



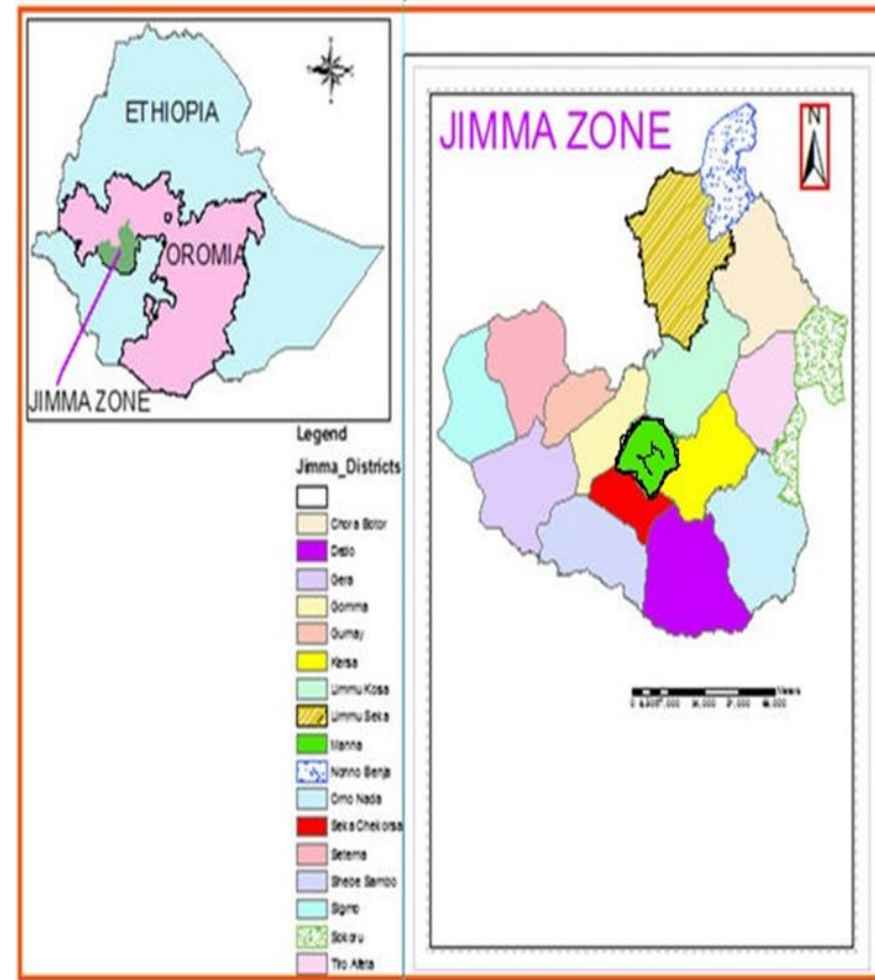
IMPROVING COFFEE QUALITY AND PRODUCTION USING INFRA-RED IR TECHNOLOGY

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BACKGROUND

- Ethiopia exports about 700 metric tons 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





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 1. Beans affected by uneven, excessive, prolonged and interrupted drying



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

