pesticides, without appropriate safety and health measures, information and training.

Malawi has depended on small metal implements such as the panga knife, sickles, hand hoe, axes etc for a long time. The hand hoe has been the commonly used

implement in agricultural production for a long time. Despite being cheap and that it does not require special skills to use, this implement has a lot of shortcomings; these include labour intensive and more man-days are required to complete a hectare of land. Again, it is slow- it takes a long time, hours for a farmer to complete a particular operation. Its continued use leads to creation of a hard pan that impedes water infiltration- these results into the most dreaded soil erosion. It also requires a lot of human effort leading to tedium and health problems including fatigue especially for the child labourers which results in increased risk of accidents and illnesses. The problems associated with the use of a hand hoe led to the use of alternative sources power namely: Draught animal power- the use of work oxen and donkeys.

### **2.3 Motorised power- Use of tractors or electric power machinery in farming operations**

The Agriculture sector through the Ministry of Agriculture promotes such mechanisms to reduce labour involvement in field operations. Since operating such mechanisations are done by adults, without children involvement, they are spared from child labour.

With such promotions like farm mechanisations, the Agriculture sector is therefore playing a direct role in minimising child labour in farm operations



**One of the labour saving technology-use of ox-drawn implements on the farm**

### **2.3.1 CHITETEDZO MBAULA ‘THE PROTECTING STOVE’**

Child labourers are vulnerable to the same dangers faced by adult workers; however, children can be more strongly affected by the work hazards and risks that affect adults. Also, because children are still growing, they have special characteristics which must be considered when thinking of food storage and utilization hazards and risks. In most rural communities people especially women and girl children travel long distances looking for fuel wood for food preparation. Looking at the way girl children and women struggle to find fuel wood for cooking, a special mud mbaula was designed which uses minimum wood fuel and produces minimum smoke. This smoke is hazardous to health and the respiratory system of human beings which includes airways, lungs, and respiratory muscles. Children have deeper and more frequent breathing and thus can breathe in more substances that are hazardous to their health.

The use of Chitetedzo Mbaula minimizes the amount of fuel wood used by at least 60% compared to the traditional (open fire) cooking which releases more and hazardous/toxic substances and higher rates of intake, resulting in greater exposure to diseases (pathogen).

### **2.3.2 Chitetedzo Mbaula—The Experience of Mulanje NASFAM**

Due to deforestation firewood is scarce and expensive these days. Women and girl children walk longer distances for firewood collection and in some villages where there are no forest reserves they have to buy fuel wood from local traders. Girl children collect these fuel woods, depriving them of the chance to go to school and exposing them to carrying heavy loads and resulting in the perpetuation of child labour at the household level. Most households in Malawi use the traditional three stones (mafuwa) stove which has high firewood consumption because the heat can radiate in many directions and the cooking pot absorbs only a smaller percentage of the heat produced. This is partially because they don't know any alternative. But a locally made clay stove can be helpful to reduce the firewood used on mafuwa by 60%. Instead of putting firewood in three open spaces as the case for the mafuwa this stove require firewood in one place. The clay stove was first introduced in Mulanje by Integrated Food Security Programme (IFSP) and was locally named “Chitetedzo mbaula”. They selected this name to indicate that the stove is protecting the cook from being burned, but also by

saving firewood, the stove protects their natural environment. Chitetedzo Mbaula is efficient because:

- It controls the amount of air flowing toward the wood so that the wind doesn't steal the heat.
- It guides the flames to the centre of the pot's base instead of beside or around the pot – this puts all the fire's energy right where you need it.
- It holds the heat for as long as possible by insulating the walls of the stove.



**Chitetedzo Mbaula in use**



**Chitetedzo Mbaula ready for the market**

This stove is made of locally found clay, locally available tools and easy to make even for unskilled people. The stoves are also a good income generating activity as they are sold to other users.



**Mrs. Chimenya of Mulanje NASFAM with Chitetedzo Mbaula**

One NASFAM member is making money from the Chitetedzo Mbaula business. She is Mrs. Catherine Chimenya the chairperson of Zikometso Smallholder Farmers' Association in Mulanje. She belongs to a group of 10 women that was trained in making Chitetedzo Mbaula by IFSP. She says that their group is able to make an average of 1000 stoves per month. They have a firing kiln that accommodates 500 stoves per firing session. Every member of the group moulds her own stoves and just brings them together for firing. She proudly said that she is able to make an average income of MK7, 000.00 per month from clay stoves during the farming season and about MK15, 000.00 per month when the field activities have lessened and she concentrates more on stove making. 'Chitetedzo Mbaula has saved my family in firewood hassles and brought some income to the household. I would like to encourage my fellow NASFAM members to use chitetedzo Mbaula or even make them. And as a woman who promotes gender I would like to encourage men to join the stove making groups because as of now it is only women who are taking part 'concluded Mrs. Chimenya.

## **2.4 REDUCING CHILD USING CONSERVATION AGRICULTURE**

In Malawi, human beings still remain the chief source of power. For many years until recently, the fertility rate of the child-bearing Malawian woman has been quite high resulting in large families and an abundance of cheap labour. With these two developments, it has been observed that more and more children in families practicing subsistence agriculture have been deployed to the fields to do the most labour demanding activities such as land preparation, weeding, harvesting and sometimes grading of the produce. Deployment of child to the fields to attend to the crop denies them the time to be in school resulting in a high illiteracy rate.

In response to this situation, there have been efforts to take children out of the mainstream farming system mainly through sensitization campaigns and enactment of child protection laws. However, the success of such efforts has not been substantial, prompting policy makers to look for alternative measures. One such measure is conservation agriculture.

Conservation Agriculture, in its various forms, has proved to reduce the demand for labour on the farm substantially. For example, pits, once they are dug, remain usable for the next three to four years thereby eliminating the need to plough the land every year as is the case with conventional ridging. Also, ground cover suppresses weeds in the field, reducing the weeding effort markedly as all the farmer needs is to simply uproot the few weedy plants that appear the field. To cap it all, the use of herbicides in areas prone to heavy weed infestation has eliminated the need to commit more man-hours to weeding.

From the foregoing, it is quite clear that if farmers adopt Conservation Agriculture, many children will be spared from doing farm work and will have enough time to attend school and grow into useful citizens of the country.

## **3.0 Recommendations**

Having seen how agriculture contributes to child labour and how children suffer in the practise, this paper proposes a number of recommendations for consideration if at all child labour should be dealt with and become history. Among the recommendations are:

- The issue of child labour should be a multi-sectoral challenge which should be taken on board by most if not all sector of economic development. As such there should be a lot of discussion and exchange of ideas within and among economic sectors about preventing and addressing cases of child labour in Malawi.
- In terms of prevention which is a long-term solution, systems of prevention need to be carefully designed by both the state or non-state agencies/ actors. Again parents and guardians must be able to see investment in school as a viable option for their children.
- Once worst forms of child labour have been identified, urgent actions for rescue and rehabilitation must be applied. Where resistance is evident, persuasion, through dialogue with parents, guardians, children themselves, employers or law enforcement authorities must be applied.
- Since experience has shown that the most effective approaches are community-based, integrated solutions tailored to the specific needs of each target group, concerned communities, families and individual must be given an opportunity in designing their own solutions for child labour related cases.
- As for protection, it is necessary to strengthen abilities to undertake a risk assessment of potential hazardous in agriculture by various stakeholders including farmers, parents and guardians as well as children themselves.
- Both state and non-state actors should support child labour elimination interventions and promising practises such as chitetedzo Mbaula, conservation agriculture. etc., so that more people are aware of them and are able to use them instead of child labour.

#### **4.0 Conclusion**

In conclusion it is evident that the problem of child labour is a multidimensional; hence a multi-prolonged strategy will be the best to be adopted focusing on poverty alleviation, children's access to education, and HIV and AIDS mitigation, and, on the other hand,

strict enforcement of national legal instruments. It is clear in some cases that many children work out of economic necessity, supplementing parents, or guardians' income to help meet the household's basic needs and therefore improving livelihoods of the poor households is crucial to maintaining the sustainable withdrawal of children from child labour and breaking the poverty cycle. This could be done through improved food, income and nutrition security initiatives through the agriculture sector.

## 5.0 References

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