

3<sup>rd</sup> Annual Summit on

# CLINICAL PEDIATRICS AND CARDIOLOGY & INFANCY, CHILD NUTRITION AND DEVELOPMENT

October 16-18, 2017 New York, USA

## Malting cereals and grains to increase the energy density of weaning foods

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Low childhood energy intake is still a challenge in Africa, not necessarily because there is not enough food, but mostly attributed to poor food preparation methods and insufficient energy intake due to low energy density weaning foods. With the small gut of the child, the amount of food the child consumes may not be enough to supply the required amount of calories or energy. In poor societies like in Uganda, weaning food are mostly porridges of staples like maize, millet and sorghum. These staples have very high starch content and high amount of water is needed to dilute the porridge to the level appropriate for child feeding thus giving it a high dilution that lowers the energy and nutrient content of the porridge. Malting can be the technique to employ to increase the energy density of the weaning foods. It works by reducing the viscosity effect of the starches by physically breaking the starch molecules with amylase enzymes at a low pH. During malting,  $\alpha$  and  $\beta$  amylases hydrolyse the starch into low molecular weight dextrin and maltose. The resulting product will produce flour with low viscosity porridge. To bring the viscosity of the porridge to the required level, the mother has to add up to 2-3 times the amount of flour she would have added using the un-malted flour thus increasing the energy density of the porridge for over 2-3 times that of un-malted flour. Porridge made from malted flour has three time more energy density compared to porridge from un-malted flour, thus has the potential to address the problem of low energy intake in children.

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