



# SA305 Seed Technology Course

January through April 2020

## Improve Your Understanding of Seed Testing Methods

Gain knowledge in seed testing by participating in our **2020 Seed Technology Webinar Series**.

Seed Academy's Seed Technology webinar series reviews the Association of Official Seed Analysis "Rules for Testing Seeds", relevant information from the Federal Seed Act, ISTA Rules, and Canadian Methods and Procedures are also covered. Seed Technology is presented as twelve (12) one-hour webinar classes. The primary references are: AOSA "Rules for Testing Seeds" & the SCST "Seed Technology Training Manual".

Participants will gain knowledge of seed testing, seed biology, principles of seed technology and practical experiences relating to seed testing and seed quality. This is an educational course targeting beginning or mid-career seed technologists who desire a better understanding of principles and concepts. This is a great course for those who currently or are planning to become a Registered or Certified Seed Technologist.

### Topics to be Covered

<i>Sampling and Submitted Samples</i>	<i>Seed Germination II</i>
<i>Purity Testing Concepts and Aids</i>	<i>Seed Germination III</i>
<i>Examinations – Noxious &amp; Cultivar</i>	<i>Microbes and Seed Interactions</i>
<i>Fabaceae/Asteraceae Purity &amp; Seed ID</i>	<i>Tetrazolium Testing</i>
<i>Poaceae Purity &amp; Seed ID</i>	<i>Seed Vigor Testing</i>
<i>Seed Germination I</i>	<i>Test &amp; Labeling Tolerances</i>

Our instructor is Tim Gutormson, who brings 35 years of seed technology experience in seed testing and research. He has also instructed college level courses, workshops and webinars for 30 years. Tim has BS and MS degrees in Agronomy, is a Registered Seed Technologist of the SCST, past president of SCST, past chairman of the American Seed Research Foundation and the current chairman of Seed Testing Research Foundation. Tim is currently an owner of SoDak Labs, Inc., located in Brookings, South Dakota.

**Course Fee:** \$650/location (includes two Seed Academy T-shirts); no limit on the number of participants/location).



Join us Tuesday mornings from 10:00-11:00 AM Central Time Zone.

January 14 – Sampling and Submitted Samples: Review sampling frequency, primary, composite, submitted, and working samples. Demonstration of mixing/dividing seed using Gamet, Riffle and Hand methods. Section 1 & 2 AOSA Rules and ISTA Sampling Handbook.

January 21 – Purity Analysis and Aids: Review purity testing components, Uniform Blowing Procedure, Multiple Unit procedure and discuss use of seed blowers, sieves, light and pressure in determining Pure seed units. AOSA Rules Section 3 and Table 3A. Section 4. Uniform Classification of Weed and Crop Species.

January 28 - Examinations: Review Noxious weed, cultivar (wheat, soybeans, oats, sweetclover, ryegrass) and bulk examinations. AOSA Rules Section 5.

February 4 (Wednesday) –Asteraceae Seed ID: Covering following: *Trifolium, Melilotus, Medicago, Carduus* and *Cirsium*. Seed drawings will be provided and Alfalfa vs. Sweetclover ID will be covered.

February 11– Poaceae Seed ID: Covering following grasses: [*Festuca, Lolium, Poa, Elytrigia, Avena, Triticum, Secale* (cereals) and others.] Seed drawings will be provided and Quackgrass ID will be covered.

February 18 – Seed Germination I: Review definitions, morphology, requirements of germination. Begin discussion patterns of germination with imbibition of water, enzyme activation, breakdown of storage tissues and initiation of embryo growth. Chapter 5 of Seed Technology, Copeland and McDonald).

February 25 - Seed Germination II: Review AOSA Rules Section 6, definitions, moisture, aeration, evaluation of seedlings, retests and special procedures/alternate methods for germination.

March 3 – Seed Dormancy: Review Table 6A, discuss substrata methods, moisture, temperature, dormant seed, light, moistening agents, viability and prechilling. AOSA Rules Section 6.9.

March 10 - Seed Vigor I: Walk through the practical aspects of conducting the primary vigor tests including traditional cold, saturated cold, accelerated aging, soak test, and electrical conductivity testing.

March 17 - Microbes and Seed/Seedling Interactions: Discuss concepts of field & storage fungi. Primary, secondary infections, saprophytic fungi & review four (4) case studies on interactions of fungi with seed testing.

March 24 - Tetrazolium Testing: Review Section 8 of AOSA Rules and Tetrazolium Handbook basics on preparing and evaluation of staining using 3-4 example species.

March 31 – Testing & Labeling Tolerances: AOSA Rules Section 14 and Federal Seed Act review regarding purity, germination and labeling tolerances.

April 7 – Fabaceae

April 14 - Special topics: as requested by participants.

Please register by Friday, January 10, 2020.

Three Ways to Register:

- 1. Online at: [www.SoDakLabs.com](http://www.SoDakLabs.com) 2. Call Marissa at 605-692-2758 3. Email: [Marissa.Willert@SoDakLabs.com](mailto:Marissa.Willert@SoDakLabs.com)

NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

EMAIL: \_\_\_\_\_

- Bill my Account # \_\_\_\_\_
- Credit Card
- Check
- T-Shirt Sizes S M L XL XXL (pick 2 sizes)