

**Installation, setting-up experiment, calibration and validation and use of Cosmic Ray Neutron Sensor (CRNS) for Stationary Soil Moisture Assessment**  
Alger, Algeria, 29 January to 2 February 2023

**Saturday 28 January:**

Arrival

**Sunday 29 January:**

**INRAA Headquarter**

9-10: Opening and introduction of the workshop

10- 10h15: Coffee break

10:15-13: Lecture on “Soil and water management package of technology for sustainable use of farm resources”

13-14: Lunch break

14-16H30: Lecture on “CRNS, theory, application and sensor specification”

**Monday 30 January:**

**INRAA Headquarter**

9-11: Lecture on “Field calibration and validation methods using point sensor, errors concern and measurement of biomass water equivalent”

11- 11h15: Coffee break

11h15- 13: Lecture on “Field calibration and validation methods using point sensor, errors concern and measurement of biomass water equivalent”

13-14 Lunch break

14-16h30: Lecture on “Soil water measurement: basic principles”

**Tuesday 31 January:**

**ITGC Station**

9-11: Assembling (indoor, due to weather condition) the CRNS device and testing it. Connecting it to the main server and initiation of the URL and checking the transmission of data.

11- 11h15: Coffee break

11h15- 13: Assembling (indoor, due to weather condition) the CRNS device and testing it. Connecting it to the main server and initiation of the URL and checking the transmission of data.

13-14: Lunch break

14-16h30: Demonstration of the soil sampling for disturbed and undisturbed soil samples for the determination of gravimetric water content and soil bulk density. And possibly attached the CRNS device in the field if weather allowed.

**Wed. 1 February:**

**INRAA Headquarter**

9-11: Lecture on “Data processing: Calculation process using Excel program”

11- 11h15: Coffee break

11h15- 13: Lecture on “Data processing: Calculation process using Excel program”

13-14: Lunch break

14-17: Practical work on the data management and calculations of the calibration parameters

**Thursday 2 February:**

**INRAA Headquarter**

9-11: Lecture on “Design of field experiment for better use of CRNS and future use of CRNS” and “Combining CRNS with modelling, remote sensing, and digital technology for improving agricultural water management and crop production”

11- 11h15: Coffee break

11h15- 13: : Lecture on “Design of field experiment for better use of CRNS and future use of CRNS” and “Combining CRNS with modelling, remote sensing, and digital technology for improving agricultural water management and crop production”

13-14: Lunch break

14-16: Round table discussion on the package of technology and ways to go and closing

**Friday 3 February:**

Departure