

Aragani –a traditional cultivation practice carried out by Irula tribal (Primitive tribal group) community in Thimabam hill region (Melseemai) of Tamilnadu

The background: Thimbam hills are situated at the southern tip of Deccan plateau at the meeting landscape of Western and Eastern Ghats of South India. The altitude of this hill section is ranging from 750 to 1120Mtrs MSL. The region is extensively covered with natural forest Vegetation as varies thorny scrub jungle at the foot hill, and extended as dry deciduous, evergreen, moist evergreen and grass lands on up land and the plateau. The region is densely populated with wild animals like Elephants, Guar, deer, leopards, bears and numerous small mammals, birds and reptiles

The primitive tribal groups namely Irula, Sholiga and Kurumba communities are living here for many centuries and their villages are scattered and remote from main roads. Since the isolation, primarily large scale pastoral and subsistence agriculture was an important livelihood avenue till late 70's. The major crops cultivated were Ragi (finger millets) Samai (little millet) Tenai (foxtail millet) Kambu (bajra) chollam (sorghum) and Macca (maize) and Millet is a staple diet of these communities; and number of pulse, tubers, greens, oilseeds and vegetables to meet out year round food requirements. The indigenous cattle (cows and buffaloes) rearing is back bone for this cultivation as well as manuring land. Hence the indigenous knowledge on breeds, character of breeds, keeping the breeding line and convert/train these cattle for farming operations is still maintained. The indigenous cultivation knowledge or the practices evolved locally with appropriate own tools and implements. Hence large volume of grain is harvested; good techniques were developed to store grains under the ground.

Araganai; The knowledge on splitting the young millet plants manually is locally called as ***Araganai***. Millet is a fibrous root plant which can produce many shoots or tillers as its root base/clump are manually splitted at young age. This science is understood by this community for generations before and the operations continue even today through very simple practice across the entire region. This cultivation method is as good as transplanting system ultimately to give vigour growth, many shoots & earheads and optimum harvest.

Land preparation- The plateau is a undulating landscape, traditional land ploughing, burrow preparation, levelling, brining manure into field were carried out with help of bullock.

Ugathi pandigai; on this day a ceremony is performed on the middle of millet field. A wooden stupa/accapacca is placed. This is decorated with traditional leaf bunch believed to be disease, pest and evil repellents. There are leafs which also represents indigenous and the prosperity with nature Goddess. Later, this same wooden stupa is used as pivot to tie stone thrasher in thrashing yard. The farmer brings all traditional seed in a basket and placed near the stupa. These seeds are from his previous year's harvest which was grown, harvested, preserved locally. Also another basket with dupa, banana and coconut for the ritual is placed. The plough with bullocks, a basket of farmyard manure also is brought to the site. The Village Gowda-head man perform praises the nature god for

good weather and protection from wild animal and for good harvest, and handful of seed is sown in a corner of the land as the cultivation operations begun for the year.



Seed sowing season; first shower-southwest rain begins in early June and the ploughing of millet land starts. With the first shower soil loosens, bio debris and dust settles and able to plough with bullocks. *Adi* the Tamil month begins on 17th July is popularly known as seed sowing season ie. *Adi pattam*. On 18th of month *Adi* (3rd July) major rituals were performed and seeds are sown. If the day is not a Tuesday or a Thursday, a symbolic sowing is observed and major seed sowing takes place on the upcoming Tuesday. This community never sow seeds on other days of the week.

The Plough: a wooden plough is locally made with forest wood ***Sengonche***(is a hard wood and lost for years and the sharpened edge is supported with flattened & sharpened iron rod called as ***Golu***. The ploughing is preferred by the men folk, youth are trained to undertake this work some time even at the age of eight. The cross bar is made of ***Goolie*** wood (*Melina arborea*) as it is light in weight and strong. The driving guide is made of *Peethai* wood. The ropes or reins are woven with forest fibre. Essentially the plough bullocks are nose knotted at young & reins are connected to it.



Alumane; it is a locally made tool, exclusively for *Araganai* purpose. It is made up of either completely with wood or partly with wood & Iron. Wooden or iron pegs are fixed on this as like a big rake. The wooden block is about 6inches thick, 5 inches width, and 2.5feet in length. Pegs are inserted with inter distance of 4inches. The total length of the pegs is about 8inches, 2inches are inserted into wooden block and 6inches length left out side. This is attached with long Pole as drive stem as about 9feet in length. The drive stem is tied on to Cross bar on pair of bullock or dragged manually. While dragging, the pegs tear open the field and millet seedlings too. Traditionally, a well dried *Asirai* wood is selected and handle with *thadachi* wood. The pegs are with dried Koli tree(*ligustrum perrotiti*) which is hard & never warp.



The Aragani operation - it is practiced on Samai and Ragi (little millet and Finger Millet) crops.

1st - *Araganai*: 8-10th day after seeds are sown The dragging of Alumane during the first time is up and down towards the slopes of the ground. This is either by manual strength or with bullocks. The depth of the digging is about 2 inches and width is also 2 inches. The inter space between the pegs are about 4 inches. The digging and splitting the plants proceeds with 4 inch clearance. The field bean, maize and mustard or streamlined in between this gap

2nd - *Araganai* after 14-16 days from first *Araganai* (24-26 days from day of seed is sown) during this time it is essentially with *Kallappe* with bullocks with hence the crop is grown higher and direction of *Araganai* is cutting across first drag or parallel to the slope. *Kallappe* is 4 inch wide and heavy can be dragged only by bullocks. While dragging the *kallappe* earth is wide open to 6 inches and depth of 4 inches and soil is raised to support the millet plant. The depth and width is for harvesting rain water and the track is parallel to slope and control soil displacement.



3rd - *Araganai* is practiced if the crop is dense, even after two *Araganai* operations.

4th Cattle grazing method: as to get result of *Araganai* This is a controlled grazing method with minimum number of cattle are (three or four Buffalos or cattle) drove into finger/little millet field to graze the crop. The plants are about 4 inch height and around 28 days from date of sowing. By doing this the crop is trimmed and the plants are tampered by cattle hoof. The young plants root base is broken and many fresh tillers appear.

Weather on the day of *Araganai*: it is done on a sunny weather, dry soil, expected to have similar weather for next two days. When soil is moist, splitting or breaking plants at ground level is not sufficient. The uprooted weeds and unwanted plants will dry if sunny weather continues.

The Araganaí story: How did this *Araganaí* evolved ?

Ayasamy, village Gowda (traditional village headman) describes the story that he heard from his great grand father of Ittarai village. In a hamlet, a family of two brothers holding a large millet field, traditionally practiced slash and burn centuries ago. In a sowing season, one day while playing, children fight turned out to become a major elder's fight between the brothers and wanted to become separate families. With his anger, one brother ploughed the newly germinating millet field, also grazed out the millet with buffaloes and damaged the field as much as he could do and he left the hamlet with his family. An elderly old man in the family fenced around this field and protected hoping the anger brother one day will return to his field. What a surprise & wonder that the damaged millet crop has grown so fast, had well developed crown and many ear heads. This was observed by the village mate and learned the knowledge.

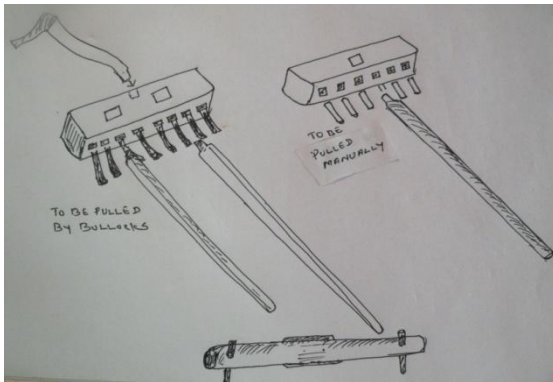


- ✓ Karupanraj the Bejelhati village farmer describes the term as **Aragani** (**araku + anai**) **Aaraku** means scrap/trimming / slicing and **anai** means keep or raise soil with

- ✓ Crop height control Grazing method; Type two; this practice is done at the time of perfuse stalk growth. The farmer hold the reins of the bullock and taken in to the field to eat out the stalk. Especially the crop is at young before the flower stalk is set. The earheads or panickles will lodge on the ground as tall the plant grows.

The *Alumane*-prime tool for Arangani:

- The traditional Alumane: Craftsman ship is learnt by them selves the Wooden thick bar is 6inch thick, 5inch wide and 36inches length, made of well dried *Asirai* wood.
- The pegs are 1inch thick and eight inch length-out of which 2inche inserted inside the wooden bar.
- These pegs are *linguistrum* wood, hardy, slightly curved towards drive pole section of the *Alumane*.
- The tip of the pegs is sharpened as flat.
- The pegs are fixed about 4inches inter space.
- The drive bar (long pole-handle) is prepared from well dried *Peesundai* plant.
- The cross –Bar to tie pair of bullocks, is made from *Melina Arborea* plant
- A normal wooden manual is about 14-15kgs, sand filled bag or stone is tied on top to increase the weight, if they feel the digging depth is not sufficient



Alumane made of flattened iron pegs(efficient)



Alumane made of Iron rod as pegs(less effective)



The perception & reasoning of *Aragani* by farmers & elders:

- Splitting roots & clump, flattening at ground level many tillers appear i.e., more tillers, larger crown, uniform sizes, uniform height,
- Tinning; the seeds are broadcast, tend to grow more plant than what is required. Thinning will increase interplant space, aeration to the plant, less competition for nutrients.
- Loosening soil; dragging with *alumane* or *kallape*, aeration is created,
- Weeding; the weeds are uprooted and mixed with soil as decomposed as green manure
- Moisture retention will increase as weeds decomposes
- Water percolation; the ground is loosen, burrows harvest rain water and percolation take place.
- Karupanraj describes the term as ***Aragani (aragu + anai)*** *Aaragu* means trimming or slicing or sharpening and ***anai*** means keep or raise soil with
- M.Mari, thadaslhatti village, without aragani the crop is a waste there is nothing to harvest. Only fodder you will get.
- According to Mani; we want good yield, Aragani is to make damage to the seedling as much as possible, that has to be equal to a destruction made by an enemy or jealously person to your crop.
- According to Resan, Thadasalhati, if you don't do aragani the crop will be with single stalk and smaller earheads. Araganai helps to get uniform crowns, uniform heights and you can keep a basket on the plants.

Millet is a community crop: Craftsmanship & Sharing of the tools; Most of the farmers themselves collect forest wood and make their own Alumane. The basic tools for such craft is owned, borrow from another farmer within the village. Similarly, sharing of Alumane, kallappe and bullocks too are practiced without money. Such exchanges and some quantity of harvested grains are complimentary. This system enhances the efficiency in farming and strengthens the community bondage. Craftsmanship & Sharing of the tools

Zabbai- is a local tool made with bamboo branches.

A bunch of branches spread as flat dove tail and tied with a drive pole. While dragging this zabbai sharp twigs and hook drag weeds, and with a weight soil is spread level and even. The seeds get covered with 1inch soil cover



Traditional finger millet thrashing stone



The Millet diversity and its future:

During the past 3years, 12 to 13 different crops are grown as mixed and benefits are documented and shared. With 8 farmers to 21 farmers 2007-08 and the harvest was 4800kgs, again from 21 farmers to 34 farmers the harvest was 13250kg in 2008-09, again extended to 45 farmers and harvest was 17000kg in 2009-10 showing the curve upwards. Currently 46 farmers have sown seeds in 81acres in Ittari alone. There more farmers have sown millets in Bejelahati, Thadsalhatti, Kalithimbam and Mavanatham counted as 102 farmers.

The rituals and participation of youth into this traditional cultivation is gradually increasing for food and as marketable-income venue. Small changes from wooden tool to iron intervention is still a question due to recurring expenses also the time and effort to make it. The future promises that the interest craft individuals are the one can anchor the tool and also keep youths in their hands



Keeping the
traditional on



By Livelihood team;

