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Name of Session: Acceptable threshold levels for
targeted crops-regulatory tolerance levels for
targeted seed crops

Outline

- Introduction
- Pest and disease tolerances
- Regulatory disease tolerance levels

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Introduction

- Seed quality is key in any agricultural production
- In seed certification, inspection is done against a set of standards laid out in the seeds and plant varieties act for genetic purity, varietal purity, seed health, Physiological purity and physical purity
- In seed health standards, seed borne diseases have more strict tolerances as compared to other diseases.

Introduction

- Kephis is the regulatory body that checks the quality of seeds in the country
- Seed certification standards are set out in cap 326; the seeds and plant varieties act. (implemented by kephis)
- The seed regulations committee (to which kephis is a member) has the mandate to modify, vary or alter certification standards whenever necessary.
- It is from the seed regulations that kephis develops the seed certification protocols for different crops.

Pest and disease tolerance

- Tolerance means the allowable upper limit of observed disease during
 - ❖ field inspection
 - ❖ post-harvest test and
 - ❖ laboratory evaluation

Pest and disease tolerance

- Zero tolerance means no allowable limit
- Disease tolerance levels for infected seed crops and seed in seed certification are part of legislative measures for seed health management

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Pest and disease tolerance

- In assessing pests and disease in a seed field for allowable tolerances, five rules are generally applied
 - ❖ Examine every field
 - ❖ Sample randomly

Pest and disease tolerance

- ❖ Sample across the entire field
- ❖ Take enough samples
- ❖ Keep records of inspection Data and Management Actions

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Disease tolerance levels

CROP	DISEASE	%TOLERANCE	
		Basic	Certified 1
Bean	Bean common mosaic virus	0	0
	Anthracnose of bean %	0	0
	Halo blight %	0	0
	Bacterial canker	0	0
	Angular bean leaf spot	0.02%	0.05%
	Bacterial blight of bean	0.02%	0.05%
Maize	Head smut (at final inspection)	0	0
	Common smut (at final inspection)	0	0
	MLN causing viruses (at every inspection)	1%	1%
Rice	Rice blast (piricularia)%	0.1%	0.5%
	White tip nematode	0	0

Disease tolerance levels

CROP	DISEASE	%TOLERANCE	
Groundnut	Ralstonia solanacearum	0	0
	Rosette virus	1/1000 plants	5/1000 plants
Wheat	Kernel bunt	0	0
	Loose smut	1/100m2	1/100m2
Sunflower	Sclerotinia wilt(At final inspection)	0	0
	Verticillium wilt	0	0
	Downy mildew %	0	2/1000plants
	Leaf blight of sunflower (%)	0	0.2%
	Botrytis head rot /Grey mould of sunflower (%)	5/1000plants	1/100plants
Sorghum	Covered kernel smut (%)	0.1%	0.2%
	Mildew	0.1%	0.2%

Disease tolerance levels

CROP	DISEASE	%TOLERANCE	
Soybean	Soybean mosaic virus SMV %	0	0.2%
	Purple stain %	2.5%	2.5%
	Bacterial pustule	0	0
	Bacterial blight	0	0
Cassava	African cassava mosaic	0	0
	Cassava Bacterial Blight	0	0
	Cassava brown streak disease	0	0
Irish potato	Bacterial wilt of potato, Black leg %, Golden nematode	0	0
	Fusarium wilt	0	2/1000
	Verticillium wilt	0	0.5/1000
	Ring rot	0	0
	Golden nematode	0	0



THANK YOU FOR LISTENING

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