

MODELS OF ALTERNATE LAND USE SYSTEMS

Dr. G. M. SUJITH

**UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
KARNATAKA STATE**

ALTERNATE LAND USE SYSTEMS

Land use systems which are alternatives to crop production are called by the term alternate land use systems

It is defined as an effective economic utilization of land without harming the natural resource structure based on land capability

It involves the addition of perennial component which has drought tolerance, can withstand the aberrations of monsoon and imparts stability to production

Various models of Alternate Land Use System

- ❖ **Agri -horticulture**
- ❖ **Agri - silviculture**
- ❖ **Alley cropping**
- ❖ **Ley farming**
- ❖ **Silvi pasture**
- ❖ **Tree farming**

VARIOUS MODELS

Agri-horticulture

Practice of cultivating crops along with horticulture component



Suitable in semi-arid regions where annual crop production is low and highly unstable

Agri - Silviculture

Production technique which combines the growing of agricultural crops with simultaneously raised and protected forest crops



Alley farming

An alternate land use system where crops are grown in alleys formed by hedgerows of trees or shrubs. It is more profitable to plant hedgerows on contours with 10 to 20 m spacing



Essential feature of the system is that hedge rows are kept pruned during cropping to prevent shading and to reduce competition with food crops

Ley farming

Ley farming aims to generate *in situ* fertility through rotation of legume forages with cereals. It is important for increased fodder production, a critical component in rainfed farming



Silvi - pasture

Marginal drylands, generally shallow and poor in nutrients, can also yield better returns through fuel wood and fodder. After six to eight year rotation even arable crops can be grown on built –up soil fertility



This system is most preferable where the fodder shortages are experienced frequently – fallow land can be spared for this system

- ❖ **Crop production may be disastrous in the years of drought, whereas drought resistant grasses and trees could be remunerative**
- ❖ **This system not only helps in generating much needed off-season employment in monocropped drylands but also utilizes off-season rains which may otherwise go waste as run-off, prevents degradation of soils and restores ecological balance**
- ❖ **Different land use systems so developed should be used in better way for increased and stabilized production in drylands**