

Institute Profile

National Center for Agricultural Research and Extension (NCARE)



The National Center for Agricultural Research and Extension (NCARE) is considered the scientific body of the Jordanian Ministry of Agriculture, and the distinguished applied agricultural research institute based on scientific milestones to provide research results for farmers and beneficiaries.

The establishment of scientific agricultural research institutions in Jordan dates back to 1958, where the Scientific Research and Agricultural Extension Department established. In 1985, the Department reorganized and named the National Center for Agricultural Research and Technology Transfer (NCARTT) to coordinate agricultural research, and carry out both applied research and technology transfer at the national level.

In 1993, NCARTT was operated as a semi autonomous institution with administrative and financial independence. In 2007, NCARTT was reorganized and merged with Agricultural Extension Directorate of the Ministry of Agriculture, and has been named the National Center for Agricultural Research and Extension (NCARE).

During the period 2002-2005, NCARE Director General elected as the president of AARINENA for two periodic periods. Moreover, in 2006, NCARE lead the experts working team of protected agriculture in the Mediterranean region countries, and a member of Global Honey Bee Scientists Board in 2007 to represent Jordan and Arab world.

Presently, NCARE comprises a well-distributed network of 7 regional research centers, 13 extension units, and 13 research stations to cover all agro-ecological zones of the country. There

are 50 Ph.D, and 80 M.Sc scientific staff, as well as 125 research assistants (B.Sc), and 80 extension agents working at NCARE.

Main achievements

In the last decade, NCARE made a substantial progress experiencing the rapid development with all science fields, summarized as follows:

- Fertigation technology: such technique reduces cost of fertilizer by 40%, and water consumption by 30%, concurrently in 2007, about 450 farmers applied fertigation technology.
- Hydroponics agriculture: about 70% of irrigation water saved, and 30-40% of fertilizer and pesticides cost decreased.
- Remove Methyl Bromide Gas: using of Methyl Bromide gas dropped by more than 72% in irrigated area.
- Integrated Pest Management (IPM): chemical pesticides used for IPM of gray mold on strawberry decline by 50% and 70% for IPM of protected agriculture in the Jordan Valley (Ghor) region.
- Improved barley and wheat varieties: promising varieties of wheat and barley were certified with a high productivity of 6500 Kg/hectare and 5000 Kg/hectare for wheat and barley, respectively.
- Olive harvest machine: NCARE by collaboration with the Royal Scientific Society developed an olive harvest machine, and early alert equipment against frost, where 40 units distributed to farmers.

- Feed blocks: agro-by-products to feed ruminant were disseminated, and several feed block units established and distributed for NGOs.
- Gene bank: more than 4000 of plant genetic materials were collected from different sites of Jordan, conserved and documented at NCARE gene bank.
- Honeybee breeding: a research base has been established to develop honeybee breeding including seven research and extension apiaries, pollen grains lab, artificial pollination lab, and biotechnology lab of bee diseases.
- Conservation of Medicinal and Herbal Plants Project (a Global Environment Facility (GEF)/World Bank funded Project and implemented by NCARE and other national institutions. During the period (2004-2007) Progress made included:
 - About 30 demonstrations of MH plants (cumin, black cumin, fenugreek) over 4 years with an area of 50 hectares were conducted in farmer fields. Technical assistance, seeds, and seedlings provided to beneficiaries.
 - Provide farmers/exporters in pre-cooling units, desalination units, and fertigation equipment.
 - Test fields for introducing new crops of MH plants established (arak, lemon grass, moringa, and karkadeh) under irrigation conditions.
 - About 10 Non-Governmental Organizations (NGOs) competitively selected and provided with agricultural inputs and equipments to promote the establishment of pilot medicinal and herbal plants project all around Jordan.
- A comprehensive botanical survey carried out at the Central upper Slopes of the Rift Valley over one year. Where, 10 hotspots with their site management plans identified, in order to improve the conservation and sustainable use of medicinal and herbal plants.
- Gray water: deep research activities were carried out at NCARE to utilize the gray water for irrigation. In 2006, promising research outputs resulted, where 14 units installed at family houses at North Badia to promote the use and improve the quality of gray water. In 2008, additional six units installed at Karak, Tafieleh, and Ma'an provinces in collaboration with Agricultural Resources Management Project at the Ministry of Agriculture.
- Sand Filtering Units: 30 sand filtering units, irrigation nets, fertilizer injection units, and irrigation supplies were distributed to 30 farms at the Jordan Valley.
- Agricultural extension: a pilot training center to build the abilities of extension agents was established. More than 12000 participants including farmers, agents, agronomists, and technicians benefited. In the mean time, awareness and training releases were produced (12 extension movies, and 18 extension letters), and six series of farmer manual guide.