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Special of Classification of Crops

Crop cultivated for specific purpose in addition to its economic yield.

- **Augmenting crops:** Crops are sown to supplement the yield of main crops. The supplement crops are known as augmenting crops. e.g., mustard with barseem.
- **Alley crops:** Arable crops are grown in alleys formed by trees or shrubs, established to hasten soil fertility restoration, increase soil productivity and reduce soil erosion. These are known as alley crops. Such crops should have slight shade tolerance and should be non - trailing. Examples are sweet potato, black gram, turmeric and ginger in between the rows of Eucalyptus and Subabul while grasses in between Hedge lucerne.
- **Border / Barrier crops / Guard crops:** The crops grew around the field boundaries of the plot or field of another crop in narrow strips to protect the main crop from the trespassing cattle menace or restrict the speed of wind. e.g., Sesbania grandiflora around betelvine crop; castor and kenaf in the outer ridges of sugarcane; safflower around pea and sorghum around maize.
- **Bonus crop:** An additional crop taken in intercropping or mixed cropping systems without any extra inputs. Redgram and castor are broadcasted in groundnut.
- **Brake crops:** Crops are grown to break the continuity of the ecological situation of the field in crop sequence or crop rotation. Sugarcane - rice rotation breaks the continuity of weeds, pests due to variations in host ranges and changing of ecological situations.
- **Cash crops:** Cash crop is a high value marketable crop which is grown for sale to earn hard cash. These crops are processed for their economic products at industries. Examples are sugarcane, cotton, jute, sugarbeet.
- **Industrial crops:** Plants grew to provide materials for industrial processing and production of non-food products such as biofuel, sugar, rubber, starch, industrial oil, aromatic compounds, steroids, medicinal drugs, organic pesticides, tannins and dye. This is a special classification based on the method of processing and the nature of the product (non-food) and not on the part of the plant which is harvested and used as raw material. Based on these criteria, both agronomic and horticultural crops can be classified as industrial crops. Corn (grain crop) and legume seed crops (e.g. soybean) can be classified as industrial if they are grown primarily for industrial processing to produce biofuel or industrial oil. Examples are cotton, sugarcane, tobacco, groundnut, castor, gingelly and tapioca.
- **Paira crops / Relay crops:** Crop plants sown a few days or weeks before the harvesting of the standing mature crop. These crops are grown on residual moisture and nutrients without preparatory tillage. The standing crop and latter sown (paira) crop will be in the same field for a brief period and remain as single crops for the rest of the duration. Examples are blackgram, greengram, khesari bean in rice.
- **Catch crop / emergency crop:** A quick growing crop incidentally planted and harvested between two major crops in successive seasons to utilize residual fertilizer and soil moisture. It may be a contingency crop

grown to replace a major crop which has failed. It is often used as a green manure or to provide supplemental livestock feed; also called emergency crop.

- **Companion crop:** Any crop which is planted close to the main crop to complement the latter's growth and production, or to maximize utilization of space because they do not compete. Examples are Black pepper planted with live coconut, cacao, *Gliricidia sepium* to serve as trellis. Castor and maize grown in turmeric field.
- **Cover crops:** Crop plants are able to protect the soil surface from the erosion through their ground covering foliage and / or root mats or loss of moisture due to leaching and erosion by wind and water. Examples are groundnut, marvel grass, cenchrus grass, sweet potato and para grass. Leguminous vines such as improved pasture and forage crops are excellent cover crops. As legumes they can enrich the soil fertility by fixing atmospheric nitrogen.
- **Contingent crops:** Crops raised in the event of failure of a main crop that has failed due to biotic or climatic or management hazards and utilize the remaining period of the season. They are generally of very short duration, quick growing, fast bulking, harvestable or usable at any time of their field duration. Examples are greengram, blackgram, cowpea, sunflower, spinach, coriander and onion.
- **Exhaustive crops:** The soil fertility gets exhausted when aggressive nature of crop is grown. Examples are sunflower, sesame, brinjal, maize and linseed. These are plants which on growing leave the field exhausted.
- **Ley crops:** Forage crops grown for grazing in rotation with field crops. Example is *Cenchrus* grasses rotated with field crops in Kangayam tracts, Tamil Nadu.
- **Mulch crops:** These crop plants are grown to conserve soil moisture from bare ground by their foliage, trailing habits and self-seeding nature. Examples are cowpea, coriander.
- **Nurse crops:** A companion crop which nourishes the main crop by way of nitrogen fixation and / or adding the organic matter into the soil. Nurse crop refers to the small grain crop in some way protected the new seedlings or nursed it along in some way until it was strong enough to establish for itself. Crops help in the nourishment of the other crops by providing shade and act as climbing sticks such as mustard in peas, sorghum in cowpea, *Tephrosia*, *Gliricidia* in tea. Leguminous or deciduous plants shed their leaves and enrich the soil fertility. Tall crops such as coconut, pigeon pea, castor, etc., nourish shade - loving plants such as turmeric, ginger and corm. Cowpea intercropped with cereals or new plantations of fruit trees.
- **Opportunity cropping:** The practice of placing an option on use of stored soil moisture while deciding whether or not to raise or establish a crop.
- **Plant crop or first crop crop or stub crop or first cycle crop:** Crop plants refer to the first crop after sowing or planting the crop in perennial or multicut crop. Examples are sugarcane, cotton, pigeonpea, napier grass, para grass, guinea grass and marvel grass.
- **Restorative crops:** Crops assist in enrichment, restoration or amelioration of the soil in addition to its economic yield. Examples are legumes. These fix the atmospheric nitrogen in root nodules and shed their leaves during ripening stage to restore soil conditions.
- **Smother crops:** Crop plants are able to smother or suppress the population and growth of weeds with their dense foliage developed due to quick growing ability, or branching or procumbent or trailing habits. Smother crop is grown for the purpose of eliminating any undesirable plant through physical or its allelopathic effects. Examples are cowpea and sweet potato, *calapogonium* in coconut.
- **Rubber crops:** Plants grown for the production of latex which is processed into the industrial product called rubber. Examples are para rubber tree, *Castilla* rubber, guayule.
- **Biofuel crops or Energy Crops:** Plants grown for the production of fuel or biodiesel from vegetable oils. Examples: sugarcane, cassava, corn, coconut, castor bean, *Jatropha*. Energy crops are harvested for biodiesel, bio-ethanol and biomass crops.
- **Root crops:** Crop plants whose surplus or reserved foods are stored primarily in enlarged roots. A tuberous root is a thickened secondary root as in arrowroot, cassava, sweet potato and yam bean. A fleshy root is usually an enlarged primary root, as in carrot, ginseng (*Panax* spp.) And sugar beet. In radish, the fleshy root consists mainly of the hypocotyls. Examples are tapioca, sugar beet, sweet potatoes.

- **Tuber crops:** Crop plants possessing enlarged underground reproductive portion of stems which has high carbohydrate. A tuber is an enlarged tip of an underground stem with leaves reduced to scales or scars subtending the auxillary buds, as in white potato and yam. The "eyes" represent buds in nodes, arranged in spiral pattern from base to the apical end of the tuber. Example is potato. Aerial tubers are called tubercle.
- **Track crops:** Crops grown for distant markets requiring heavy transport.
- **Trap crop or Decoy crop:** Plants grew to attract certain insect pests or parasites because they are favorite hosts. These act as decoys to lure pests away from the main crop. These make pest control easier because the insects are concentrated on a few plants. Examples of trap crops are as follows:
 1. Basil (*Ocimum basilicum*) - green, loopy tomato caterpillar.
 2. Garlic (*Allium sativum*) - greenfly.
 3. Chive (*Allium schoenoprasum*) - greenfly and cutworms.
 4. Corn (*Zea mays*) - cotton bollworm.
 5. Marigold (*Calendula officinalis*) - caterpillars and cutworms.
 6. Nasturtium (*Tropaeolum majus*) - aphids.
 7. Tarragon (*Artemisia dracunculus*) - loopy caterpillar.
 8. Tobacco (*Nicotiana tabacum*) - cotton bollworm.
 9. Orobanche and Striga are trapped through solanaceous and sorghum crops respectively.

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