

FIELD, PESTS, & DISEASE DIAGNOSTICS IN SEED CROPS

Prof Ratemo W. Michieka

University of Nairobi

February 7th, 2018

Seed Enterprises Management Institute

University of Nairobi

WEED MANAGEMENT

SEMI'S UON
Seed Enterprises Management Institute

University of Nairobi

INTRODUCTION

- Aim:

Highlight the most basic weed control methods to reduce weed infestation in a crop

- Practices used to reduce the growth and development of weeds:

- prevention

- eradication

- control

- limitation

Introduction

- Prevention
 - take measures and reduce establishment of weed species in area
 - stop introduction, propagation, and spread of weeds
- Eradication
 - best for success
 - rarely achieved
 - totally kill weeds and eliminate propagation
 - not possible because of trillions of weed seeds in the soil & other reproductive organs

Introduction

- Control
 - reducing weed infestation for the benefit of the crop
 - essential timely control
 - must be done early when weeds are young
 - the species of weeds dictate the success of control

Four General Weed Control / Methods

- Cultural Control

- employs practices common to good land preparation and management

- use of weed free crop seed

- crop rotation

- weed free fertilizers

Note: Our crop land soils harbour millions of dormant weed seeds that readily germinate when conditions are favourable.

Weed Control / Methods

- Mechanical Control
 - practices: hand pulling, hoeing, flooding, mowing
 - using mulches to smother weeds (horticulture)
 - machine tillage
 - row plowing
 - roguing
 - burning (in special cases)

Weed Control / Methods

- Chemical Control

- use of herbicides = greatest possibilities of relieving human labour and back-breaking (physical agony)

- phytotoxic chemicals: synthesized in the 1950s-1960s = herbicides

Seed Enterprises Management Institute

University of Nairobi

Herbicides: Best Weed Control

- Part of the general group of chemicals called pesticides
- Selective and non-selective
- Contact
- Translocating
- Soil applied
- Foliar applied
- Long life residual
- Short term activation

SEMISUON
Seed Enterprises Management Institute

University of Nairobi

Herbicides

- If misused, can cause extensive economic loss
- Importance of reading labels prior to using:
 - dosages used
 - time of application
 - weeds to control
 - crops in question
 - minimum residual levels
 - toxicity to human beings & environment
 - precautions to apply in case of poisoning

Negative Effects of Herbicides

- Many considerations
- Most effective and potential weed killers
- Possible environmental pollutants
- Carcinogenic
- Water pollutants
- Herbicide degradation in the tropics due to various climatic conditions
- **Note: Knowledge and expertise required**

Thank you!

SEMIJUN

Living in Harmony

with
the

EARTH