IMPROVING COFFEE QUALITY AND PRODUCTION USING INFRA-RED IR TECHNOLOGY

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BACKGROUND

• Ethiopia exports about 700 metric tons of coffee annually.
• Coffee accounts for more than 60% of the coffee export earnings.
• Most of the coffee is processed by cooperatives.
• There are two types of coffee drying process that are dry and wet coffee drying process.
• Wet drying system exposes the coffee for quantity and quality losses.
Figure 1. Beans affected by uneven, excessive, prolonged and interrupted drying

Uneven drying, excessive temperatures, moisture migration: Marble, pale

Excessive Temperatures: Greyish, crystallised, weak structure

Prolonged drying: Bleached, yellow slightly transparent

Interrupted drying, rewetting due to moisture migration: Mouldy
Figure 2: Traditional Sun drying system
Figure 3: Mountain of Coffee husk
Figure 4: Woman during sun drying period
• CES uses state of the art infrared technology widely used in the food and pulp industries to reduce coffee pulp drying time
• IR-dryers utilize infrared gas such as methane
• The carrier gas is not readily available in developing countries like Ethiopia
• Biogas produced anaerobically from coffee waste (husk) will be used as a carrier gas
THANK YOU