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Harvesting Solar Energy to Harvest Bumper Crops

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INTRODUCTION

Indian farming is passing through distress at the times when the fuel and electricity charges are sky high. In the states were cropping intensity is very high, these costs are adversely affecting the profitably. Animals used in agricultural operations for draft are now beast of burden as to maintain these animals is proving costly. The share of draft power using animals have drastically reduced in past decade due to mechanization. The number of some species of pack animals have come down to the category of conservation and extinction. The animals were not only used for draft in agriculture but for manure too. Indiscriminate use of chemical fertilizers has not only reduced the fertility and productivity but also attracting uncurable fatal diseases like cancer. This ill-advised use effecting human and soil health. Now the question of remedy comes and what can be solution to these emerging problems posing threat to agriculture production. Nature has bestowed India with bright sun shine during the summer when the lands are parched needs this type of energy such as wind, solar and biomass which are easily available with farmers without costing much. Renewal energy and agriculture are vanquishing combination for cost. Renewable energy can be used on the farm to replace other fuels or even sold as a cash crop. It is one of the most promising and important opportunities for value-added products in agriculture. Solar energy promising effect on agriculture by saving money, increasing self-reliance and reducing pollution. Solar energy can cut a farm's electricity and heating bills help farmers to increase their profitability. Cheaper and improved technologies are required to modernize the agriculture sector. Most of the on-farm operations earlier were performed either manually or by animal power but the scenario has completely changed. We are competitive with developed country and advancing to self-reliance in agriculture.

The Sun has been worshiped as a life-giver to our planet since ancient times. The industrial ages gave us the understanding of sunlight as an energy source. India is endowed with vast solar energy potential. About 5,000 trillion kWh per year energy is incident over India's land area with most parts receiving 4-7 kWh per sq. m per day. Solar photovoltaics power can effectively be harnessed providing huge scalability in India. Solar also provides the ability to generate power on a distributed basis and enables rapid capacity addition with short lead times. Off-grid decentralized and low-temperature applications will be advantageous from a rural electrification perspective and meeting other energy needs for power and heating and cooling in both rural and urban areas. From an energy security perspective, solar is the most secure of all sources, since it is abundantly available. Theoretically, a small fraction of the total incident solar energy (if captured effectively) can meet the entire country's power requirements (Source www. Mnre.gov.in). The objective of Green Corridor Energy is to synchronize electricity generated through renewal energy to conventional power grids to supply uninterrupted power.

Roof top panels and on field installed panels are common sight in urban and rural areas. The owners are self sufficient in power generation rather adding to the power pool through grid helping others. This new concept is taken very well by Indian Farmers. Now a days renewal energy is integral part of agriculture. Almost every farmer has taken advantage of subsidiary offered by government and symbiotic effect.

Role of renewal energy in agriculture:

For on farm operation farmers are in search of Cheaper and improved sources of solar energy applications for agriculture. Renewal Solar energy is clean, risk-free and is harmless to man and environment. What are those areas agriculture where we can take advantage of this source of energy? These incude:

1.Water Pumping
2. Crop and grain drying
3. Seed Storage
4. Green House heating