

## INFORMATION NOTE

### I. Background information

1. The workshop on “Use of Advanced Technologies for Family Agriculture” (to be held in Petrolina in Pernambuco, Brazil, 30 January to 3 February 2023) is co-organized by the United Nations Conference on Trade and Development (UNCTAD), and the Serviço Nacional de Aprendizagem Industrial – Pernambuco Regional Department (SENAI/PE), in Brazil, and hosted by SENAI/PE. The workshop focuses on the technology assessment and the management and use of advanced technologies in precision agriculture and showcases its possible use in family agriculture in rural areas of the semi-arid region in the North-East of Brazil, where these technologies have been deployed on a limited scale and pilot basis.
2. The objective of the workshop is to build the capacities of government officials and experts on the use of frontier technologies for agriculture, and particularly family agriculture.
3. The workshop offers a mix of lectures, seminar, computer lab practices and field visits. The lectures and seminars will focus on family agriculture, remote sensing, drones, use of satellite and drone data for precision family agriculture. They will be delivered by staff of the SENAI/PE and invited scholars. The participants will visit farms of family agriculture and discuss the application of frontier technologies for agriculture with rural communities.

### II. Tentative programme

#### Basic Module, 7h

- Introduction to precision agriculture
- Remote Sensing
- Introduction to remote sensing satellites
- Introduction to Unmanned Aircraft
- Application of Satellites and Unmanned Aircraft in Precision Agriculture
- Unmanned Aircraft Legislation

#### Image Processing Module, 7h

- Acquisition and Processing of Georeferenced Data
- Planning and Acquisition of Images in Agriculture
- Mosaicking and Orthorectification of Agricultural Images
- Introduction to GIS Systems Applied in Agriculture
- Case studies: Mapping of Failures in Sugarcane and Mapping of Spots in Planting with Multispectral Sensors.
- Laboratory practices with processing software.

#### Precision agriculture with data from Unmanned Aircraft, 3h

- Introduction
- Localized Herbicide Application
- Application of Insecticides and Fungicides

#### Technological assessment: Discussion on application in precision agriculture in family farming, 3h

#### Visit to a family farm and discussion with farmers, 12h

### III. Nomination criteria

4. According to the themes of the workshops, the background of participants is expected to be relevant for the technological assessment and diffusion of frontier technologies for precision agriculture. During the workshops, the participants are expected to exchange experiences of their country and challenges they are confronting.
5. Permanent Missions should provide a scanned copy of Note Verbal as official document when they submit nominations.
6. Candidate nominations, including information on affiliation, contact details and a short CV, may be sent to the CSTD secretariat email address: [sticourses@unctad.org](mailto:sticourses@unctad.org) before **30 November 2022**.
7. There is a total of 25 places available for participants. The consideration and selection of the candidates will be on first-come-first-served basis.

#### **IV. Cost**

8. SENAI/PE will cover local expenses related to accommodation and local transportation, which occur after participants' arrival in Petrolina, Pernambuco, Brazil.
9. It is to be noted that the cost of air travel from the country of origin of the participant to Petrolina, Pernambuco, Brazil, as well as travel insurance and per diem, will not be covered by SENAI/PE nor UNCTAD and must be arranged by the participants or their employer.

#### **V. Contact information**

10. For further questions, please contact: Mr. Clovis Freire, Chief, Technology and Innovation Policy Research Section (TIPRS) of the Division on Technology and Logistics (DTL), Tel: (+41) 22 917 7916 (freire@un.org) and Ms. Eva Xin, Team Assistant, DTL, Tel: (+41) 22 917 5749 (sticourses@un.org) .

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