The opinions of agricultural researchers on the current and potential applications and impacts of nanotechnology on Egyptian agriculture

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ABSTRACT

Nano Technology (NT) is a recent and impactful innovation with various applications that enhance agricultural practices. The success of extension efforts led by Egyptian Agricultural Researchers (EARs) depends on their awareness of NT applications. This awareness is crucial for encouraging farmers to apply NT effectively, leading to improved agricultural productivity, increased farm income, and enhanced food security.

The main objective of the study was to explore Egyptian Agricultural Researchers' (EARs) opinions on Nano Technology (NT) and its current and potential contributions to Agricultural Production and Marketing (AP&M). Specific objectives included understanding EARs' perspectives on NT and its impacts on various aspects of AP&M, such as improving access to inputs, modernizing processes, reducing transportation costs, maximizing economic returns, and promoting environmentally friendly practices.

Data were collected from 79 Egyptian Agricultural Researchers (EARs) representing different Agricultural Research and Educational Institutions using an online questionnaire. The questionnaire, tailored to meet the study objectives, included inquiries about respondents' characteristics and their opinions on various aspects related to the meaning,

current applications, and potential uses of Nano Technology (NT) in Egyptian agriculture.

The most important results of this study are:

The respondents reported a considerably high knowledge of the meaning of NT:

- Their opinions encompassed various current and potential contributions of NT,
- Their opinions included NT several current and potential contributions in improving farmers':

Access to production and marketing inputs and services,

Modernizing processes and services of performing production and marketing activities,

Minimizing the costs of agricultural activities and services, and,

Maximizing farming economic net returns and enhancing environmental protection.

Keywords: Nanotechnology, Agricultural Researchers, Egyptian Agricultural, Sustainable Development Strategy