AI 3017 INTEGRATED FARMING SYSTEM

UNIT 3.1

Livestock production in IFS:

Sheep farming in Integrated Farming suitable for wetland: In one acre of land goats can grow up to 30 to 35 numbers. The forage crops of cumbu Napier CO-4 (40 cents), Hedge lucerne - (30 cents), fodder sorghum CO.F.S. 29 - (30 cents) these crops can ensure supply of fodder throughout the year. In this CO 4 grass is high forage yielding one. It had high tillering capacity, lean stems with more leaves, easy palatability and not having spines attracts sheep. Further, it has easy digestibility. The intercrop CO-4 variety are fed into small pieces will increase the body growth rate. Buffel grass varieties viz., blue, white and black can withstand the drought and weed infestation. This kind of grass was suitable for pastures. These grasses cultivated with legume fodder such as Stylo in 3:1 proportion in dryland pastures would increase the productivity of goats. Produced forages are cut in to small pieces and fed to the sheeps. Generally, sheep produce three lambs in two years. This will give more profitable than other livestock. Moreover, green fodder given to goats about 2 to 3 kg per day would be sufficient.

Goat rearing in dryland IFS: In integrated farming, suitable for dryland of 1 hectare land with crop cultivation and goat rearing (20 females: 1 male) by doing this, three times production, net profit and increasing employment chances. From 20 sheeps we can get 45 lambs in a year. Moreover, from sheep manure we get 200 kg N, 106 kg P and 91 kg K. it also gives 40 to 50 thousand rupees additional income. In our country, sheeps are largely dependent on Grazing land because of this sheep's productivity is low. Solving this problem tree kind fodder leaves, agri related products as daily feed will increase the productivity. Thus groundnut leaves, red gram bran, black gram bran and such as the feeding of the wood leaves like Agathi, Barnyard, neem, Tamarind, Supapul, Desmanthus, Portia, surrogates such as tree leaves Acacia, Kutaivelan, Velikattan and Raintree pods will give required nutrient-rich forage to the sheep. It removes fodder demand, increase meat production leads to getting additional income. During rainy season, sheeps get enough amount of green grass through the pasture. So allow 6 to 8 hours daily for grazing is enough for sheep. During summer (March to August) green grass not available. Therefore, in the Cause of mixed ration (Concentrate) giving to sheep's is necessary. In this concentrated fodder include cereals, cakes, rice or wheat bran, mineral Mixture and normal saline. Usually for sheep's, groundnut cake, sesame or mixed soya cake mixed with mixture fodder may fed to the sheep. During non-availability of mixture fodder, red gram bran, black gram bran, bengal gram brans to be given as fodder.

Agro forestry and goat farming: Practicing agriculture with livestock farming is more profitable than doing agriculture alone. In addition to goat rearing in agriculture, growers growing goats 20 to 30, per year will give minimum 40 to 50 thousand rupees as additional profit. Agroforestry and goat rearing doing together may give many benefits to the farmers.

- Fallow land and dry land may be exclusively used for this project.
- In this method, the amount of water needed is very low.
- In this method, from the goat dung and leaves heap decomposition used as fertilizer for agriculture, the opportunity to increase soil fertility.
- Fifth year onwards, get more profit from well grown tree.
- Above all, farmer will get the employment opportunity throughout the year.

Agroforestry and kennel method of goat rearing

- New forage variety hedge lucerne in 25 cents and kollukattai grass in 25 cents should be cultivated.
- For an acre based on water facility available at least 25 cents fodder maize CO.F.S.29, 5 cents of land used to build fences and set up kennel method shed in the center.
- In the remaining land, Agathi, Soundal, Gliricidia trees could be planted in the border.
- Three to four months prior to the purchase of goat starts cultivating forage crops and kept ready.
- Goat rearing in kennel method

Construction of Shed

- 10 to 15 square feet of space is needed for one goat.
- Put shed with coconut palm leaf or tiles set
- Aluminum plates on one side of the barn to feed and keep
- Water supply with automatic tool
- Kennel should be set at a height of about 3 feet above ground level.
- Mixed forages 50g for younger ones, 100 g for grown and 200g for pregnant sheep per day. For goats, requires 1-3 litres of water per day. It also fed with 1 to 2 kg of forage sorghum and 250 to 300 grams of tree leaves per day.

Integrated sheep rearing: Sheep farming in dry lands under integrated farming system is profitable business. In these lands crop cultivation with fodder trees are fed to the sheep. It has rich in proteins and minerals. These include Agathi, neemSupapaul, Acacia sp, kalyanamurungai, Gliricidia and Raintree are important one. Tree leaves are rich source of nutrients than other fodder. Instead of giving tree fodder alone it can be mixed with cereal or legume fodder will reduce the feed cost of fodder sorghum and increase the productivity of sheep. It's not just giving maravakait tivanankalait separately mixed with cereal grains or forages pulvakait, sheep concentrate mixture of corn, cut through the green, can increase productivity. Sheep farming income depends on the ability of production of lamb. To make the sheep farming profitable one breeding management practices to be followed in right time. Goats are usually produces their offspring's around the year and also get into lactation 60 to 90 days after give berth. Tamil Nadu is categorized according to three oestrus periods.

Goats become enter into estrus period during March to April give birth to lamb in July to August. From the beginning of June, due to start of south-west monsoon both sheep and lamb got good fodder. The sheep had good milk production capacity increase the growth of lamb. During the months of July and August those sheep eve lambs in November and December. In some areas there is severe cold and snowfall caused growth and health of lambs. Similarly, in places that are dependent on rainfall areas fodder shortages are likely to occur. Separated from the mother the offspring not provided sufficient amount fodder will cause growth of the younger ones. The increase in mortality of the offspring. Rainfed crops harvested in the months of December and January may be used as feed for mother to increase the milk yielding capacity. if they do get to keep the mother sheep by products of agricultural products can be corrected by maintaining milk production.

Methods to increase Fodder production

- Grow high yielding varieties and technologies.
- Area for forage production is very low. So we can increase the size of the area planted forages as possible.
- Legume fodder may intercropped with other crops to increase the production.
- Social forestry and Agroforestry system forage crops can be grown. For example, between the trees supapaul kolukattai grass and stylo can be grown in 3: 1 proportion.
- Fallow land, lake, forage or fodder trees can be grown in places like roadside land.

- Agricultural lands, fruit tree mango, sapota, guava, lemon, coconut and tamarind intercrop forages grown between the trees.
- Grow good grass pastures in poor condition land Marvel grass, kolukattai grass and legume fodder like Stylo and ciratro can be sown.

Therefore, future agriculture depends on planned farming of marginal and small farmers. Farm holders according to their resource availability if integrated farming system is followed they can improve their livelihoods and standard of living.