



Agricultural Engineering Research Institute (AERI)

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About Us

Agricultural Engineering Research Institute (AERI), a subsidiary to Agricultural Research, Education and Extension Organization (AREEO), was established to address research issues related to Agricultural Engineering.

AERI, considering the needs of the executive departments in the field of technical and engineering problems and issues of the agricultural sector, by identifying its mandate and research priorities, was established in 1988.

AERI headquarter is located in Karaj city (Alborz Province) in 40 km distance from west of Tehran (Iran capital).

In order to implement the results of research activities and demand-driven research, this institute has been one of the leading institutions and in total more than 80% of the projects have been customized and commissioned by various executive bodies and private sector. In recent years, good interaction and communication has been established with the private sector, and many technological researches has been defined and implemented jointly with the private sector in various fields.

Mandate of AERI is to reduce hardship of ordinary farmers by introducing improved engineering techniques for maintaining productive and sustainable agricultural systems.

The AERI institute currently has subdivision in 14 provincial agricultural research centers.



Some of the important priorities and objectives of the AERI:

- ◆ Undertake basic, applied and adaptive research leading to development and improvement of agricultural machinery and equipment, application of novel and smart technologies, irrigation and drainage, food industry and post-harvest technology and processing, and energy-use in agriculture and rural industries,
- ◆ Develop hardware and technology in cooperation with other AREEO institutes in the area of crops, horticulture, aquaculture and animal husbandry for production and processing,
- ◆ Provide inputs to Ministry of Jihad-e Agriculture on policy interventions with respect to agricultural mechanization and machinery, energy management in agriculture, irrigation and drainage, post-harvest technology, and greenhouse management in agriculture,
- ◆ Act as a repository of information on agricultural engineering,
- ◆ Collaborate with relevant national and international agencies in achieving the above objectives.

The above mentioned mandate and objectives are followed and are implementing through the five different research departments including: **1.** Irrigation and Drainage Engineering; **2.** Agricultural Machinery Engineering and Mechanization; **3.** Food Engineering and Post-harvest Technology; **4.** Greenhouse Engineering; **5.** Smart Farming; and plus one non-research department entitle “Technical and Research Service Department” (the sixth department).

The AERI institute also has extensive scientific collaboration with the executive deputies of the Ministries of Jihad-e Agriculture and Energy in order to fulfill its mission on conduction on-demand research projects. The institute has relations with the scientific associations; universities; and other research centers in various fields; including joint research projects implementation; evaluation, and supervision; and supervising of student's thesis and dissertations.



Visions and Missions

The asserted visions and missions of the AERI (2020-2030 horizons) are as follow:

Visions:

Improving the effectiveness and sustainability of measures in the production and processing of agricultural and food products through agricultural engineering with the approach of participation of relevant specialties, private sector, and knowledge-based companies.

Missions:

- Production, development, and transfer of knowledge and hardware and software technologies in the field of agricultural engineering,
- Optimal and sustainable use of water resources, soil, energy, capital and agricultural inputs,
- Improvement and development of agricultural mechanization in the production and processing of agricultural products,
- Improvement and development of conservation agriculture,
- Reduction of waste and losses in the production and processing of agricultural products,
- Development of smart farming technologies and practices
- Participation and contributions in national decisions and decision-making,
- Testing and evaluation of agricultural machineries and equipment,
- Development of small-scale units of post-harvest technologies and processing at the village level,
- Organizing and developing agricultural and food processing workshops.



Staff and Budget Structure

AERI has branches in 14 provinces of Iran with over 300 staff members in headquarter and provinces in overall, out of which 150 people (50%), are research staffs. The ratio of research staffs to the non-research staffs is about two which is fairly proper.

From the budget structure aspects, the AERI institute is independent from AREEO budget allocation system and receives its financial resources directly from the Planning and Budget Organization and partly from its demanded research projects and through agreement with the different governmental organization and private sector.

Published Journals

Publication of "Journal of Agricultural Engineering Research" initiated in 1999. This journal received the scientific-research degree on Jan. 27, 2001 from the Ministry of Science, Research and Technology. However, since 2015, this journal has been divided into three specialized scientific-research journals with the titles of:

- Irrigation and Drainage Structures Engineering Research,
- Agricultural Mechanization and Systems Research,
- Food Engineering Research.

The institute also publishes an extension journal namely as:

- Agricultural Wastes and Byproducts Management



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