



MODULE 1: Introduction to the potato crop

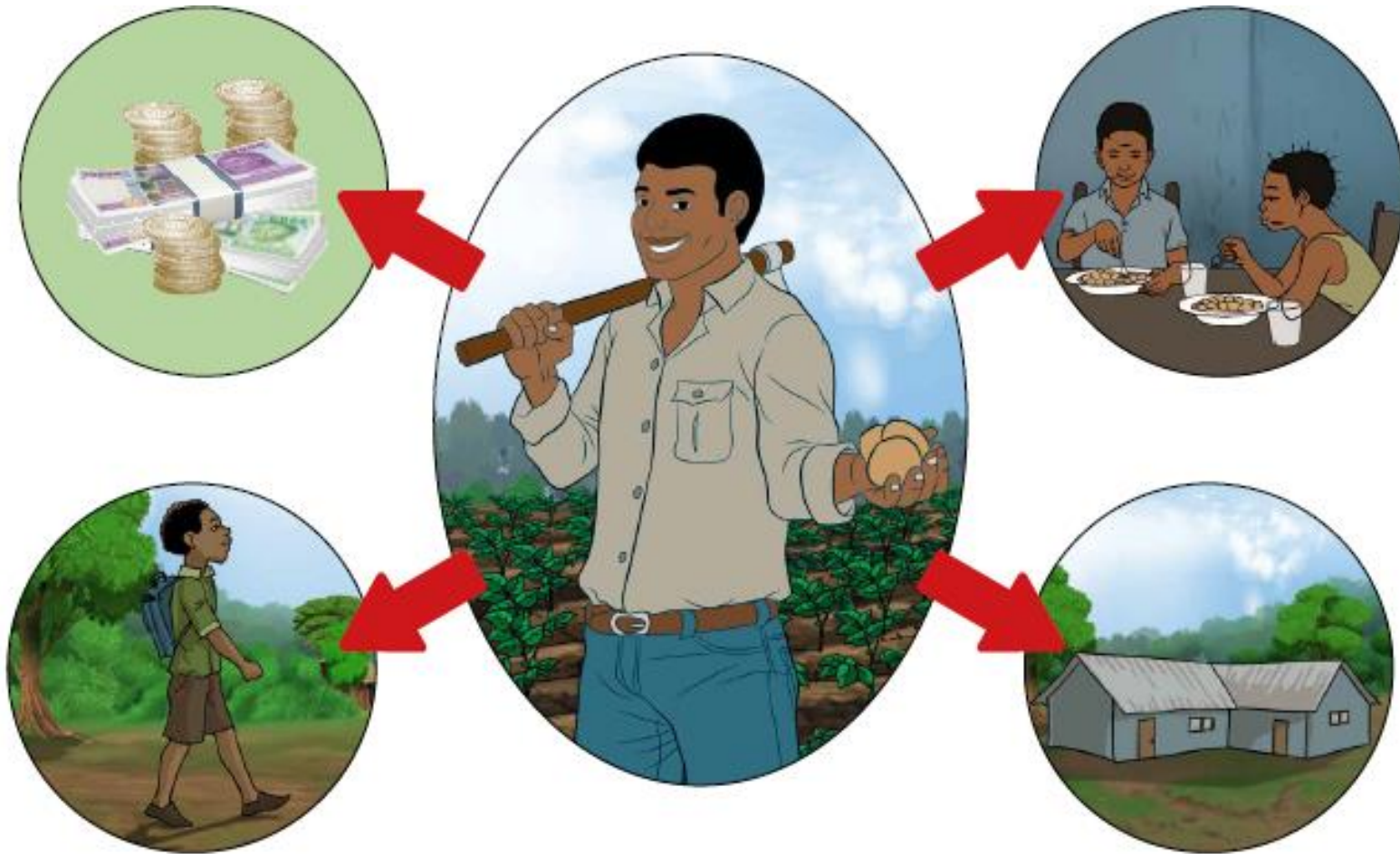


Module 1 Outline

1.1. Importance of the potato crop

1.2. Understanding the crop cycle

1.1. Importance of the potato crop



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Importance of the potato

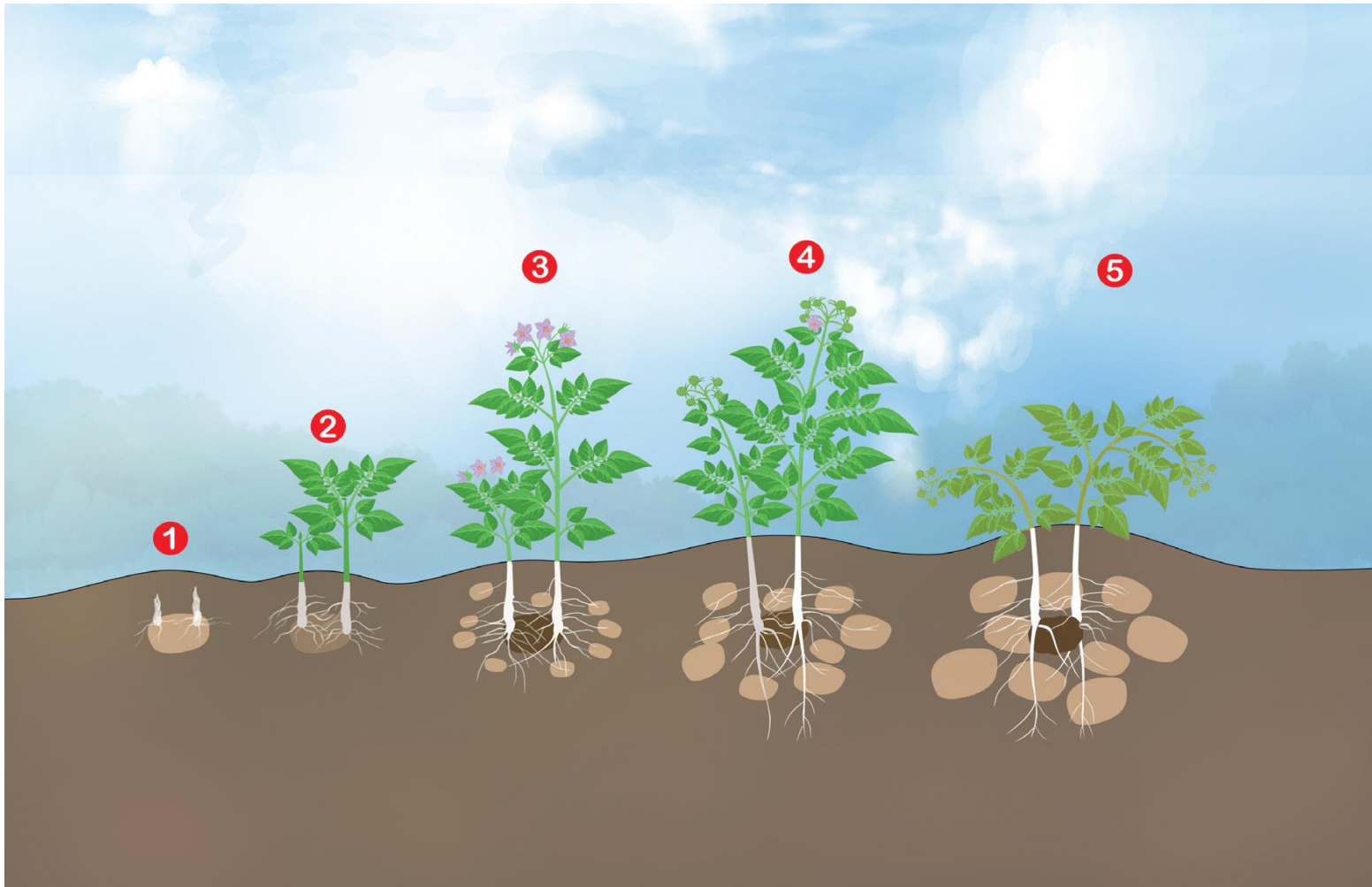
- Potatoes originated in the highlands of South America.
- Third most consumed food crop in the world, after wheat and rice.
- Provides more calories per unit area and unit of time than crops grown in cool climates.
- Has the highest concentration of protein (more than 2% of fresh matter) among roots or tubers.
- A medium-sized potato may fulfil half the daily vitamin C requirement in an adult.

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Nutritious crop and an income booster

- High in **potassium**, good for blood pressure, bones and muscles.
- Micronutrient-rich (iron and zinc) and improves nutrition, especially in infants and pregnant and lactating women.
- An income-boosting **cash crop** that enhances the lives of smallholder farmers through better:
 - ❖ houses,
 - ❖ education for children and
 - ❖ healthcare.

1.2. Understanding the crop cycle



Cont'd...

Planting to emergence

Stage 1 (2-4 weeks):

- Plant strong and well sprouted tubers with multiple (minimum of 3) sprouts.
- What influences plant emergence:
 - ❖ soil type and moisture,
 - ❖ seed physiological age,
 - ❖ planting depth, and
 - ❖ soil temperature.
- **This phase is very critical for better yields.**

Emergence to tuber initiation

Stage 2 (2-4 weeks):

- Crop duration depends on the variety used.
- Fertilization should have been completed by now.
- Plant protection measures are critical against diseases like late blight at this stage rather than later.

Tuber initiation to end of leaf growth

Stage 3

- The flowering stage begins as leaf growth ends.
- All the leaves are fully grown.
- Ensure that plants have maximum soil around the stems and the leaves are protected from pests and diseases.

Tuber bulking to plant death

Stage 4

- This is the stage when leaves turn yellow and die.
- Crop growth stops and tubers grow in size.
- All the foliage must die for maximum yields.
- Control pests and diseases as needed, but chemical application must stop 2–3 weeks before harvest.



CIP is a research-for-development organization with a focus on potato, sweetpotato and Andean roots and tubers. It delivers innovative science-based solutions to enhance access to affordable nutritious food, foster inclusive sustainable business and employment growth, and drive the climate resilience of root and tuber agri-food systems. Headquartered in Lima, Peru, CIP has a research presence in more than 20 countries in Africa, Asia and Latin America.

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