

## AGRICULTURAL WASTE INTO WEALTH

**Shivani Suman, Sakshi Saxena, Nishikant Yadav and Naveen\***

Ph.D. Research Scholars, Department of Entomology, College of Agriculture,  
Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, Madhya Pradesh

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### INTRODUCTION:

“*What is the waste?*” Waste is any material that cannot be used, it is not needed by the producer or owner because it has lost its value. If we do not utilize waste and throw it around, causes various pollutions which is harmful to the environment as well as the health of human beings. Waste also possess a serious threat to our life.

Waste is classified into different types and one of them is **AGRICULTURAL WASTE**.

Agriculture waste is defined as, “*the collective term used for a non economical substance which is produced by agricultural operations such as roots, crop residues, and livestock waste*”. Agricultural waste is waste produced through various agricultural operations like bagasse, straw, peels, etc. It includes manure and other farm waste, poultry house waste, fish waste, and slaughterhouse waste too.

When there is high agriculture production, it results in high agricultural wastes, so it is very necessary to convert unutilized waste into a useful form. Wastes obtained through rural and urban areas are different.

- **Waste from a rural area** – Maximum agricultural waste is obtained from the rural area such as cattle urine and dung, waste of food materials of animals and their excreta i.e. Poultry waste, Agro-industrial waste *i.e.* sugarcane molasses, peels of potato, peels of orange and another agriculture crop. Rural areas mainly produce natural or organic agricultural wastes.
- **Waste from urban area**– In an urban area, mixed waste is found. A waste product that is



Being isolated from normal waste is diapers, sanitary pads, bandages, syringes, and other medical waste. Polythene, glass, and waste from machinery i.e. tires and batteries, plastics i.e. moulds plastics, and hard plastic are included. Whereas normal waste in the urban area includes kitchen waste and excreta etc.

In nature, nothing is considered a waste. Everything is food for something else. Everything is meant for another thing through its modification. It is the rule of nature.

At present time, the population is increasing day by day and simultaneously resulting in a decrease or scarcity of food. Due to the arrival of such critical conditions, people started relying on the use of more complex nutrients i.e. chemical fertilizers to produce a higher yield or sufficient food to cater to the need of people and fulfilled the need of the increasing population. Due to continuous and non-judicious use of chemicals, the land becomes infertile and barren. People also burnt agricultural waste (parali and palkati) which create air pollution, damage other crops or create an unhealthy environment.

#### **How to manage agricultural waste –**

The management of agriculture waste through composting and vermicomposting etc. –

- **Composting** –Composting is the process of recycling various organic materials which are earlier regarded as waste material and produce a soil conditioner. Compost is a result of the decomposition of material into organic matter full of humus and nutritive value.
- **Method of recycling of organic wastes-** NADEP compost method, heap method, pit method, Indore method, and Bangalore method.
- **Efficient composting techniques-** vermicomposting and microbial enriched composting.
- **Vermicomposting** – Vermicomposting is the product of composting using different species of worms, to create a mixture of decomposing vegetable or food waste, bedding material, and vermicast. Vermicast is the end product of the breakdown of organic matter by earthworms. It is the most eco-friendly recycling process that not only converts organic debris into compost but also makes the availability of nutrients to plants.

The basic requirement for composting to start is organic waste. As earthworms feed on waste, they begin to excrete a dark-colored nutrient-rich organic matter called vermicast, when the



worm container gets filled with compost, it can be used as manure for gardening or farming purposes.

### **Wealth from agricultural waste –**

With the management of agricultural wastes, we utilize it to obtain a lot of money. Many examples of agricultural waste to wealth are as follows-

1. Production of biogas from waste to be utilized for various purposes.
  2. Use of agriculture waste in mushroom production.
  3. Use of briquette.
  4. Making of bio-fertilizer
  5. Production of biofuel such as ethanol.
  6. Use of wood chips, straw in mulching.
  7. Used for alcohol production
  8. Medicinal uses
  9. Use of stubbles and roots for plywood making and craft paper making.
  10. In organic farming, oilcake to be decomposed, and the product obtained is used as insecticide material.
- **Mushroom production** – A mushroom farming business can be means of big profit in just a few weeks with considerably low start-up capital investment to start a business. Mushroom is cultivated on a large number of agro-waste. For this, we can use paddy straw, wheat and ragi straw or leaves of maize, millets and cotton wastes, dried grasses, used tea leaf waste. Waste material that remains after mushroom production is used as a raw material for composting or vermicomposting.
  - **Medicinal and value-added products developed from farm wastes** – which may increase the income of farmers. Many medicinal uses of plants or crops are not being used due to lack of knowledge such as cucurbits sp. known as **kacharia in local language** is considers as waste material but it possesses a medicinal value which is beneficial for health.

### Wealth



If the farmers or people aware of the beneficial effect of kacharia, they may enhance their income by selling it to the pharmaceutical industries. They make dried products or pickles of kacharia and sell them at a valuable cost in the market. Here farmers get money from the waste material i.e. Kacharia, which is grown unnecessarily in the field. And this also produces many value-added products which benefit the health and Increase income as well. Like the above examples, there are several forests produces which can be used for many other medicinal and other uses.

### CONCLUSION:

We have to recycle waste into new products to become healthy with also getting money from this recycling. The essence of recycling waste is to minimize the waste quantities exposed to our environment.

India is a country of landless farmers. The production of manure, composting, and vermicomposting play a potential role in earning wealth by adopting the above work as a production industry. Agriculture and forest provide food, fuel, fiber, and fodder and fulfill the shelter needs also. It will save crores of rupees that are converting waste into wealth.