

# Introduce of *Crambe abyssinica* into the ISTA Rules

Results of an ISTA Comparative  
Test on *Crambe abyssinica*

# Material

- 4 seed samples of *Crambe abyssinica* with different germination
- Paper substrate

# Participants of the Comparative Test

- DE 04
- DE 13
- DE 15
- DE 18
- DK 01
- FR 02
- GB 04

# Methods

- **Treatments for promoting germination**
- Without dormancy breaking
- $\text{KNO}_3$
- 5 days prechilling
- **Germination test**
- Paper substrates TP
- Constant temperature  $20^\circ\text{C}$
- Alternating temperatures 20- $30^\circ\text{C}$
- Counts after 4 and 7 days

# Test results (Normal Seedlings)

Pretreatment	Temperature			
	20°C		20-30°C	
	Mean value (%)	SD	Mean value (%)	SD
0	72,64	7,82	85,47	3,49
KNO3	88,22	3,79	87,05	2,46
Prechille 5 days	21,09	16,62	45,34	19,02

# I test results (Abnormal Seedlings)

Pretreatment	Temperature			
	20°C		20-30°C	
	Mean value (%)	SD	Mean value (%)	SD
0	4,44	2,71	5,44	4,05
KNO3	6,12	1,92	4,31	2,01
Prechille 5 days	2,43	1,62	3,52	2,13

# Testresults (Dead Seeds)

Pretreatment	Temperature			
	20°C		20-30°C	
	Mean value (%)	SD	Mean value (%)	SD
0	10,39	4,35	7,05	2,05
KNO3	8,73	2,27	7,18	1,87
Prechille 5 days	13,53	11,54	12,96	8,50

# Testresults (Fresh Seeds)

Pretreatment	Temperature			
	20°C		20-30°C	
	Mean value (%)	SD	Mean value (%)	SD
0	12,53	10,43	2,00	2,52
KNO3	2,93	2,89	1,18	1,67
Prechille 5 days	62,96	26,68	38,19	24,14

# AOSA Rules for *Grambe abyssinica*

- Substrate T (paper towels) or B (between blotters)
- Temperature 20 or 25°C
- First count after 4 days
- Final count after 7 days
- Additional directions for fresh and dormant seeds  $\text{KNO}_3$