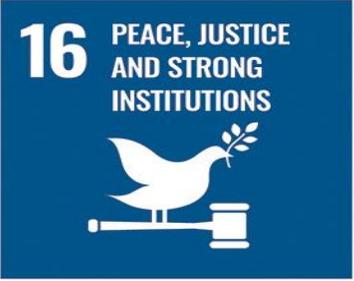
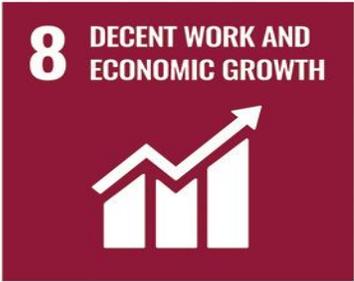




# Situations of dry land and sustainable agricultural mechanization in Uzbekistan

# SUSTAINABLE DEVELOPMENT GOALS



# RAINFED IN UZBEKISTAN



- In Uzbekistan there is 734 thousand ha rainfed for growing agricultural crops, including the main part in Jizzakh province (221 thousands), in Kashkadarya province (252 thousands), in Samarkand Province (175.5 thousands). 99,800 hectares of these rainfed have sufficient rainfall, 553,700 hectares are semi-sufficient and 89,500 hectares are poorly supplied by rainfall.

Most of the irrigated are being installed with water saving technologies (drip irrigation system and sprinkler irrigation system) step by step.

# Status of agricultural machinery in Uzbekistan

- Most of agricultural machinery and technology is readily available for crop, livestock and food production
- Agricultural mechanization input into agriculture, food and agro-based industry is very low for household holders while **big farms and clusters use only mechanization in agriculture**
- Land preparation fully mechanized, significance progress in crop maintenance, manual and semi-mechanized in harvesting and post-harvest handling, wheat and cotton has achieved fairly high level of mechanization.

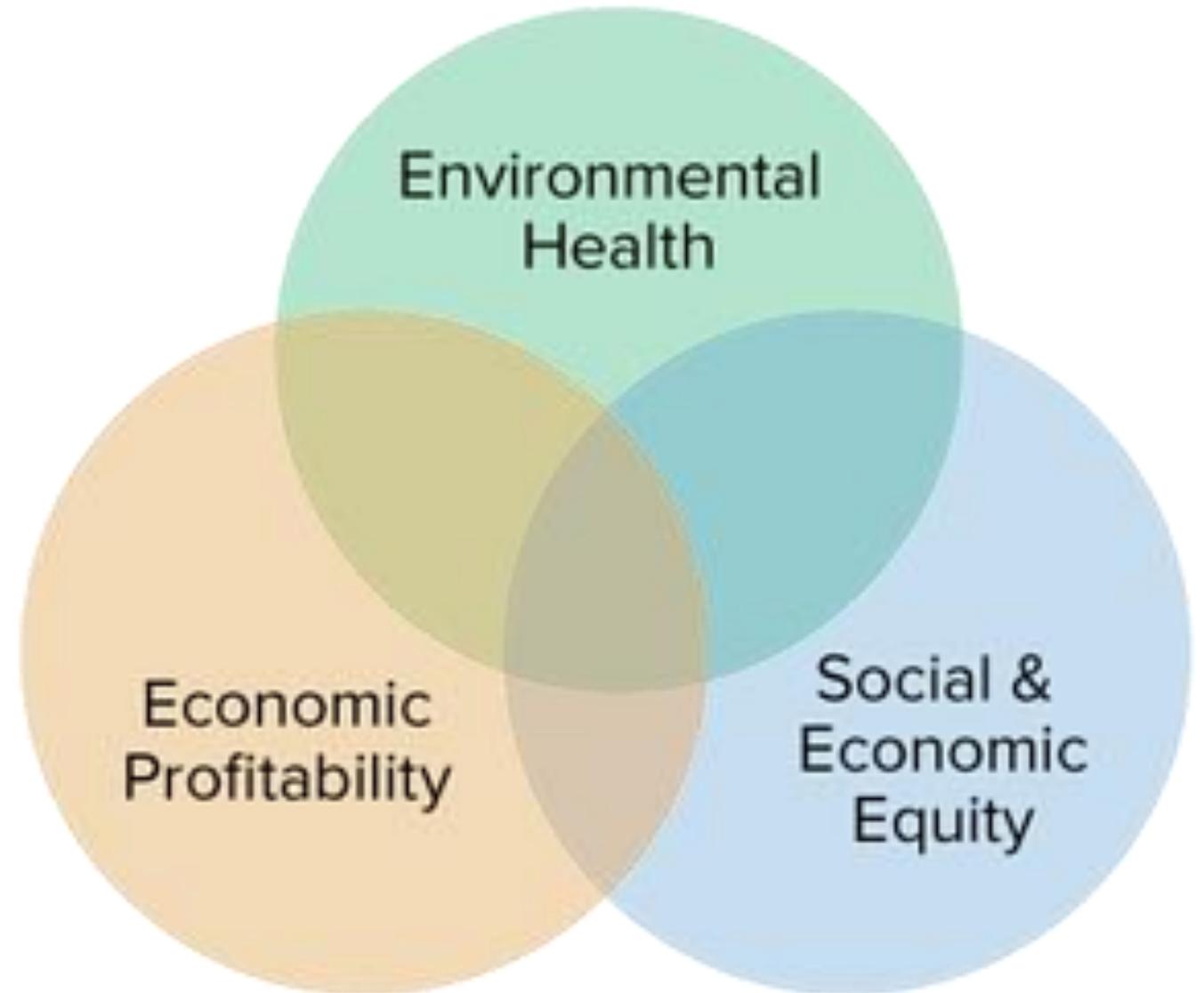
## Status of agricultural machinery

- Locally manufactured agricultural machines: cotton picker and planting, cereal seeder, rotary tiller, plough, cultivators, disking, rotary slasher, fertilizer spreader, boom and manual knapsack sprayers, laser levelling equipment, agricultural hand tools.

## Sustainable agriculture

- Practitioners of sustainable agriculture seek to integrate three main objectives into their work: a healthy environment, economic profitability, and social and economic equity.

<https://sarep.ucdavis.edu/sustainable-ag>



# Sustainable agriculture

## **Sustainable mechanization.**

Sustainable agricultural mechanization covers all levels of farming and processing technologies, from simple and basic hand tools to more sophisticated and motorized equipment.

Sustainable mechanization is applied to crop management practices such as: agricultural land preparation, supports timely seeding and planting, weed control, integrated pest management, precise fertilizer application, harvesting, preparation for storage, and value addition operations along the food supply chain in terms of on-farm processing, transport and marketing.

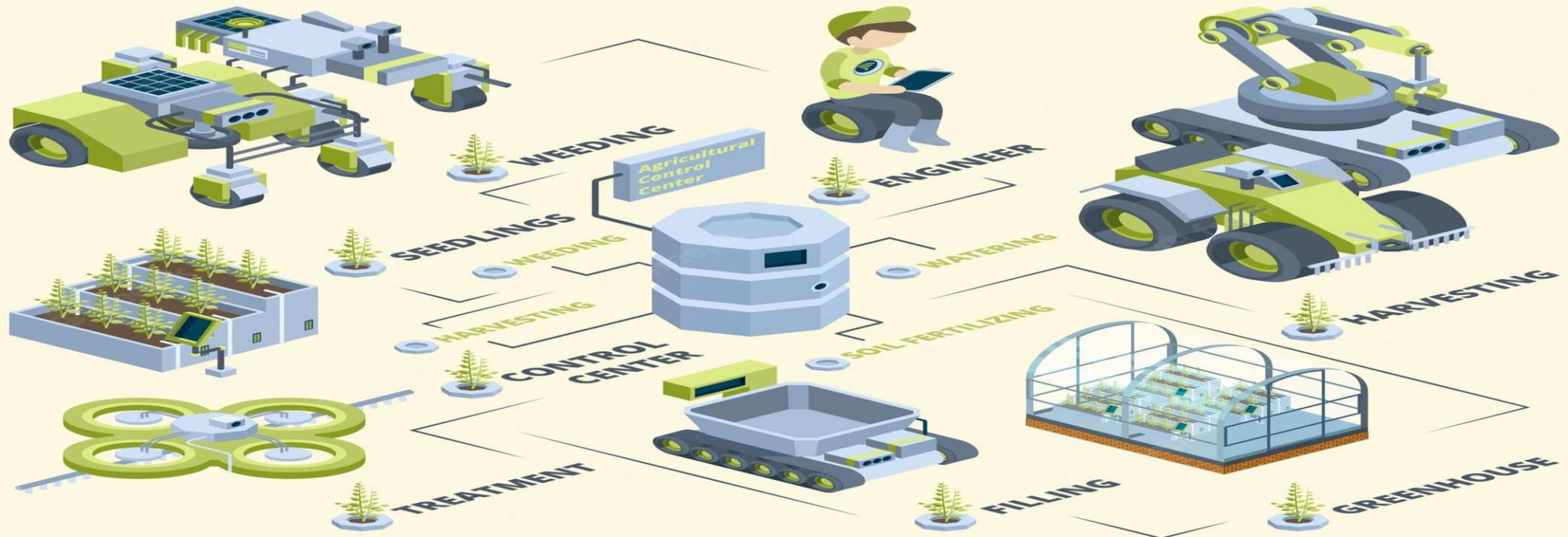
# Sustainable agriculture

## Sustainable mechanization.



# Sustainable agriculture

## Smart farming



([https://www.freepik.com/premium-vector/smart-farm-battery-agricultural-machines-drones-tractors-harvesters-future-technology-dairying-solar-panels-vector-isometric-farm-illustration-isometric-solar-smart-energy-drone-countryside\\_11435122.htm](https://www.freepik.com/premium-vector/smart-farm-battery-agricultural-machines-drones-tractors-harvesters-future-technology-dairying-solar-panels-vector-isometric-farm-illustration-isometric-solar-smart-energy-drone-countryside_11435122.htm))

# Sustainable agriculture

## Conservation agriculture.



**No mechanical soil disturbance by** – seeding or planting directly into untilled soil=**NO-TILL**



**Enhance and maintain organic matter cover on the soil surface** – using crop residues and cover crops to protect and feed soil life



**Diversification of species** – both annuals and perennials - in associations, sequences and rotations



# Key Takeaways

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Natural resources, stakeholders, support systems to put the sustainable agriculture mechanization on the agenda of different sectors, connect them and ensure effective interaction to lead national economy for innovation, growth, and competitiveness.

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There is a need for long term vision of sustainable agricultural mechanization in higher education system in the country including research and development.

# Key Takeaways

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Most of the present farm layout and infrastructural facilities are generally not designed for efficient use of sustainable agricultural engineering technologies.

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The concept of sustainable agricultural mechanized farming is not fully understood and practiced in the agricultural sector in the country.

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Lack of extension services throughout the country on sustainable agriculture

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Little or no mainstreaming of Sustainable Agriculture in National Educational and Research Programs

# Recommendations

## Support

- Support the Sustainable Agricultural practices to enhance agricultural production and local production of Sustainable Agricultural Equipment including smart agricultural machines, agricultural drones and etc.

## Develop

- Develop sustainable agricultural mechanization strategy in the country

## Increase

- Increase financial flows and investments in this sustainable agriculture



**• THANK YOU VERY MUCH  
FOR YOUR ATTENTION!!!**