

# Conservation agriculture innovation strategy to achieve sustainability in agricultural mechanization

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**Abstract**— Due to the rural share of 31% of the total population of the country. The total acreage of agricultural products and 75% are in rural areas, undoubtedly the country's rural development through agricultural development; especially sustainable agriculture exposure is affecting the economy of the country. Currently, about 16.2 million hectares of crops in cultivation is the 17% figure is dedicated to the export of horticultural products. Sustainable development of rural areas to develop soil and crop conservation issues and other development and healthy organic crops noted. Therefore, this study is based on the challenges and strategies for the development of agricultural systems at the plant are investigated. The results showed that the development of organic crops mainly in greenhouse crops And a small quantity of garden products. So that almost 114,000 hectares and 126,000 hectares, the share of agriculture to organic methods of conservation and greenhouse horticultural sector has been. The results show that the cultivation of crops during 8 years of protection is a high growth so that in 2011 reached 300,000 hectares. Lack of familiarity with new methods of tillage and crop farmers and failure to develop and promote the benefits of organic products among consumers of barriers to the rapid growth and development of organic agriculture is healthy. So far, 154 countries in the list of producers of these products has been unfortunately, the name of the country due to the lack of discussion of standardization and lack of standardization and lack of standards has not been listed yet. selection and applying appropriate promotion and identification of machines and implements standards for organic production and adopting appropriate policies government can play an important role in the sustainable development of agriculture in Iran.

**Keywords**— conservation tillage, reduced tillage, sustainable development

## I. INTRODUCTION

Increasing world population pressure on land resources, particularly food crops, at least in part by improper handling of the crisis has made. Should be accepted that the food sources is not unlimited, and hence for the survival of living organisms on Earth, and the only way of adhering to sustainable agriculture will not. The concept of sustainability in agriculture varies according to the different perspectives from the viewpoint of possible economic, political, social, cultural or be considered. Given the environmental and ecological issues is considered one of the major objectives of sustainable

agriculture. To achieve sustainable agricultural production and environmental well as the main base of the soil must be considered. Generally the most important factor associated with environmental degradation, declining soil fertility, and it is destruction. Sustainable agriculture is thus achieved when the rate of erosion rate Soil erosion has almost stopped or cut less. Nowadays increasing agricultural production to meet the growing needs of an expanding population, have considered concerns about future food supply to the people. Contamination of water, soil, air and soil erosion, pest resistance to pesticides and chemical fertilizers has caused widespread. To protect agricultural resources, however, at the same low efficiency and human health guarantees future. This principle is based on: Favorable ecological, economically beneficial, and socially acceptable. Integrated method and its emphasis on self-discipline and direction maximize performance but also to improve the use of inputs is considered a long period.

## II. IMPLEMENTATION HISTORY OF CONSERVATION AGRICULTURE

### A. World

Due to economic pressures and environmental conservation agriculture in small and large areas of South America began in the 30s and developed rapidly.

Limited experimental treatments (Khuzestan, Kermanshah, Mazandaran)	Modification of existing equipment	Sent to experts	2005
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### B. Iran

When you submit your final version, after your paper has been accepted, prepare it in two-column format, including figures and tables.

Executive level	The notice	Provinces test	The number of pattern set instruments	Year	Place of funding
1500	1500	6	35	2008	
23000	21000	17	186	2009	Wheat Project
186000	100000	31	451	2010	
350000	244000	31	90	2011	
117171	321000	32	570	2012	Conservation Plan

### III. CONSERVATION AGRICULTURE APPROACH FOR SUSTAINABLE DEVELOPMENT OF AGRICULTURE

Given the discussions gave rise to the concept of industrial development, agricultural development. As a result of innovative technologies, many environmental problems emerged which provide sustainable development thinking by the United Nations as the agricultural landscape. Considering sustainable development of agriculture, gave rise to the concept of sustainable agriculture will. In this regard, a set of methods, including maintenance, conservation agriculture crop residue on the soil surface, crop rotation, green manure and controlled traffic farming machines, farming has been introduced in order to achieve sustainable development. This article aims to explain the benefits of the approach taken and the Library of conservation agriculture as a strategy for achieving sustainable development of agriculture. Results have shown that conservation agriculture through the preservation of plant debris, increasing the amount of organic matter in soil, prevent erosion on dry land, removing weeds, cutting costs and reducing fuel consumption. (3 million hectares of farmland are covered by the project safety culture. They project on conservation tillage land, increase farmers' income is 30 percent, and also led to action to save farmers and 40% reduction in fuel consumption, here), Maintain soil moisture and land reclamation for agriculture is yielding results in achieving sustainable development. In this respect, promote and educate farmers in conservation agriculture methods, requires the cooperation of the implementing agencies, universities, and organizations associated with agriculture. Soil as a major source of renewable low speed is needed to manage and protect. Sustainable management of soil type, soil management, the supply current needs without the ability of future generations to meet their needs from the soil, endanger. Soil sustainability may be caused by excessive cultivation, raising or lowering water quality, low or over-fertilization, disregarding the use of pesticides, unable to maintain the level of soil organic matter and clear natural vegetation is threatened. This is possible through chemical and physical processes (such as erosion, Stalination and desertification) or biological processes (such as loss of soil fertility) could threaten the stability of the soil (Abbott and Murphy, 1386). Tillage management factors that can destroy or improve soil structure. Tillage is the physical erosion of the soil, in order to prepare the bed cultivation, conservation of water and soil, eliminating soil compaction, weed control, plant debris burial, mixed with fertilizers and soil improver and facilitate root penetration as is (Bayat et al, 1386). Low-till techniques as a method of protecting the soil with plant residue behind and concentrate organic material in the soil for prevent the erosion of coverage provide freely. Direct planting of seeds without any tillage due to reduced mechanical energy

and production costs in many areas is recommended (Connell and House. 1379). All with a view of conservation tillage requires less time and usually does not yield a significant decrease in agreement but climate shows different effects, so that the merits of some of the production methods or parameters are changed to suit local conditions (Griffey, 1380). In general, low-till and no-till conservation tillage, which includes most systems are suitable for low rainfall areas. Conservation tillage systems in the plant residues remain on the soil surface and soil erosion due to minimized during tillage and planting, in addition to reducing wind erosion and water loss due to evaporation and transpiration from the soil surface soil moisture increases and will help to improve soil structure (Chast, 1374). Crop residue on the surface evaporation, soil crusting Close and tighten the limits increase permeability and reduce erosion (Casper, 1369).

### IV. CONCLUSION

Sustainable agriculture as a farming system to be considered valid. This system is capable of achieving the objective of agricultural policy in many countries is acceptable. This system is a dynamic and rapidly evolving. This system has many benefits as compared to traditional agricultural preserves the resource base to achieve economic and environmental benefits are. Today, global approach to farming based on soil living structures. Applying this type of agriculture, biological products, which is consistent with the nature of the soil ecosystem, Priority, and soil as a dynamic ecosystem that is considered material and energy flows in soil organisms and plants are the main implementation. The main factors regulating soil organisms in food chains and life cycles of good relations between them are implemented. Plant and agricultural scientists to focus more on the dangers of overuse of pesticides and fertilizers, and soil and water conservation issues and environmental protection have spent and generally be said to be ecologically sustainable agriculture proper, economically and socially justifiable is desirable. Sustainable agriculture goals that must be achieved as soon as possible, and the continuing need to be less damaging chemicals and expensive and environmental protection, animal health and biological communities through careful planning, sustainable agriculture can make to the future generations can enjoy the environmental conditions are suitable. Besides supporting the participation in training, accreditation and program plans to increase production, environmental protection and ultimately achieve sustainable development is important. According to the debate gave rise to the concept of industrial development, agricultural development. As a result of innovative technologies, many environmental problems emerged which provide sustainable development thinking by the United

Nations as the agricultural landscape. According to the sustainable development of agriculture, gave rise to the concept of sustainable agriculture will. In this regard, a set of methods, including maintenance, conservation agriculture crop residue on the soil surface, crop rotation, green manure and controlled traffic farming machines, farming has been introduced in order to achieve sustainable development. This paper aims to explain benefits the approach taken and the Library of conservation agriculture as a strategy for achieving sustainable development of agriculture. Results have shown that conservation agriculture through the preservation of plant debris, increasing the amount of organic matter in soil, prevent erosion on dry land, removing weeds, reduce costs, reduce fuel consumption, conserve soil moisture and restoring the lands efficiency makes access sustainable development is agriculture. In this respect, promote and train farmers in conservation agriculture practices, requires the cooperation of the implementing agencies, universities, and organizations associated with agriculture.

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