Biotechnology Trait Detection Workshop

August 27th- 31st 2018

Moscow, Russia

International Seed Testing Association

Organized by:

International Seed Testing Association
GMO Technical Committee

FSBE "The Russian Agricultural Center"

GenBit LLC

Lecturers and organizers:

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PROGRAMME

Monday, 27th August 2018

18:00 Welcome Dinner

Tuesday, 28th August

08:30 Opening and introductions
09:00 Introduction to GMO testing & workshop overview
10:00 Coffee break

TESTING PLANS

10:30 Theory I: Basic statistical concepts
11:15 Qualitative testing plans – Introduction to SeedCalc
12:00 Lunch
13:00 Theory: Testing plans II: Quantitative testing plans.
14:30 Computer exercises
16:00 End of the day 1

Wednesday, 29th August 2018

FROM SEED TO DNA

8:30 Theory: Sample Preparation: I. DNA Extractions
9:30 Introduction to the Hand-On laboratory procedure and design
10:00 Coffee break
10:30 Hands-On Laboratory: DNA extraction
12:00 Lunch
13:00 Theory: Sample Preparation: II. DNA quantification, normalization, and sample tracking
14:30 Hands-On Laboratory: DNA visualization, quantification and normalization
16:00 End of day 2

Thursday, 30th August 2018

THE POLYMERASE CHAIN REACTION

08:30 Theory: Introduction to PCR

09:30 Hands-On Laboratory: Qualitative PCR set -up

10:00 Coffee break

11:00 Theory: PCR for GMO testing: Definitions and practices

12:00 Lunch

13:30 Theory: Real-time PCR for GMO quantification

14:30 Hands-On Laboratory: Real-time PCR set –up (in parallel – tubes, plates, and GenBit approach)

15:00 Coffee break

15:30 Hands-On Laboratory: PCR results visualization and documentation

17:00 End of day 3

Friday, 31st August 2018

LABORATORY BEST PRACTICES

09:00 Theory: Protein based methods

10:00 Theory: ISTA rules for GMO detection

11:00 Theory: GMOs analysis in Russia, an update.

12:00 Lunch

13:00 Assay and Process validation

14:00 Theory/Hands-On Laboratory: Data analysis and interpretation

14:30 Coffee break

15:00 Theory & discussion: Results analysis continued

Stacked traits new challenges and solutions

Management and practices unique to the GMO testing lab

16:30 Conclusion