

## **An Overview of Agricultural Mechanization and Ecosystem**

**M. Almassi<sup>1</sup> and N. Habibi<sup>2</sup>**

In the past two centuries people intentionally or unintentionally failed in being in harmony with environment and the principles of sustainable nature. This is mostly due to the advent of the industrial age and modernity having achieved the domination of natural phenomena and ecosystems, using the tools and thinking of reductionism or system. Current and future technologies and the so-called agricultural mechanization or automation has become common in recent years by applying different policies to increase competition for the exploitation and development of land for crop and horticulture production. Intensive cultivation, mismanagement of forests and other natural resources, intensive grazing etc, has led to environmental problems and deterioration of natural resources. Despite significant improvement in the areas of plant breeding, irrigation, pest control, soil fertility and the use of new technologies such as precision agriculture and biotechnology. Climate and soil are still the most important determinants of sustainable agricultural systems. Concepts such as sustainable agriculture, conservation agriculture, organic farming, precision farming and agricultural biotechnology are the result of such inappropriate policies. In this article, a brief history of the inception and use of agricultural machinery and mechanization are presented. The positive and negative aspects of machine operation with an emphasis on environmental aspects will be discussed. Also envisage of the future mechanization system management will be reviewed.

**Key words:** Agricultural machinery, Renewable energy, Soil compaction, Sustainable agriculture.

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1. Corresponding author, Email: [morteza.almassi@gmail.com](mailto:morteza.almassi@gmail.com)

2. Invited Scholar of Academy of Sciences and Professor, and Ph.D. Student, Azad University, Tehran, I.R. Iran, respectively.