



# Farming Practices

## Intercropping in coffee plantations

Farmer Group Educator (FGE) training sessions

# FGE training sessions



Farming practices



Farm group



Gender  
& ESS



Financial literacy



# Content

- What is intercropping / crop diversification
  - Benefits of intercropping
  - Criteria for intercropping
- Case studies on intercropping in coffee
- Intercropping methods
  - In young coffee
  - In established coffee
- Things to remember



# Intercropping – definition, benefits & criteria

# Intercropping / crop diversification



- Growing one or more compatible crops along with the main crop to obtain additional revenue
- The intercrops will have different growth characteristics like canopy height, canopy spread, root depth and root distribution
- Maximum utilisation of natural resources
- Do not compete with the main crop (coffee)



# Benefits of intercropping in coffee

- Increases the overall productivity of the available land
- Provides additional income in staggered manner throughout the year
- Acts as an insurance against crop failures and low prices for coffee
- Intercropped farms are more climate resilient compared to mono crop
- Perennial fruit trees / spices grown as intercrops act as shade plants, reduce the risk of erosion and improve soil health
- Provide healthy food to farming families
- Provide regular employment throughout the year



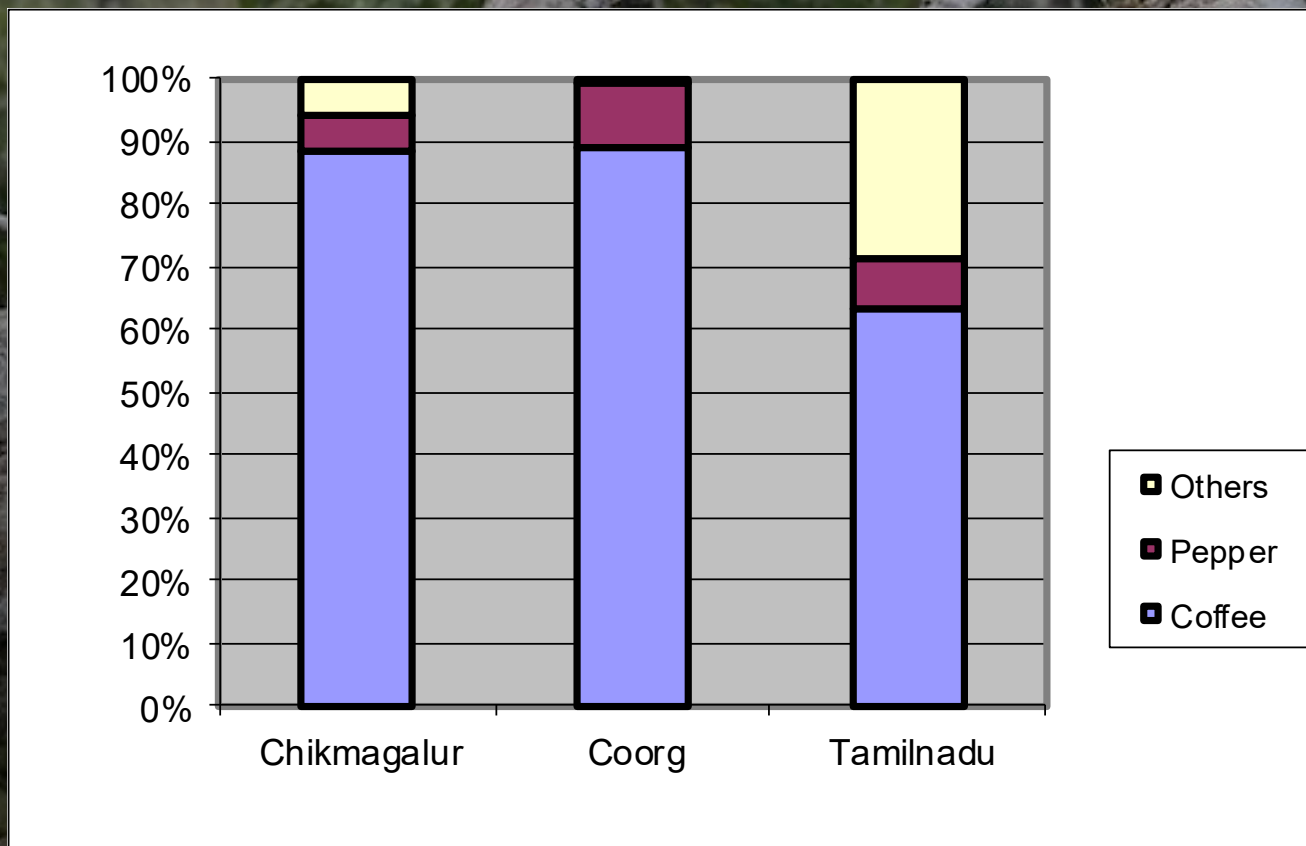
# Criteria for intercropping in coffee

- Effective utilisation of inter-row space in coffee plantation
- Intercrops should have different growth characteristics, so that they do not compete with coffee for light, nutrients and water
- Maintain optimum plant population
- Adopt separate management practices
- They should not harbour pests and diseases of coffee



# Case studies on intercropping - India

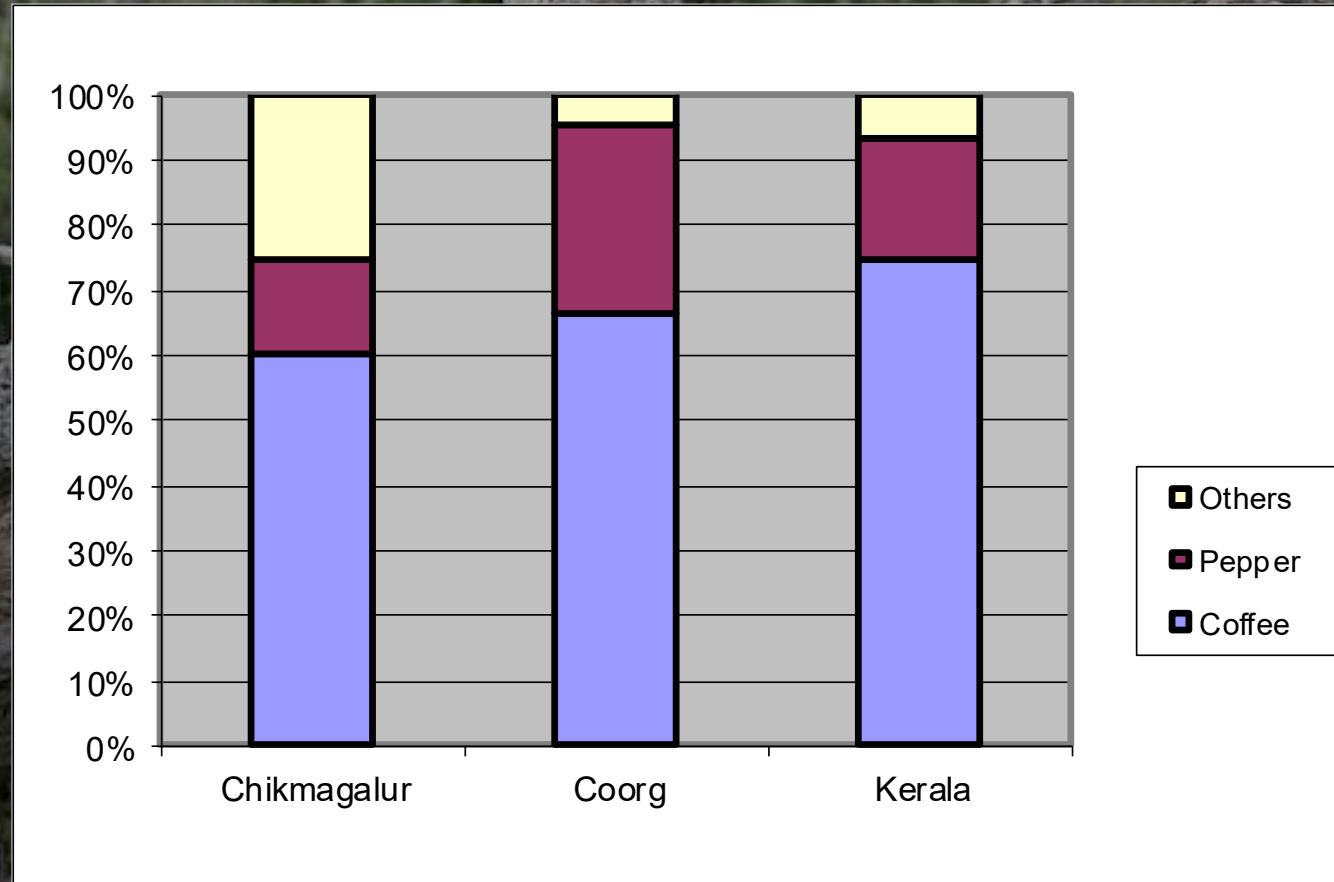
# % share of intercrops in total income of Arabica holdings



Others: Mandarin orange, Banana, Avocado, Arecanut etc.

Courtesy: Coffee Board of India

# % share of intercrops in total income of Robusta holdings



Others: Arecanut

Courtesy: Coffee Board of India



# Intercropping in young coffee

- Short duration crops
  - Vegetables – Beans, Yams, Melons
  - Biennial crops – Ginger, Pineapple, Banana etc.
- Benefits
  - Effective utilization of vacant spaces in between coffee rows
  - Helps in effective weed control
  - Helps in erosion control
  - Biomass can be used as mulch and compost
  - Provide additional income when coffee is not yielding



Coffee :  
Banana



# Intercropping in grown up coffee

- Suitable crops
  - Perennial spice crops – Black pepper, Clove, Nutmeg, Cinnamon etc.
  - Fruit crops – Mandarin orange, Avocado, Jack Fruit etc.
  - Others: Arecanut, Cardamom in valleys
- Benefits
  - Improve micro-climate
  - Provide additional income round the year
  - Biomass can be used for composting / biochar preparation

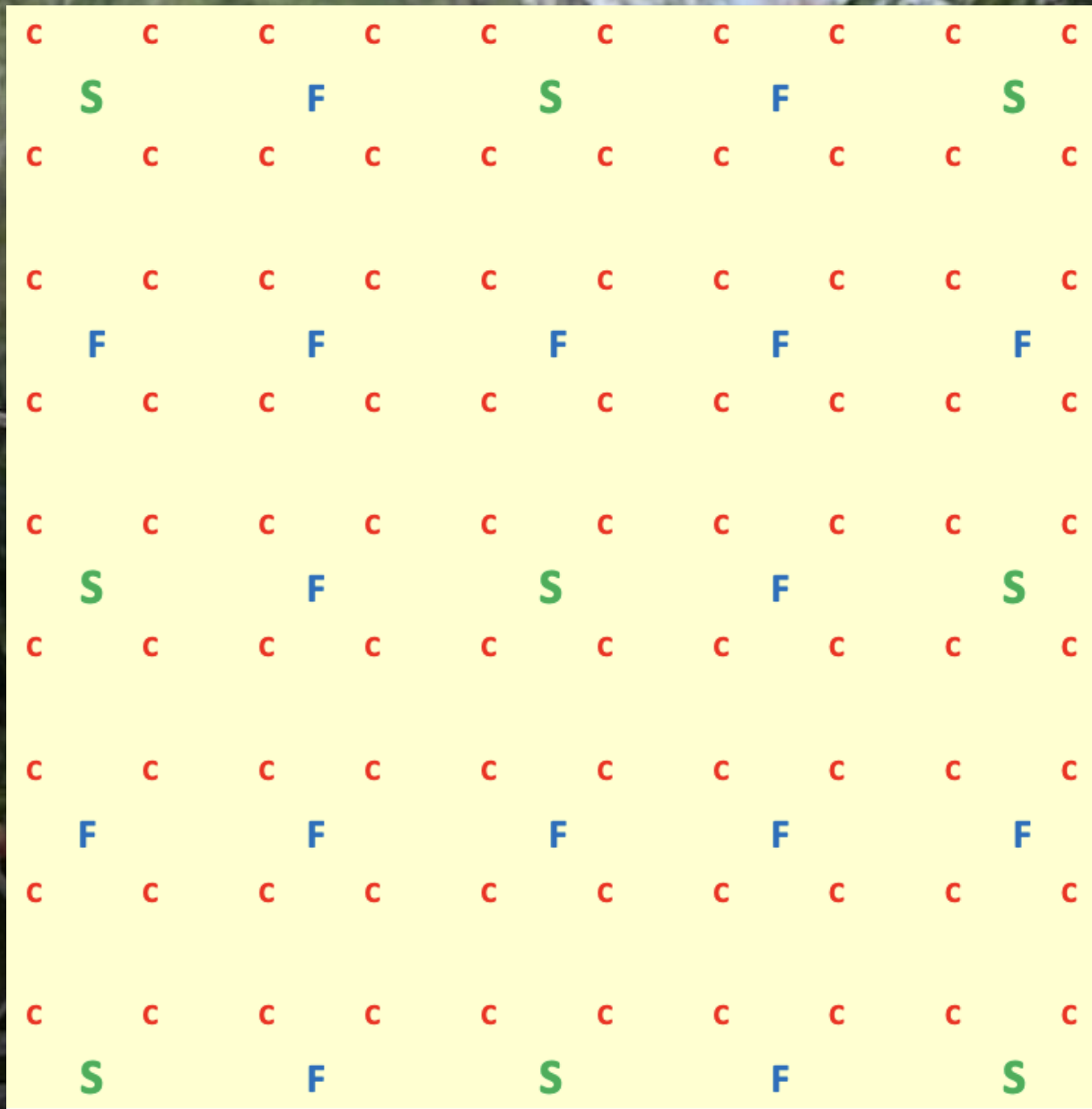


## Model Planting Design for Intercropping

**C – Coffee 10x10ft**

**F – Fruit trees 20x20ft**

**PS – Permanent Shade Tree 40x40ft**





Arabica + Pepper + Jackfruit + Arecanut (India)



Arabica + Banana + Orange + Pepper + Bee Keeping (India)



Arabica + Clove (India)



Arabica + Pepper + Orange (India)

Robusta + Pepper (India)

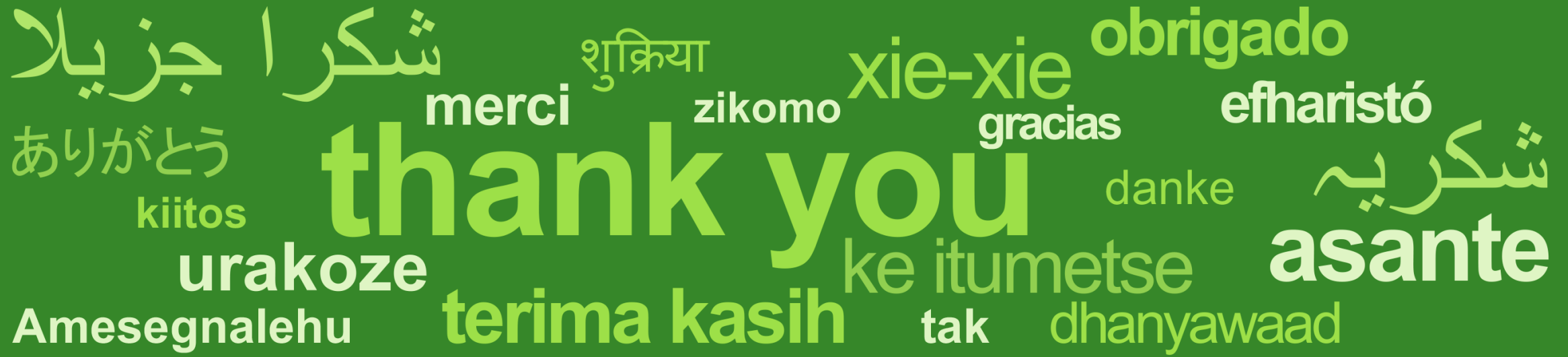


Robusta + Arecanut + Pepper (India)

# Things to remember



- During early years
  - Intercropping only in interspaces with clear gap of at least 1 ft from base of coffee plants
  - Separate nutrition and plant protection measures to be undertaken
  - Avoid intercropping once coffee starts yielding
- In grown up coffee
  - Maintain optimum planting density / planting design
  - Separate nutrient and plant protection measures to be adopted



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