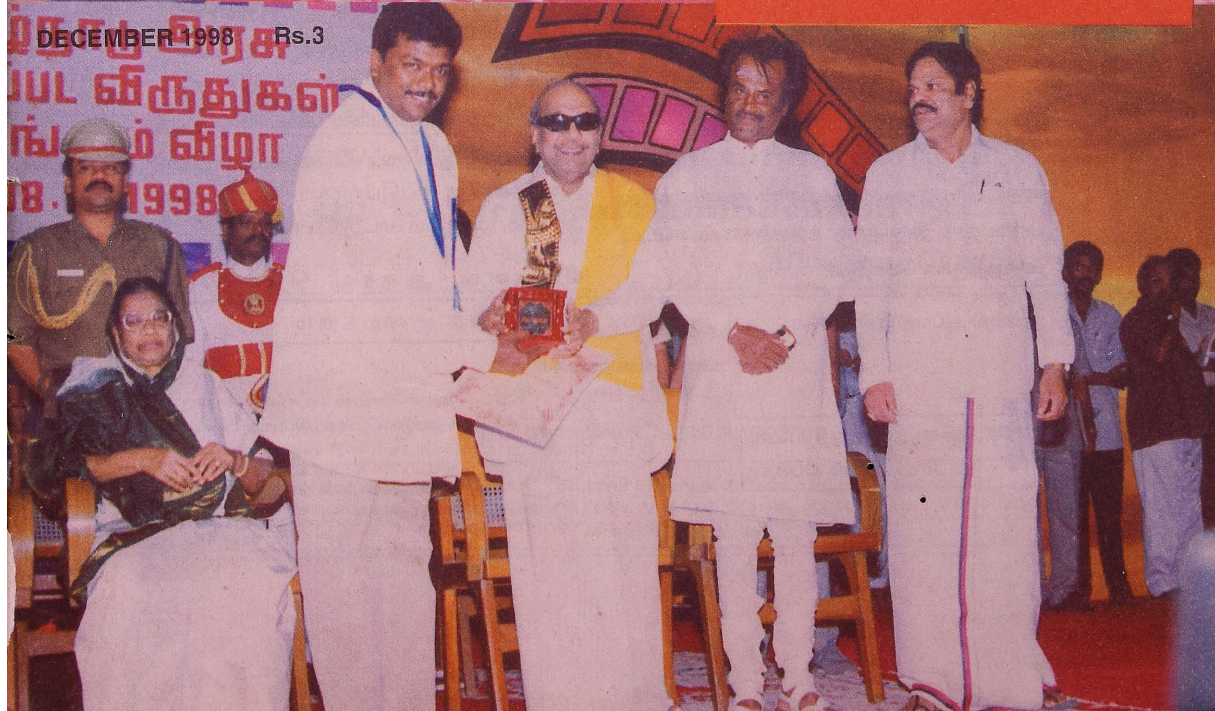
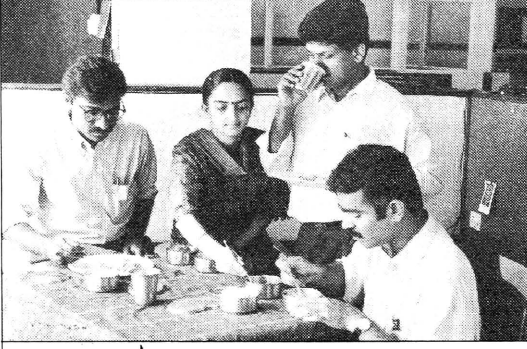




## Tamil Arasu



DECEMBER 1998 Rs.3



**நமது அன்றாட  
பழக்கவழக்கங்களால்,  
எய்ட்ஸ் வராது.  
அதற்கு நீங்களே  
ஒரு உதாரணம்.**

காலையில் எழுந்தது முதல் ராத்திரி புடுக்கப் போகும் வரை நீங்கள் எத்தனையோ பேரைச் சந்திக்கிறீர்கள். ஓட்டலுக்குச் செல்கிறீர்கள், சினிமா பார்க்கிறீர்கள், நெரிசலான பஸ்ஸில் பயணம் செய்கிறீர்கள், பலருடன் கை குலுக்குகிறீர்கள்.

இவர்களில் யாருக்காவது எச்ஐவி/ எய்ட்ஸ் பாதித்து இருக்கலாம்.

சாதாரண பழக்கவழக்கங்களின் மூலம் எய்ட்ஸ் பரவுவதாக இருந்தால், உங்களையும் எய்ட்ஸ் பாதித்திருக்க வேண்டும்.

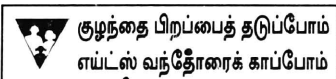
ஆனால் அப்படி இல்லையே...

ஏனெனில், கை குலுக்குவதாலோ, உணவைப் பகிர்ந்து கொள்வதாலோ, தொடுவதாலோ, தும்மலினாலோ, கழிப்பிடத்தை அனைவரும் உபயோகிப்பதாலோ, எய்ட்ஸ் பரவுவதில்லை.

எனவே எய்ட்ஸ் பாதித்தவரைக் கண்டு நீங்கள் ஒதுங்க வேண்டியதில்லை. உங்களுக்கு எந்த ஆபத்தும் இல்லை.

அவர்களும் நம்மைப் போன்றவர்கள்தான். அவர்களுக்கு எப்பொழுதும் போல நாம் அன்பும், ஆதரவும் காட்டுவோம்.

**சிறிதளவு ஆதரவு பெருமளவு  
சுமையைக் குறைக்கும்.**



மேலும் விவரங்களுக்கு அனுக வேண்டிய முகவரி :  
தமிழ்நாடு எய்ட்ஸ் கட்டுப்பாட்டு அமைப்பு  
417, பாந்தியன் ரோடு, சென்னை - 600 008.  
தொ.பே.: 8255467, 8255261, 8254917.  
24 மணிநேர தொ.பே.: 8256882, 8256864.



# TAMIL ARASU

*Magazine of the Government of Tamil Nadu*  
*Thiruvalluvar Year 2029 - Karthigai-Margazhi*  
*December 1998*

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**“We will not attain total freedom  
till we eradicate untouchability”**

**- Mahatma Gandhi**

## *Wrappers*

- I - Film Awards - 1997.  
IV - Inauguration of Samathuvapuram at Salem.

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## PRIVATE SECTOR SHOULD COME FORWARD TO PATRONISE SCIENTIFIC RESEARCH IN LARGE SCALE

*-Her Excellency Justice Selvi. M. Fathima Beevi at the Inauguration of the  
Sixth International Symposium of Central Electrochemical Research Institute  
at Chennai on 26.11.98*



I have great pleasure in participating in the inauguration of the Sixth International Symposium on "Advances in Electrochemical Sciences and Technology", jointly organised by the Society for Advancement of Electrochemical Science and Technology, Karaikudi and the Central Electrochemical Research Institute, Karaikudi.

The founders of modern India had the foresight to establish this laboratory as early as 50 years ago and it is gratifying to see the remarkable growth the institute has attained. The CECRI, Karaikudi, has, under the Council of Scientific and Industrial Research, become

a premier institution for research and development in Electrochemical Science and Technology, not only in India but in the region of South Asia itself.

No one can afford to ignore Science today, for Science alone can cover every aspect of economy and guide us towards prosperity. Science and Technology improve the quality of human life. For a nation's economic progress, the application of Science and Technology to agriculture, industry and transport and other economic and non-economic activities is essential.



The future belongs to Science and Technology. Science has grown with astonishing rapidity, particularly in the 20th century. The process of upgrading technology has been continuous. Science and Technology is a major source of change and it is now the password to the next century. Scientists in India, renowned for their ingenuity, have appreciably been able to meet the demands of the changing times.

However, the maximum utilization of the powers of Science and Technology is somewhat lacking in our country. After USA, India ranks second in the world as regards qualified Science and Technology manpower. Hardly six percent of this manpower is engaged in research and experimental work in our country, compared to the 32 percent in USA. More research facilities should come up to develop indigenous technologies and thereby enhance productivity in all sectors. By developing technologies of our own, instead of borrowing technology from outside, our country can have a judicious mix of large scale, medium scale and small scale technologies. The Government has recognised the paramount importance of Science for development as is evident from its support to our dedicated Scientists and from its unwavering faith in our Scientists who are equal to those in any country.

The CECRI has a tradition of exceptional contribution to the national development

process. The Institute is offering world class Research and Development. It is on the part of the manufacturers to make good use of it. The CECRI is a multi and interdisciplinary laboratory serving in the fields of corrosion science and engineering, industrial metal finishing, electrochemicals etc. CECRI has been a major contributor to the substantial growth in various fields. The Institute has made a significant contribution to the Space and Atomic energy programmes through the Development of strategic technologies and materials. I need not elaborate on our country's competence in this area. Several technological developments made by CECRI have been successfully commercialised. The Scientists of this research facility have proved their mettle and have inspired many enthusiastic young scientists towards building up a modern, self-reliant India.

We have a long tradition of Scientific research which began hundreds of years ago. It is my earnest wish that Research and Development facilities in all relevant fields must be set up covering all regions of our country, providing larger number of opportunities to our aspiring Scientists and enabling larger interface with industry.

A constant link between Scientists and manufacturers is imperative to keep pace with the changing global environment. The manufacturers should equally participate in such symposia on Science and Technology.

Private sector should come forward to patronise scientific research in large scale; industries should organise research independently. CECRI can be taken as a model Research and Development establishment to follow.

I wish to place on record my appreciation of CECRI for the vital role it plays in the technological process of our economy. I am delighted to convey my greetings to the society for the Advancement of Electrochemical Science and Technology, which acts as a vital link between electrochemical research and

industry. The society disseminates information of interests to the members and organises activities to foster the advancement of electrochemical Science and Technology. I convey my hearty greetings and good wishes to all the members of the Society for success in all endeavours.

I am happy to note that more than 350 delegates from several countries are taking part in the symposium. I wish the Symposium and the Electrochemical Industrial Fair, successful dissemination of information.

★ ★ ★

## **Tamil, Tamils and Tamil Nadu**



### **Love of Tamil**

*"I hope that the love of Tamil lovers will prove lasting and stand the severest strain. The superficial knowledge that I have of Tamil has enabled me to the language. To neglect it would appear to me to be criminal".*

*"No other Indians can equal the performance of the Tamils in this fight. It therefore occurred to me that I should read Tamil with close attention, if for no other reason than to tender sincere thanks to them atleast mentally. Accordingly, the last one month was devoted mostly to the study of Tamil. The more I learn it, the better I appreciate the beauties of this language. It is a very fine and sweet language, and from its structure and from what I have read in it, I find that the Tamils have produced, and still produce, a large number of intelligent thoughtful and wisemen. Moreover, since India is going to be one country, some Indians outside Madras should also learn Tamil".*

**- Mahatma Gandhi**



## *Tamil Nadu in the forefront of Industrial Development in the Country*

**T**his International Conference will encourage Research and Development. This will provide a platform for interaction and presentation of Development of Science and Technology in Rubber. If the wheel was the discovery of primitive man, the modern man took the credit for capping it with rubber. This has made the wheel more efficient and productive. Rubber is known to have been used by the natives of Central Mexico from the sixth century. But, Rubber remained unknown till the Industrial revolution in Europe. From there, the use of natural rubber, for the benefit

and comfort of mankind, has evolved. India ranks fourth among the largest producers of natural rubber. It is next to Malaysia, Indonesia and Thailand. Rubber occupies over one-fifth of the cultivated area in Kerala and Tamil Nadu. This is concentrated in the southern parts of these two States. This is a most important crop of the two States in terms of area, income and employment. This State has always been in the forefront of Industrial Development in the country.

Our Government has always been encouraging development of infrastructure and



environment, ideal to the growth of Industries. Our Government aims at providing an efficient administration. This could be seen from the higher level of productivity in many areas and also from the excellent industrial relations.

In India, over 10 million people depend on rubber directly or indirectly for their livelihood. I learn that the productivity of rubber is the highest in India. The average yield is 1.3 tonnes per hectare. The Rubber Scientists of various research institutes and also the farmers take the credit for this achievement. The overall production of natural rubber is 6 lakhs and 50 Thousand Metric Tonnes in India. The consumption is over 7 Lakhs and 80 Thousand Metric Tonnes. The short-fall is being met from imports. The global recession in economy, slow industrial growth with synthetic substitutes have affected consumption of natural rubber.

But, I am sure, this is only a temporary phenomenon. The overall demand for natural rubber is likely to go up in course of time. I can quote one example. An area where the demand is already existing but not being met. Just last week, I was having discussions for the observance of the WORLD AIDS DAY. I came to know that the global production of condoms is less than 13 billion pieces. The estimated requirements is 16 billion pieces. I do not have

to say that natural rubber is an important raw material for the manufacture of this item in Aids prevention.

Another area is Automobile Tyre. There is a very good scope for increase in capacity-utilisation and production. It is understood that the Tyre Industries in India are running only at Two-Thirds of their capacity.

With improved tyre quality and the global competition in the market, the tyre-manufacturers in India can definitely create a record in the international market.

Currently, the Indian Rubber Industries enjoy an export-market of Rupees One Thousand Two Hundred and Fifty Crores. This is less than 1 per cent of our total export. I firmly believe that there is a considerable base for improving this. Against this background, this International Conference is timely. You may be able to discuss such issues for effective and corrective steps.

(Excerpts from the speech of  
**Hon'ble Chief Minister KALAIgnAR** at the  
inauguration of  
the International Rubber Conference  
on 7.12.1998)

★ ★ ★

# SEVVAZHAI

- Arignar Anna

Sengodan, a poor agricultural labourer was growing a sapling of plantain at the backyard of his hut. The sapling was revered as a pet child by him. The moment he returns home, his first work would be to go to the backyard and inspect the sapling to see if it is sufficiently watered. Only then he talks to his four children. His joy increased with the growth of the sapling. While watering and digging around the sapling his eyes would glow with happiness. His wife Kuppy was surprised and even felt jealous that her husband was showing more affection towards the plant than their first son Kariyan.

Sengodan would caution Kuppy to take care of the sapling and be vigilant to prevent cattle from tramping it. Describing the fruits, he would tell her that Sevvazhai would be big and round and very tasty- 'just looking at it would fill the stomach', he would add.

Apart from acknowledging their father, the conversation of his four children with other children would always be centred on Sevvazhai, with pride.

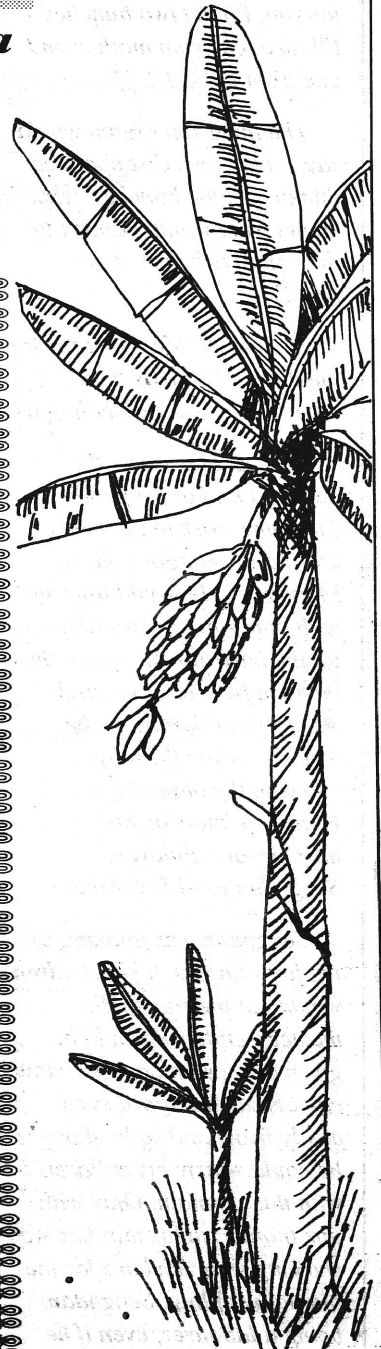
- Children of an agricultural labourer - what will be the topic of their conversation?

- Will it be on the new motorcar bought by their father?

- Or the diamond necklace of their mother, or the radio bought by their brother? What will they talk of? Only the Sevvazhai.

It was their motor car, radio, necklace and all other luxuries.

Kariyan, his eldest son would say that he would take one full bunch of bananas when it becomes ripe. Ellappan from his neighbouring hut would say: 'Won't you give me atleast one fruit? Don't forget I have given you mango and fried



groundnut! But Kamatchi, his younger sister would say:

"You know, if it is one bunch for you, I'll get two bunches - I'll take one from mother and one from father!"

The third son Muthu would say, "Don't get disappointed thinking of the bunches, who knows what would happen to the bananas before it get riped".

He had decided to eat more number of bananas than others if needed by stealing it-

Sevvazhai grew as the darling child of Sengodan. Tiresome work in the fields. Stern and pompous farm Manager - He would tolerate with pain - but he would forget all the hardship and pain, the moment he sees Sevvazhai. When his children cry, he would console them by showing the plantain tree. Even to admonish his mischievous children, Sengodan used Sevvazhai.

Sengodan was thinking of the joy with which his children would eat the fruits. His master's children would be given grapes and apples. How can Sengodan afford such costly fruits and so he thought he could satisfy his children with this plantain. Only with this thought in his mind he was showing so much care for the plantain sapling. Sengodan, being a labourer, even if he works overtime could not save the 'money' much needed for

buying fruits and eatables. His earnings can only fill half the empty stomachs. His wife Kuppy's earnings could only lessen the burden. This was their plight.

The fruits of his labour goes to the land lord. A large portion of the benefit goes to the landlord. Only by this plantain he would reap the full benefit of his labour. The landlord could not demand a share in this because, he spent time for it only after toiling in the fields and he takes care of the plantain only during his resting hours, after a heavy day's work. He felt glad that atleast in this 'Sevvazhai' he was able to reap the full benefit of his labour.

All these ideas did not come to his mind clearly. Like a smoke screen it would come and go. This was the reason why he felt proud and happy when he looks at the plantain.

The plantain tree grew as also his happiness. Now, the children's play area was the place where Sevvazhai grew. As flowers and honey attract women and bees, the children always played around the tree. Kariyan would ask "will the plantain come out in one month's time?"

Sengodan would say "It would take two months dear". For him the plantain was more precious than Muthuvijaya's diamond necklace. The

plantains were growing bigger and bigger and children's appeal to either their father or mother for their share were also becoming frequent. His daughter would ask, "when will it ripe?". His son would ask "for how many days it should be on the tree?" "I should cut it at the right time and keep it for riping.

Sengodan would think. This was his labour. He was going to benefit fully from his labour. There was no agent who would ask for his commission - No landlord who would demand a lion's share. In the fields, his is only the labour, the benefits were reaped by the landlord. Only the balance left by him was his for taking. But in this case 'Sevvazhai', the labour and the benefit goes to him alone. He decided to cut the bunches in two days time. The children jumped with joy. The news spread to other children - they started giving Kariyan all sorts of eatables - asking for banana.

Nothing equals this joy. "I laboured and I am going to reap the benefit. Likewise If I am to benefit from the toil in the fields, how exhilarating it would be! The labour spent for growing the plantain is not even one hundreth of what I had toiled in the landlord's fields. Eventhough I work in the fields, since the land belongs to him, a large share of benefit goes to him. This plantain has grown in my garden by my labour and so I



am going to benefit - Likewise  
If I had a piece of land as my  
own, how happy it would be.  
Will a time come stating that  
the land belongs to the  
labourers and without  
labouring, a man or a land  
lord cannot own lands. Will  
such time come? "Sevvazhai  
slowly instigated all these  
thoughts in Sengodan's mind.  
But for children it caused  
watering in their mouth.

At the time when Sengodan  
was joyously watching the  
plantain, the landlord  
Paranthamar was preparing  
for the birthday celebration of  
his daughter-in-law  
Muthuvijaya. He had informed  
the 'Iyyar' for conducting  
'abishekam' in the Ambigai  
temple. He asked his  
accountant to prepare the list  
of items. While preparing the  
list, won't 'fruits' come to the  
mind? The landlord said "two  
bunches of plantain".

"There is no good plantain  
in the shop. They sell only the  
green bananas", said  
Sundaram, the accountant.

Ok! Buy two bunches -  
where else you get good  
plantain! Before waiting for  
the landlord to complete his  
sentence, the accountant said,  
"there is a very good  
Sevvazhai in our Sengodan's  
house - we can take it.

• 'Ok!' said the landlord.

Sengodan's Sevvazhai!  
His dream!!



His labour's benefit!!

The joy of the children!!

Sundaram had rung the  
death bell.

The whole family of  
Sengodan had been joyfully  
watching the growth of the  
plantain. And Sundaram has  
come as a Murderer.

Sevvazhai - the cause for  
happiness, pride, belief is  
endangered.

When Sengodan and  
Sundaram are taking on the  
street the children did not  
know, their conversation  
would be over the plantain!  
Sengodan's head was spinning  
- He was tongue tied - words  
which started coming out got  
jammed in the throat.

"Daughter-in-law's  
birthday pooja' reasoned  
Sundaram. What can

Sengodan do. What can he  
say? The longing that grew  
with the plantain - The longing  
that tempted children's mouth  
to water - eagerly waiting for  
the day to ripe - which of that  
can he say. The person who is  
asking for the plantain is the  
landlord.

He imagined as if the whole  
village is scolding him. "The  
landlord without any  
discrimination, respecting you  
as such have asked for a  
plantain. But you refused to  
give. Provider of your daily  
meal. How can you be so  
thankless. After all a plantain.  
For his wealth and status -  
this is nothing".

"Father, don't cheat us. I  
too had watered the plantain  
tree - prevented cattle from  
stamping over it - you only  
said that the plantains would

be as sweet as Sugarballs. It was so dear to our sister. Even looking at upward would cause watering of mouth - You told us you would give us but now you are cheating us. Did we ask you to buy grapes or oranges from shops. All we asked was the plantain which we grew in our garden'', wailed his children in his mind.

''Is it fair that you are making the children cry like this?'' his wife asked him angrily in his mind. But the man standing in front of him was the land lord's accountant.

He went to the place where he kept his sickle. Children shouted in joy that their father is going to cut the bananas.

Sengodan's eyes started to burn with tinging tears. He cut the banana stalk and brought it to the hut. Children jumping with joy asked him to put it down so that they can touch it. Sengodan pated Kariyan's back and said, ''Dear, our landlord wants these bananas, I am taking this to him - Don't cry, the next sapling will grow in a month and I'll give you that fruit'' with these words he comes out of his hut before, the wailing of the children shatter his heart.

That day, Sengodan's house resembled a death house. He gained guts only very late to return to his hut. He saw the children sleeping tiredly after

crying for so long. His eyes started to water. Wiping it he laid down and shifted restlessly - with thousand thoughts in his mind. 'Sevvazhai' -having grown as a darling child - what is the use....!

Landlord could afford to buy not one, but thousand such plantains. But for Sengodan...? How much had he suffered for this - How many nights had he dreamt of it - How many times had he shown the fruits to his children with longing! so much labour! so much care! Everything wiped off in a second!

After four days Azhagu Muthuvijaya went to - Ambigai temple with the bunch of 'Sevazhai' for her birthday pooja.

Even after four days of consoling the children did not stop crying. Kariyan was very adamant for a plantain. Kuppy sent him with a quarter Ana to the shop for a plantain.

Kariyan ran to the shop.

The 'Sevvazhai' bunches are majestically hanged in the shop. The accountant had earlier taken four bunches of Sengodan's plantain from landlords' house and sold it to the shop. Kariyan stood in front of it with longing!

''A fruit, cost one Ana boy - Sevvahai will not be available for quarter ana - go!'' said the shop owner and chased him.

Kariyan, poor chap, he could not understand how the plantain grown in his garden came to the shop. How many days had he watered it for this fruit. The fruit is there. But out of reach to him. He returned home munching fried nuts and saw Sengodan coming out of garden with the other banana sapling.

''Is this also for the landlord''? asked Kariyan.

''No, my son! Our Parvathi paati had expired. This sapling is to tie in the paadai''.

The decorated paadai (used for taking the dead body to the cremation ground) hosted the 'Sevvazhai sapling'.

The paadai was surrounded by wailing people. Kariyan and other children were standing in the rear.

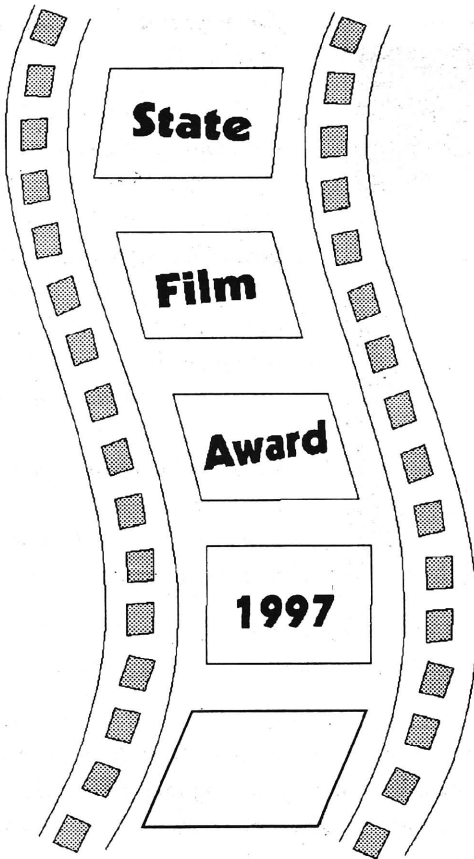
Kariyan pointing the paadai said, ''that is our Sevvazhai''.

''The plantain we grew in the garden we gave it to our landlord's house and the tree we tied it with the paadai'', said Kariyan proudly.

Poorchap - he is only a boy!! He could not understand that Sengodan's Sevvazhai is a common occurrence in the life of labourers.

Translated by :  
Junior Choumian &  
Rajasekaran

★ ★ ★



positive light. Each award carried a cash prize and a scroll.

*Her Excellency the Governor in her presidential address, said :*

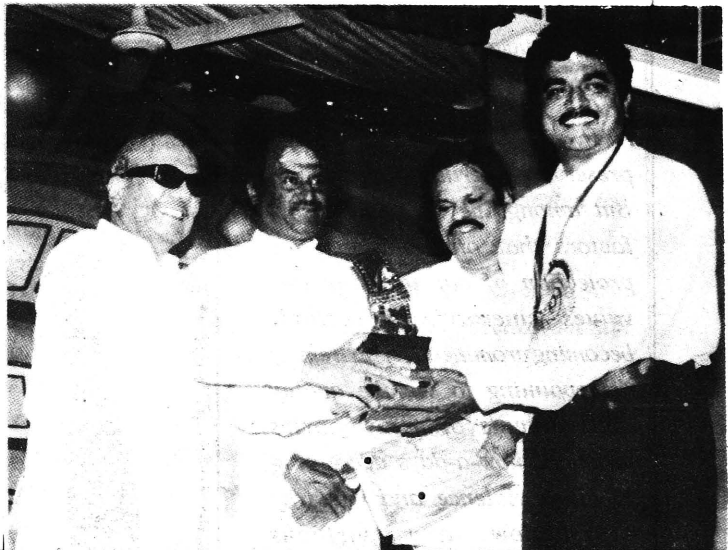
*"Cinema is a mass medium that can substantially add, as an instrument of communication and as one of the industries based on modern technologies, to the development of the society and the nation. Like all communication systems, cinema should serve the needs of the people without the influence of commercialism. Cinema is recognised as an integral part of the society. Though the feature films offer a look into the private lives of individuals, they are visual reflection of the inner space of societies.*

*The responsibility vested with the film makers is enormous. They must equip themselves to meet the professional challenge. To deal with cinema, in its full dimensions, film makers and their co-workers in movies must be sufficiently*

**T**he Government of Tamil Nadu selects and presents awards to best films, artistes and technicians every year.

*The awards for the year 1997 were given away to artistes and technicians of the Film Industry on 8-12-1998 at Valluvar Kottam, Chennai.*

*Her Excellency the Governor of Tamil Nadu, Justice Selvi. M. Fathima Beevi presided and distributed the awards for the best films and special prizes for films portraying women in a*







for negative featuring of human life.

*Cinema should be both entertaining and educative; its overwhelming influence should be utilised for public good. Cinema is vital, in the present conditions, for the development of the individuals. The future Indian Cinema will no doubt have technical fineness; it should also clearly depict the social meaning of the plots and look at the future in a constructive manner so*

*qualified. Specific methods are necessary and skills and knowledge can be better acquired in an academic environment. When the Government of Tamil Nadu realised this significant factor in film production, the present Film and Television Institute was established. It is now a renowned centre of excellence in producing numerous personnel who have become successful and popular in many categories.*

*It is our foremost duty to preserve this heritage for posterity. But among the so many social factors that often threaten the protection of our tradition and values, cinema is increasingly becoming prominent. It is extremely disappointing to see the quality and contents of many movies produced now-a-days decreasing to allow violence and vulgarity overshadow any virtuous presentation. We must avoid opting*

*that the reality of tomorrow's modern life is brought in advance with a positive outlook.*

*Technologically, Tamil Cinema has progressed in leaps and bounds. Our film personalities have won many awards at national level. Many inspiring names have hit the national*



headlines. They have proved their mettle in many categories such as acting, direction, cinematography and music direction. I am confident that the representatives of Tamil Cinema will continue to carve a niche for themselves in the annals of feature films and inspire the film-loving public to aim and achieve greater things in life. I congratulate the winners of this year's State Film Awards for their excellent performances. I wish to place on record my appreciation of the Government of Tamil Nadu

In his address, he explained the steps taken by the State Government for motivating the Tamil Film Industry. The Government has provided insurance cover for film artistes and workers and granted Rs.1 lakh from the Chief Minister's Relief fund for the stunt artistes who die in accidents during film shooting.

At present the Government has also increased the monthly pension for film artistes from Rs. 75 in 1971 to Rs.500. Entertainment Tax has

been reduced to 30 percent, despite the Government incurring a loss of Rs.40 crores. Similarly, the fee for outdoor shooting has been reduced to Rs.500 from Rs.2000 and for shooting at heritage centres like Mamallapuram the fee has been reduced to Rs.1000, he said.

He also pointed out that the Government has increased the grants for quality low-budget films to Rs.5 lakhs. Films with social message are given a total

for such encouraging efforts to promote a powerful mass medium in order to serve the public better.

*"I am happy to extend my greetings and best wishes to all of you for a happy and prosperous life."*

The Hon'ble Chief Minister Kalaignar M. Karunanidhi presented the awards to the best individual artistes and technicians in various categories besides awards for long-term achievement. The awards carried a five sovereign medallion and a scroll.

waiver of Entertainment Tax, he added.

Super star Thiru Rajni Kant felicitated the award winners.

The Hon'ble Minister for Information, Publicity and Printing, Thiru V. Mullaivendhan welcomed the gathering.

Thiru C. Rajarethinam, I.A.S., Secretary, Information and Tourism Department proposed a vote of thanks.



# ACTIVITIES AND ACHIEVEMENTS

## IMPROVEMENT AND MAINTENANCE OF HIGHWAYS

- ★ The post of a separate Minister and Secretary, exclusively for Highways Department exist only in Tamil Nadu, in India.
- ★ Allocation for works relating to Highways - during the past two years:Rs.1,114 crores, this year:Rs.831 crores.
- ★ During 1996, repairing of roads in a permanent manner, to a stretch of 1,543 k.m. in the 8 flood affected Districts have been completed.
- ★ Road works to a stretch of 6,600 k.m. and construction of 54 bridges in 28 Districts, at a cost of Rs.500 crores with the financial assistance from NABARD.
- ★ Railway bridges in 6 places at a cost of Rs.33.40 crores.
- ★ Construction of 106 bridges throughout Tamil Nadu to a tune of Rs.350 crores.
- ★ Improvement of 8 Radial Roads reaching Chennai, at a cost of Rs.212 crores, with the financial assistance from HUDCO.



- ★ Tamil Nadu leads in India, under BOT scheme with private investments.

## NEW WELFARE SCHEMES FOR CONSTRUCTION WORKERS



- ★ Rs.1 lakh as insurance amount to the family of the deceased dying in accident.
- ★ Rs.500 as funeral assistance.
- ★ Formation of creches for children in Chennai, Madurai and Coimbatore.
- ★ Rs.750 to the students who pass 10th standard and Rs.100 who pass 12th standard as assistance, to the children of construction workers.
- ★ Rs.1,000 as marriage assistance towards the marriage of son or daughter.
- ★ Rs.1,000 towards maternity assistance for women construction workers.

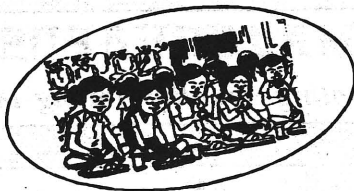


### To avail these assistances

Get Registered in the Offices of the  
**Deputy Commissioner, (Labour Department)**  
 in the citites of Chennai, Tiruchi, Madurai, Tirunelveli,  
 Salem, Coimbatore, on payment of Rs.25.



### **Social Welfare Schemes for the people**



- Free nutritious meals for 80 lakh children to a tune of Rs.464 crores;

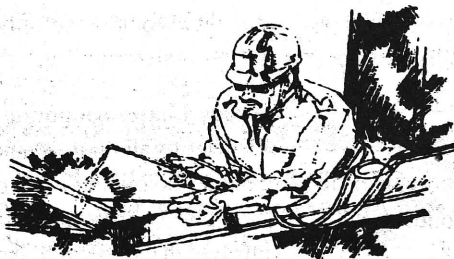
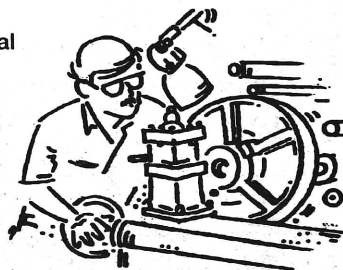
- An egg, every week for 78 lakh children at a cost of Rs.42 crores;

- Nutrition Programme through 34,500 centres for 20 lakh children (6 months to 6 years old) and 5 lakh pregnant and lactating mothers, at a cost of Rs.101.60 crores;

- Free uniforms to 64 lakh students to a tune of Rs.56.72 crores.

### **Small Scale Industries in the path of development**

- Permanent registration certificates to 62,253 small scale industries at an investment cost of Rs.1,446 crores, which generates employment opportunities to 5 lakh persons. During the current year, so far permanent registration certificates has been issued to 13,182 small scale industrial sectors at an investment cost of Rs.283 crores.
- Postponement/waiving of sales tax to a tune of Rs.105 crores to 719 small scale industrial sectors.
- Rs.48.50 crores capitation grant to 2,846 small scale industrial sectors.
- Rs.12.50 crores subsidy for electricity to 7,024 small scale industrial sectors. For the current year Rs.7.50 crores is allocated.
- Subsidy for purchase of generators to 452 small scale industries to a tune of Rs.1.75 crores. For the current year, the allocation is Rs.70 lakhs.
- 2,500 women industrial entrepreneurs will be trained; training to 1,500 women started this year.



To avail these concessions.

Approach:

**District Industrial Centres**

# SAMATHUVAPURAM

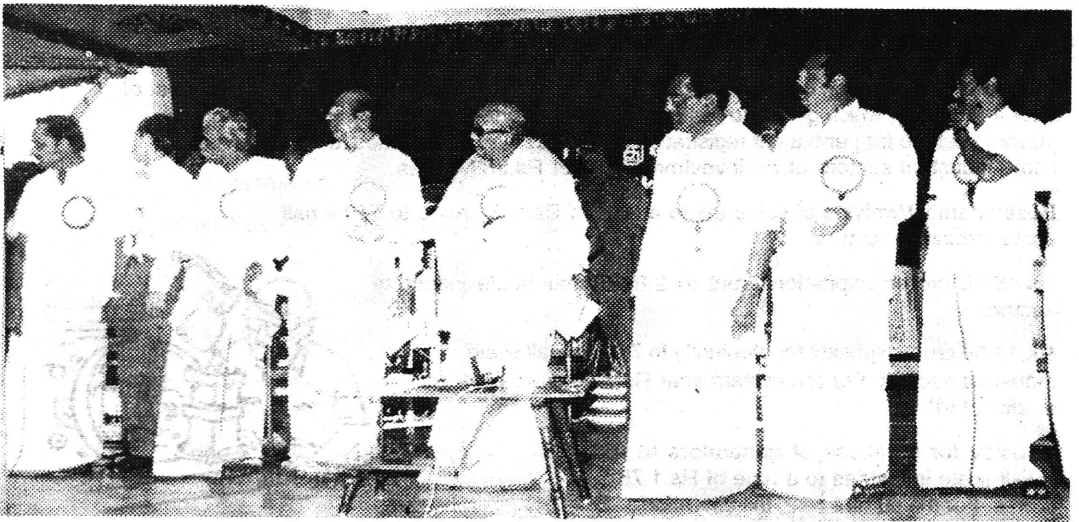
- for promoting equality among the people

**Hon'ble Chief Minister Kalaigñar M. Karunanidhi** inaugurated three Samathuvapurams established in Salem District, laid foundation stones for various schemes and distributed Government assistance to beneficiaries at Salem on 4.12.1998. In his address, he said :

“It is essential for each and everyone to take up a profession

*“Samathuvapuram scheme has been conceived to facilitate harmonious co-existence of people belonging to various communities. The objective of Samathuvapuram is to achieve the goal of making people live as a homogeneous one. The amity prevailing at these villages would be a model for the whole country and these efforts would make India itself a Samathuvapuram”.*

- Chief Minister Kalaigñar



and people who stood divided by professions has now been divided by Castes. This Casteism has created communal hatred that leads to violence. These hatred and violence cannot be tackled by enforcement of law and police actions alone.

Maturity of mind is most essential, and a feeling of equality would arise only then’.

‘So far six Samathuvapurams have been inaugurated. Today I have inaugurated three more in this Salem District totalling it to nine Samathuvapurams. 900 poor families belonging to all communities have benefited’. It is for you to cooperate with this Government which is involved in the task of bringing equality among all communities.’

**T**hanthai Periyar introduced various social reforms and strived for equality among the people and fought for the eradication of casteism. Following his footsteps, **Arignar Anna** served for the welfare of the people. Samathuvapuram conceived in the minds of Chief Minister **Kalaingar** brought into practice the ideals of these great leaders, where members from all religions and communities live in harmony without any differential treatment. 100 houses are constructed in each Samathuvapuram and allotted to 100 beneficiaries - 40 houses to Adiravidars, 25 houses to backward classes, 25 houses to most backward classes and 10 houses for people belonging to other communities.

Three Samathuvapurams have been constructed at a stretch, in Salem District - the first District in the whole of Tamil Nadu.



**S**amathuvapurams have been established in Neikarapatti, Katheri and E.Konur in Salem District. Neikarapatti is a village 5 km from Salem on Salem-Erode National Highway.

Katheri is 15 km from Sangagiri, 2 km away from Salem - Erode National Highway near Samiampalayam. E.Konur Samathuvapuram is situated on Mettur-Salem highway 5 km from Mettur. All these three Samathuvapurams have been constructed amidst beautiful natural surroundings and airy places. Basic facilities like tar topped road, drainage, children's park, TV and library room, community hall, child care centre, drinking water, electricity, garbage bins, cremation and burial grounds, etc., have been provided. A primary school and fair price shops have been established in E.Konur

Samathuvapuram. Tree saplings have been planted in all these Samathuvapurams. Health Sub-Centres are also situated near all these Samathuvapurams.

Nationalised Banks like Indian Bank, Indian Overseas Bank and Canara Bank have come forward to adopt Neikarapatti, E.Konur and Katheri Samathuvapurams respectively to take care of the maintenance and development of these Samathuvapurams.



**A**s we approach the new millennium, three major revolutions in science and technology will influence agricultural technology in a fundamental manner. They are;

i) The gene revolution - which provides a molecular understanding of the genetic basis of living organisms, as well as the ability to use this understanding to develop new processes and products for agriculture, the environment and for human and animal health.

ii) The information and communications revolution which allows a rapid growth is the systematic assimilation and dissemination of relevant and timely information, as well as a dramatically improved ability to access the universe of

goals of natural resources conservation and food security.

### **The Gene Revolution**

The past ten years have seen dramatic advances in our understanding of how biological organisms function at the molecular level, as well as in our abilities to analyse, understand and manipulate DNA molecules, the biological material from which the genes in all organisms are made. The entire process has been accelerated by the

## **AGRICULTURE BOUQUET OF MORROW**

**Dr. M.S.Swaminathan**

knowledge and communicate through low cost electronic networks, and

iii) The ecotechnology revolution - which promotes the blending of the best in traditional knowledge and technology with modern science.

In principle, these three types of advances - when coupled with improvements in management science and governance - greatly increase the power of a scientific approach to genetic improvement, agronomics the integrated management of natural resources and ecosystems, and the management of local and regional development policies. However, these scientific revolutions seem to be proceeding at an ever increasing pace, with most of the action occurring in a few places in industrialised nations. Developing countries should lose no time in harnessing these technologies for achieving the twin

Human Genome Project, which has poured substantial resources into the development of new technologies for working with human genes. The same technologies are directly applicable to all other organisms, including plants. Thus, a new scientific discipline of genomics has arisen. This discipline has contributed to powerful new approaches that can be used in agriculture as well as in medicine and has helped to promote the biotechnology industry.



*Several large corporations in Europe and the United States have made major investments in adapting these technologies to produce new plant varieties of agricultural importance for large-scale commercial agriculture. The same technologies have equally important potential applications for addressing food security in the developing world.*

*The key technological developments in this are:*

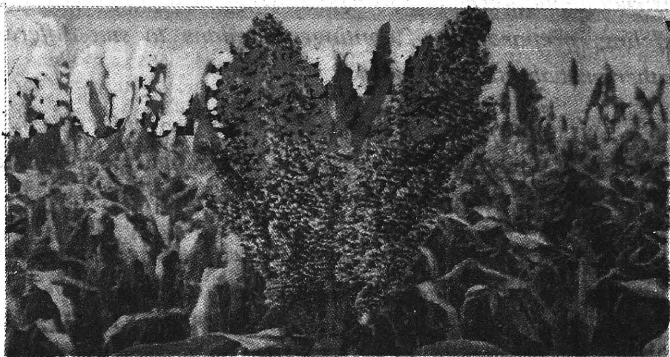
- *Genomics : The molecular characterisation of species.*

- *Bioinformatics; Data banks and data processing for genomic analysis.*

- *Transformation : introduction of individual genes confirming potentially useful traits into plants, trees, livestock and fish species.*

- *Molecular breeding. Identification and evaluation of useful traits by use of marker assisted selection, which greatly speeds up traditional breeding processes.*

- *Diagnostics : Identification of pathogens by molecular characterisation.*



- *Vaccine Technology : use of modern immunology to develop recombinant DNA vaccines for improved disease control against lethal diseases of animal and fish.*

*Developing countries must exploit these techniques and develop partnerships with advanced research institutions for this purpose. There are widespread public concerns about the potential adverse impact of genetically modified organisms (GMOs) on human health and the environment. Some of these concerns are genuine.*

*In order to take advantage of recombinant DNA technologies without associated harm to human or ecological health, it is important that every country has in place suitable institutional structures and regulations for biosafety, bioethics and biosurveillance. A recent statement issued by the Royal Society of London on "Genetically modified plants for food use" provides guidelines for the safe handling of biotechnological applications (Royal Society, 1998)*

### **The Information Technology Revolution**

*New communication and computing technologies will have profound implications in everyday research activities.*

- *Access to the Internet will soon be universal, and it can provide unrestricted low cost access to information, as well as highly interactive distance learning. The Internet will not only facilitate interactions among researchers, but also greatly improve their ability to communicate effectively with the potential users of their research knowledge.*

- *Computing makes it possible to process large - capacity databases (libraries, remote sensing and GIS data, gene banks) to*

construct simulation models with possible applications in ecosystem, modeling, preparation of contingency plans to suit different weather probabilities and market variables.

- The software industry is continuously providing new tools that increase research productivity and create new opportunities for understanding complex systems of growing conditions.

- Remote sensing and other space satellite outputs are providing detailed geographic information useful for land and natural resources management. All countries should take advantage of these opportunities.

### **The Ecotechnology Revolution**

Knowledge is a continuum. There is much to learn from the past in terms of the ecological and social sustainability of technologies. At the same time, new developments have opened up uncommon opportunities for developing technologies which can lead to high productivity without any adverse impact on the national resources base. Blending traditional and frontier technologies leads to birth of ecotechnologies with combined strength in the following areas.

- Economics
- Ecology
- Equity
- Employment
- Energy

For example, in the area of water harvesting and sustainable use, there are many lessons to be learnt from the past. In the desert area of Rajasthan, drinking water is available even in areas with 100 mm annual rainfall, largely because women are continuing to harvest water in structures called kunds. In contrast, drinking water is scarce during summer in some parts of the North East India with an annual rainfall of 15,000 mm. Thus, there is need to conserve traditional wisdom and practices, which are often tending to become extinct (Anil Agarwal and Sunita Narain, 1996). The decision of the World Intellectual Property Organisation (WIPO) to explore the intellectual property needs, rights and expectations of holders of traditional knowledge, innovations and culture is hence an important step in widening the concept of intellectual property.

Principles of ethics and equity demand that this invaluable component of IPR gets included when the TRIPS agreement (Trade-related Intellectual Property Rights) of the World Trade Organisation comes up for review in 1999. FAO has been a pioneer in the recognition of the contributions of farm families in genetic resources conservation and enhancement by promoting the concept of "Farmers Rights". Like WIPO, UPOV (Union for the Protection of New varieties of Crops) should also undertake the task of preparing an integrated concept of breeders' and farmers' rights.

### **Precision Agriculture**

Precision agriculture involves a systems approach to experimental design and agronomic practices. It needs inter-disciplinary research drawing on expertise in a range of subject areas such as agronomy, plant science, genetics, soil science, entomology, meteorology, weed science, plant physiology, plant pathology, ecology and economics (National Research Council, 1997).

Agricultural extension workers using information technology will play an

increasingly important role in crop production and natural resource management.

The curricula of agricultural schools and colleges need to be modified to make precision agriculture the road to an ever-green revolution. Precision agriculture is particularly valuable for increasing opportunities for skilled employment in the farm sector. For example, computer software development, equipment fabrication and sales, custom hiring of software and farm equipment, local production of biofertilisers, biopesticides and drip irrigation equipment and consultancy services can all provide new opportunities for unskilled workers to become skilled.

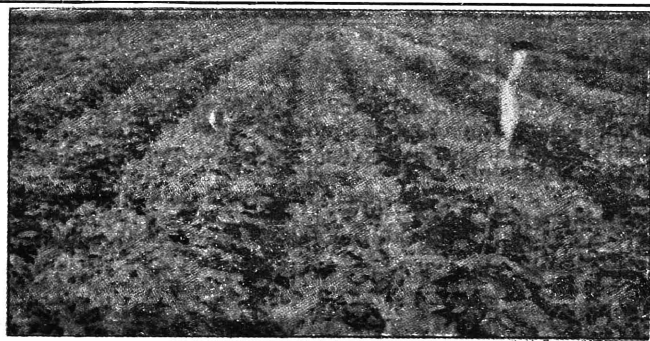
Precision farming methods have to be based on scientific land and water use planning. It will need concurrent attention

to natural capital stocks and nature's services. Examples of stocks include: soils and soil nutrients, biodiversity, water, minerals, forests and oceans. Examples of nature's services include: water cycles, nutrient cycles, carbon sequestration and waste recycling. Agro-forestry and other sustainable systems of land management need to be popularised in areas experiencing varying degrees of desertification.

Costanzo et al (1997) have assessed the value of 17 ecosystem services and flows for 16 biomes (desert, tundra, ice/rock excluded) at \$33 trillion per year. By comparison, global GNP is now \$18 trillion per year. Food production services of crop lands is \$ 0.13 trillion per year. Thus, the need to conserve ecosystem services and flows under varying agro-ecological conditions through precision farming practices can hardly be over-emphasised.

In the emerging knowledge intensive agricultural era, international cooperation is vital for taking the benefits of new technologies to those who have so far been bypassed by new knowledge and techniques. Women farmers and farm labour need particular attention in any agricultural extension and development programme designed to reach the unreached. The gender dimension needs to be internalised in all research, educational and development programmes intended to promote natural resources conservation based advances in agricultural productivity and production.

Sustainable agriculture in the 21st century will be based on the appropriate use of biotechnology, information technology and ecotechnology.



Advancements increase the power of a scientific approach to genetic improvement

Practical achievements in bringing about the desired paradigm shift will depend upon public policy support and political action. Regulation through legislation, social mobilisation through local level community organisations and education through the mass media and information shops will all be needed to meet the dual demands for food and ecological security.

# STATE-WIDE PULSE POLIO

## IMMUNISATION PROGRAMME



**T**he Hon'ble Chief Minister Kalaignar M.Karunanidhi inaugurated the first phase of Pulse Polio Immunisation Campaign for 1998 in Tamil Nadu on 6.12.1998 by administering polio drops to children at the Government Royapettah Hospital, Chennai. For the second year in succession, the programme was inaugurated by the Chief Minister.

About 6.5 lakh children received oral polio vaccine drops at about 40,000 centres in the first round of the Pulse Polio Immunisation Programme in the State. The entire exercise will cost Rs.6.13 crores. The intensified Pulse Polio Immunisation is part of the total eradication of polio from the Country by 2000 A.D.

The second phase of the programme is on January 17, 1999. ●

### INTENSIVE PULSE POLIO PROGRAMME

The mass immunisation programme to eradicate the polio has been in operation in the country from 1995-96. This time, the strategy has been modified to ensure 100 percent coverage of all children under five years. Renamed as Intensive Pulse Polio Programme, it will concentrate more

on children in unreached and underreached areas. Para-medical workers will go door to door for giving polio vaccine in areas where the coverage was less than 90 percent during the last time or there are reported cases of polio and in thickly populated slum areas.

The opinion leaders have a significant role to play in the implementation of the Programme.



They can easily convince the parents who may be ignorant or sceptical about the effectiveness of the programme. These opinion leaders include village elders, local panchayat people, teachers and priests. To make these persons realise their responsibility of convincing others, it is necessary that the field officers connected with the campaign, meet and convince them first. Sustained efforts towards this end are sure to result in 100 percent coverage. A massive campaign has already begun to create awareness about the programme. Media publicity, rallies and seminars are part of this campaign.

#### **ARRANGEMENTS IN TAMIL NADU**

Over 65 lakh children under five years are to be immunised in Tamil Nadu. For this, about 40 thousand immunisation centres including about 850 in Chennai are being set up throughout the State. About 2 lakh persons including doctors and para-medical workers are being pressed into service. Besides mobile centres, immunisation booths will be set up in railway stations, bus stands and airports to vaccinate the children on the move.

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#### **CARE MORE FOR YOUR CHILD**

*- V. Sankaran*

Kumaran is a self-made man. At 45, he does hard labour in undertaking repairs to bicycles in Madurai to earn a living. He was born a normal boy to a textile mill worker, but fate willed him

otherwise. Two years after his birth, he was laid down with high fever and taken to a hospital. Doctors diagnosed him polio affected. No medicine was available to cure the disease. Even today, it is so. Kumaran survived the attack but had to contend with a life-long trauma of being handicapped. He could only walk like a hunchback, with one hand supporting the leg. Despite all odds, he walked to his school, a kilometre away, to complete schooling. Last January, during the Pulse Polio Programme, looking at a queue of mothers having babies in their arms, he remarked, "Had I been vaccinated against polio during my childhood, I would now be like any other normal person". The pity is that an effective and safe oral polio vaccine was invented by Dr. Albert Sabin only in 1954.

What happened to Kumaran can also happen to your child. If you want to make sure that such a thing will not happen to your child, there is only one option available to you. You must be aware of the ongoing campaign for the polio immunisation programme. Polio drops are given to all children under five years on two days, one on the 6th December, 1998 and the other on the 17th January, 1999 between 7.00 am and 6.00 pm. Your job is very simple. Take your child to the nearby immunisation centre on these two days. For your convenience, these two dates have been fixed to fall on Sundays. Even if you have some very urgent work on these two days, take sometime off for the sake of your own child and get it vaccinated against

polio. It takes a few minutes only and costs you nothing.

Your child might have been given polio drops earlier. In that case, you may have the doubt whether the child should be vaccinated again on these two particular days. Yes. It is absolutely necessary that your child should be given polio drops on these days without fail. Medical experts say that a child must be given two doses with an interval of one to two months to ensure that the child gets 100 percent protection against polio. No need to worry about the extra doses during the mass immunisation programme in case the child has already been given polio drops. Additional doses do not do any harm to the child and absolutely there are no side effects. Even the sick children must be given pulse polio vaccines. Illness like cold, cough, fever, diarrhoea and vomiting are no contra indication to polio vaccination. Such vaccination is safe for the child and effective for combating polio.

Also, you should give oral polio vaccine to your child at the immunisation centres set up by the Government and not anywhere else. Polio drops administered in these centres will be very effective, as they are always kept under 8 degree centigrade and handled by trained persons. you cannot be sure that such a sensitive vaccine will be handled so carefully anywhere else.

You may ask why polio drops should be given to children on the notified days. This is because the Government wants to make India a polio-free country. For this, wild polio virus must be eradicated from the environment. This cannot be achieved if all children are not vaccinated simultaneously. Mass vaccination on a single day will destroy the wild polio virus and thus prevent it from spreading to polio free areas. When polio is eradicated completely, even the routine immunisation against polio can be stopped.

The Government is spending a lot of money on this programme for the well-being of the children to whom the future belongs. When massive efforts are taken for protecting the children from the crippling polio, is it not the duty of every parent to do what is expected of him or her? You will be doing a great service not only to your child but also to your country just by getting your child vaccinated against polio. If you are a parent of a child under five, do remember - the dates are the 6th of December and the 17th of January. Also, ask your neighbours to do the same if they do have children under five. Your cooperation will spare many children from becoming handicapped.





# THIRUKKURAL

*The code of conduct for the mankind*

மறத்தல் வெகுளியை யார்மாட்டுந் தீய  
பிறத்த லதனால் வரும்.

marathal vehuliyai yarmatun dhiya  
piratha ladhanal varum.

*"Give up wrath in all cases, because it will  
beget a series of unending evils".*

## COMMENTARY

As a general statement it is said that it is good to restrain anger in all cases, whether a person is more powerful than yourself, or weaker than yourself, or equal to yourself in strength and status. It is to be avoided because of its evil potency. The emotion of anger is destructive of all spiritual values. It clouds the consciousness. The person is not able to discriminate between what is true and what is erroneous or what is good and what is evil. Thus, he lacks right knowledge and hence the capacity to adopt right conduct. Thus, that emotion of anger diverts the individual from the right course of conduct and punges him into the wide ocean of Samsara.

★ ★ ★

தன்னைத்தான் காக்கிற் சினங்காக்க காவாக்கால்  
தன்னையே கொல்லுஞ் சினம்

thannaitthan kakir cinankgaka kavakal  
thannaiye kōllun cinam.

*"If you want to guard yourself, then guard  
against wrath, for wrath will kill him who is not  
able to guard against it".*

## COMMENTARY

An ascetic who is not able to restrain anger will fail in his object, will slip down from his high spiritual ladder and get involved in the misery of Samsara of birth and death. Hence one who wants to save his soul must guard himself against anger. Otherwise his whole life will end in frustration and misery.

★ ★ ★

சிறப்பினுஞ் செல்வம் பெறினும் பிறர்க்கின்னா  
செய்யாமை மாசற்றார் கோள்.

Sirapinun selvam perinum pirarkinaa  
seyamai masattrar kol.

*"It is the considered belief of men of spotless  
purity that no evil should be done to other beings  
even though it will bring in great wealth that will  
yield glory".*

## COMMENTARY

This injunction applies both to the householder and the ascetic. Neither of them on any account should cause injury to other living beings. Securing of wealth by such means by the

householder would imply ordinary riches. It will given him an important status in society. Not causing injury is considered to be greater value than the possession of all those powers.

★ ★ ★

இன்னா வெனத்தா னுணர்ந்தவை துன்னாமை  
வேண்டும் பிறன்கட் செயல்

inna venatha munarnthavai dhunnamai  
vendum priankat seyala.

“Whatever is known to be bitter pain by his own experience should not be done to others”.

### COMMENTARY

This also emphasises the identical nature of living beings. If a person knows that something is bitterly painful as felt by himself, he must realise that the other living beings in a similar situation would also feel the same pain. Hence just as he dislikes pain himself he should see that there is no pain caused to other living beings.

★ ★ ★

எனைத்தானு மெஞ்ஞான்றும் யார்க்கு மனத்தான  
மாணாசெய யாமை தலை.

enaithanu mengandrum yarku manathana  
manaasei yamai dhalai.

“Never to cause wilfully any kind of evil to any living being, this is the greatest virtue”.

### COMMENTARY

Here the emphasis is laid on wilfully doing evil. That ought to be avoided. In an unconscious moment or involuntarily injury may be caused to living beings. Such an injury is not done wilfully and hence ought not to be considered as really sinful. The idea of doing evil is considered more important than the real action causing pain.

★ ★ ★

தன்னுயிர்க் கின்னாமை தானறிவா னென்கொலோ  
மன்னுயிர்க் கின்னா செயல்.

thannuyir kinnamai dhanariva nengolo  
mannuyir kinna seyala.

“A person who has personally experienced what is injurious to his own life, why should he inflict injury on other living beings”.

★ ★ ★

பிறர்க்கின்னா முற்பகற் செய்யிற் றமக்கின்னா  
பிற்பகற் றானே வரும்.

Pirar kinna murpahar chieyir tramakinna  
pirpagar rane varum.

“If a person does evil to others in the forenoon, he will be confronted with evil in the afternoon.

### COMMETNARY

That the result of evil-doing is inevitable and immediate is pointed out here. ‘As he soweth so must he reap’ is a moral principle that can be never escaped.

★ ★ ★

ஒன்றாக நல்லது கொல்லாமை மற்றதன்  
பின்சாரப் பொய்யாமை நன்று.

Ondraha nalladhu kollamai matradhan  
pinsara poiyamai nandru.

“Not to kill is the one good deed par excellence. Next to this comes the virtue of speaking the truth”.

★ ★ ★



### LEATHEL LEAF BLIGHT OF COCONUT

**A** new leaf blight disease of coconut was identified during the year 1995 at Ponnapuram and Angalakurichy villages of Pollachi taluk of Coimbatore District of Tamil Nadu. The leaf blight inciting organism was isolated from the infected leaflets, rachis and seed nuts. The organism was identified as *Botryo-diplodia theobromae* from cultural and morphological characters (IMI 321848). The infection was noticed on the seed nuts, Seedlings and trees.

The symptoms on the Seedlings initially appear on the lower most leaf as brown spindle shaped necrotic spots of various sizes running parallel to the longitudinal veins, with dark brown margin surrounded by yellow halo. During the advanced stage of infection, the lesion extend to the rachis and lead to the death of the seedling.

The symptoms on the tree appear as follows

- Symptom initially appear on the lowermost frond as a spindle shaped lesion on leaflets of various size, surrounded by dark brown margin with yellow halo and grey centre.
- Later the lesion enlarge in size, coalesce and gives a blighted



appearance with dark brown wavy margin accompanied with yellow halo.

- On the blighted portions numerous black coloured minute pycnidial bodies were seen.
- The lesion spreads to the entire frond, the leaflets roll inward from the margin and get blighted.
- As the fronds get blighted, the symptom spread to the rachis also. It was followed by the dropping of the affected frond and falls down.
- Infection subsequently spreads to the inner whorl and two to three fronds alone were retained on the crown. It was coupled with shedding of nuts and buttons.
- Finally the crown topples down and leads to the death of the tree. And the tree dies within three years after infection.

*Courtesy : TNAU, News Letter*

# PEST MANAGEMENT FOR VEGETABLES

**V**egetables grown in Kerala are highly susceptible to attack by pests, but a sizeable quantity of vegetables brought to the market are free from insect attack. The farmers try to control pests using chemicals. This leads to side-effects like pest resurgence, secondary pest outbreak, pesticide residue, wiping out of natural enemies and environmental pollution.

There is need for educating vegetable growers to follow eco-friendly plant protection practices for the management of pest which help in ensuring a pest free crop in a cost effective manner.

As a part of the integrated pest management (IPM) strategy, some of the eco-friendly measures suitable for the effective control of major pests affecting vegetables have been identified. These practices were tried on a participatory basis in bittergourd, cowpea and amaranthus.

## **Bittergourd**

The major pests affecting bittergourd are leaf hopper, aphids, mites, whiteflies, fruit flies, pumpkin caterpillar, semilooper, pumpkin beetles and epilachna beetles. The pest problem aggravates during summer making the cultivation of this crop difficult.

The eco-friendly pest management has proved that the crop can be cultivated during

summer. The practices include rational rotations of different treatments, trapping, mechanical control and covering of fruits.

## **Neem seed oil emulsion and garlic mixture**

Neem seed oil emulsion is prepared by dissolving 60 grams of ordinary soap in 500 ml water and adding this to one litre of neem seed oil. The emulsion obtained is diluted by adding 40 times water to obtain 61.5 L of spray solution. The solution is mixed with 1.25 kgs of well crushed garlic and filtered. This is applied on the lower surface of the leaves when leaf hopper, aphids or whiteflies are noticed. This treatment is also helpful in controlling the incidence of epilachna beetle.

The mechanical collection of epilachna beetle adults, grubs, pupae and eggs helps in managing the pests.

The adults of pumpkin beetles which feed on leaves are managed by collecting the beetles using a seep net. Burning the pits before sowing of seeds control grubs.

## **Plant Extract of *Andrographis paniculata* L. and cows urine solution**

Mix one litre of cow's urine with one litre of *Andrographis paniculata* L. and dilute it with 10

**Prof. P. Regunath  
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litres of water. To this add 10 grams of crushed hot chilli (*Capsi scum frutescens* L). Filter the solution and apply on both surfaces of the leaves. This controls mites, pumpkin caterpillar,

leafhopper, snake gourd, semilooper and white flies.

The interval of application of the above organic formulations is decided based on strict surveillance and assessment of the pest population and damage caused.

Spraying water on the lower surface of the leaves at weekly intervals has been found to be useful in washing out the mite population.

### **Spraying of Magnesium sulphate solution**

One percent  $MgSO_4$ , obtained by dissolving 10 g of  $MgSO_4$  in one litre water, is sprayed on both surfaces of the leaves twice, during twining stage and after a month. This treatment is effective in controlling the foliar yellowing caused by sucking pests.

### **Traps and covers**

Banana/Ocimum/Jaggery traps suspended alternatively on trellises trap large populations of fruit flies.

#### **Banana trap**

Cut a ripe banana into four horizontal pieces. Coat one surface of each piece with carbofuran

granules (0.5g) Place each piece in a coconut shell and suspend in the trellis.

#### **Ocimum trap**

Crush 30 grams of Ocimum leaves. The extract, along with the crushed leaves, is placed inside a coconut shell. About 50 ml water is added to prevent the extract from drying. Add 10g of well powdered jaggery and 0.5g of carbofuran. The traps are suspended in the trellis.

#### **Jaggery trap**

Fill one-fourth of a coconut shell with starch solution (rich gruel water) and add 10g of powdered jaggery and 0.5 g carbofuran.

In addition to these traps, the fruits are also covered with polythene or paper cover. This prevents adult fruit flies from laying eggs. Damaged fruits are collected and destroyed.

### **Cowpea**

Some of the major pests affecting vegetable cowpea (*Vigna unguiculata var sesquipedalis*) are American serpentine leaf miner aphids, pod bugs, pod borers, basal swelling, wilt and mosaic. Insecticide application often fails to yield good results, sometimes aggravates insect pest incidence. Major pests of

cowpea can be managed by spray application of insecticide of plant origin.

Neem seed oil emulsion



prepared as mentioned earlier, applied at 10 per cent strength (diluting neem seed oil emulsion with 10 times water) as fine spray is effective against American serpentine leaf miner and pea phids. The incidence of other pests like pod borers and pod bug was also found to be less in neem seed oil emulsion treated fields. Application of neem seed oil emulsion at 10 percent strength is also effective for suppression of mosaic disease symptom. With neem emulsion, a prolonged protection of the crop can be achieved reducing the need for frequent pesticide applications. This also ensures the survival of the existing natural enemies.

One litre plant extract of *Hyptis suaveolens* with soap solution (one litre of plant extract + 60 gm of bar soap dissolved in 1/2 litre water) diluted ten times in water applied as fine spray is found to be effective for controlling peaaphids and adult stem flies.

The basal swelling and wilt disease of cowpea often makes cultivation very difficult. The soil and air borne fungus viz. *Fusarium* spp which causes the malady can be effectively managed by the following practices.

- Burning the trash in pits
- Before sowing, drenching the pits with one percent Bordeaux mixture / 0.4 percent copper oxychloride.



- Drenching the base of the plants with one percent Bordeaux mixture / 0.4 percent copper oxychloride

along with a spray application with the same fungicide at the same concentration.

- The practice of growing cowpea in the same field should be avoided and proper rotation should be followed.

Once the disease is noticed, the affected plants should be removed and destroyed.

### **Amaranthus**

The major problem affecting amaranthus is leaf spot disease caused by *Rhizoctonia solani*, a common soil borne plant pathogen. The leaf spot symptoms appear and spreads due to the air borne spores of this fungus. This disease is found to be very serious in the amaranthus growing tracts of Kerala. The following management strategies are suggested

- The Co-1 variety of green amaranthus is highly tolerant to the disease.
- The highly preferred red amaranthus raise the green Co-1 amaranthus in combination with red amaranthus or raise Co-1 and the red amaranthus in alternate rows. Avoid splash irrigation.
- As soon as the disease symptoms start appearing apply 0.4 percent of the







commercial fungicides, Dithane M 45 or Indofil m 45 in cowdung super natent (suspend one kg of fresh cowdung in 10 L of water, filter the supernatant and add 40 gms of the fungicide to prepare the spray solution) so as to cover the entire plant as fine spray. A waiting period of 15 days before harvest. The harvested crop should be washed thoroughly in running water before use.

The usual practice of the farmers to apply high doses of inorganic fertilisers has to be discouraged. Instead different forms of organic manures like cowdung, poultry manure, neemcake, vermicompost in combination with reduced dose of inorganic fertilisers including adequate potash fertilisers can be used. This practice helps in reducing the damage caused by foliar fungal pathogens.

#### **General IPM strategy for vegetables**

- Burn the pits/beds
- Drench the pits/bed with 1 percent Bordeaux mixture wherever the problem due to soil fungi is severe.

- Practice clean cultivation.
- Use resistant varieties if available.
- Select healthy seeds from healthy gardens.
- Give more importance to organic manure.
- Following IPM strategies for the control of pests by integrating suitable methods.
- Chemical pesticides should be the last resort.
- Conserve the natural enemies seen in the field.
- Collect the natural enemies from places they have assembled in large numbers and release them in places where they are not seen.
- Subject the crop to frequent conservation and decide on the type of control measures to be adopted.
- When insecticide application becomes necessary select a suitable, effective insecticide which will cause only least damage to the natural enemies and the environment.
- Select a suitable equipment in good working condition for application of pesticides.
- Harvest mature fruits before applying pesticides and allow the waiting period before the next application of pesticides.

*Courtesy : Science Express*

# NALADIYAR

ஈகை யில்லார்க்கு வீட்டில்லை.

நட்டார்க்கு” நள்ளா தவார்க்கும் உளவறையால் அட்டது பாத்துண்டல் அட்டுண்டல்-அட்ட தடைத்திருந் துண்டொழுகும் ஆவதின் மாக்கட் கடைக்கும்ஆம் ஆண்டைக் கதவு.

*Share your food with friends and foes. To the selfish heaven's gate is closed.*

To eat your own meal, after sharing what you have cooked, to the extent of your ability, both with those who are friends and those who are not friends, is 'cooking and eating' (is = *real house-keeping*). To the good-for-nothing human beings whose habit of life it is to shut themselves-up, and eat alone what they have cooked, the door of yonder world will be shut.

**He who regards his own welfare should not eat alone. With two or three or may let a man eat his meal.**

★ ★ ★

ஈயாதானுக்குத் தான் தேடியபொருளான் இகழ்ச்சியே அன்றிப் புகழ்ச்சியில்லை.

தும்த்துக் கழியான் றறவோர்க்கொன் றீகலான் வைத்துக் கழியு' மடவோனை - வைத்த பொருளும் அவனை நகுமே, உலகத் தருளும் அவனை நகும்.

*The miser contemptible.*

The senseless man who spends not his time in enjoyment (of his wealth), and who gives nothing to pious devotees, but hoards and dies, - *him* his hoarded wealth derides; *him* all that is gracious in the world derides.

**What is the use of wealth that one neither gives nor enjoys?**

★ ★ ★

ஒருவன் அதை அனுபவியாமலும் ஈயாமலும் இருந்தால் அப்பொருள் அவனுக்குடைமையன்று.

எனதென தென்றிருக்கும் ஏழை பொருளை எனதென தென்றிருப்பன் யானுந் - தனதாயிற் றானும் அதனை வழங்கான், பயன்றுவ்வான் யானும் அதனை அது.

*Whose is the miser's wealth?*

As to the property which the wretched churl claims, saying 'It is mine, it is mine,' I too chime in with 'it is mine, it is mine,' for if it is his, he himself spends it not, nor enjoys the benefit of it; and I, too, neither spend nor enjoy it!

**If they are (called) wealthy because of wealth buried in their house, why are we not (esteemed) wealthy because of that same wealth?**

★ ★ ★

ஈயாதசெல்வர் பொருளாற் பலவித இடுக்கண் எய்துவர்.

வழங்காத செல்வரி னல்குந்நதார் உய்ந்தார்: இழந்தார் எனப்படுதல் உய்ந்தார்; - உழந்ததனைக் காப்பய்ந்தார்; கல்லுதலும் உய்ந்தார்; தங் கைநோவ யாப்பய்ந்தார் - உய்ந்த பல.

*Poor men better off than churls.*

The poor have escaped much from which rich men that dispense not suffer.

They have escaped the reputation of having lost (their substance).

They have escaped the toil of saving it.

They have escaped (the labour of) digging (to hide it).

They have escaped the ache of hands securing it from powerful plunderers.

Many are the (sorrows) they have escaped.

★ ★ ★

பெரும்பாலும் செல்வருக்குப் பொருளார் பல வகையினும் துன்பமேயன்றி இன்பமில்லை.

ஈட்டலுந் துன்பமற் றீட்டிய ஒன்பொருளைக் காத்தலும் ஆங்கே கடுந்துன்பம்; - காத்தற் குறைபடிற் றுன்பங் கெடிற்றுன்பந் துன்பக் குறைபதி மற்றைப் பொருள்.

*Wealth is the source of many sorrows.*

Gathering it together is trouble, and even so the guarding of resplendent wealth is severe trouble. If the guarded heap diminish, it is trouble. If it perish, it is trouble. Wealth is trouble's very dwelling place!

★ ★ ★





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