of defoliators (leaf drop) and boll maturation.

- Requires careful timing of defoliation, normally at 60% boll opening otherwise may lower the fiber quality.
- High trash levels collected alongside harvested cotton may reduce the fiber grade
- If not well managed, machine harvesting may increase ginning cost.

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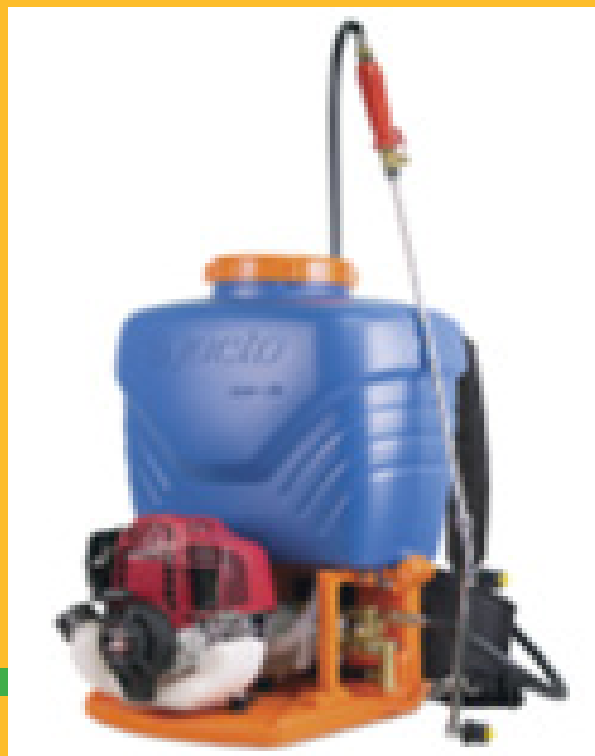
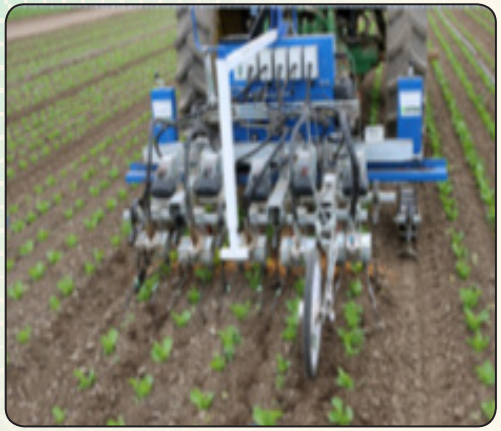
REPUBLIC OF KENYA

MECHANIZATION OF COTTON PRODUCTION

(Spraying, Weeding and Harvesting)





Introduction

Mechanization is the performance of farm operations using machines.

At farm level machines can be required to perform various activities in order to reduce druggery (use of human labor)

Importance of mechanization include:

- Helps to achieve timeliness of farm operations
- Labor saving
- Reduces input losses through correct metering.

Cotton mechanization areas:

- Spray application of foliar and in pest and disease management
- Weeding
- Harvesting.

a). Sprayers

These are Mechanical equipment used to spray liquid agricultural products.

Types of Sprayers

i). Manual sprayer

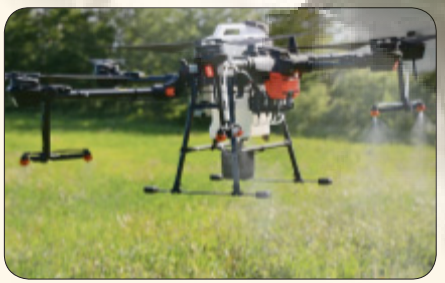
- Suitable for small holdings
- Operates at low pressure range

ii). Motorized sprayer

- These are powered by battery, engine or tractor PTO.
- Suitable for large area spraying
- Operates at higher pressure compared to manual sprayers

iii). Drone spraying

- These allows spraying in difficult situations such as very wet fields and hilly terrains



- Suitable for spraying large scale farms

b). Mechanical Weeders

- There are many types are available in the market
- They can be manually operated, animal-drawn, self-propelled or tractor-mounted
- All work by lifting soil from the bed between the rows and pushing it to the root zone of the crop.

c). Mechanized harvesting

- This is the use of calibrated mechanized seed cotton harvesting equipment
- Cotton is mainly manually picked in Kenya
- Manual picking is tedious, laborious and inefficient.
- The picker machines are often referred to as spindle-type harvesters as they remove cotton from open bolls and leaves much of the stems and leaves on the plant.
- It works faster by harvesting a number of rows simultaneously.
- Careful selection of harvesting machinery is recommended
- Consider prevailing processing status (ginning) when selecting the equipment.

Challenges of mechanized harvesting

- Requires to be complemented with application