

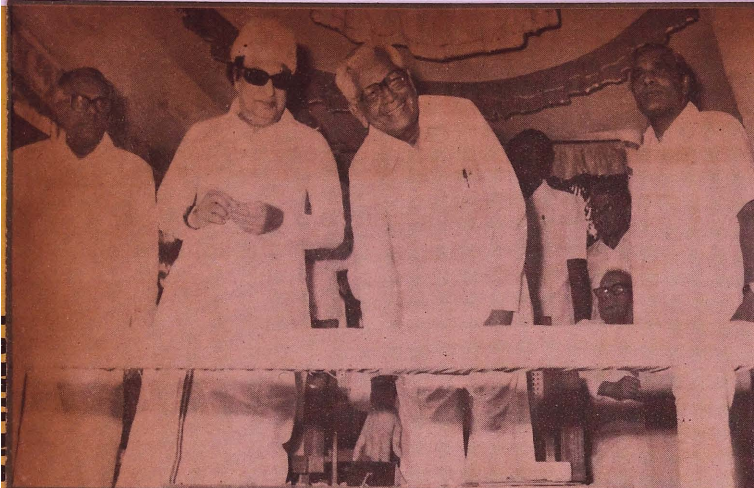
Tamil Arasu

August 1983 75p

Thiruvalluvar Year - 2014

Aadi - Aavani - Rudhrothkaari





PERUNTHALAIVAR
KAMARAJ'S
BIRTH ANNIVERSARY
MADRAS
(16.7.1983)



Tamil Arasu

AUGUST - 1983

VOL: XIV NO: 2

TO ENSURE THE SAFETY OF TAMILS IN SRI LANKA

HONOURABLE CHIEF MINISTER



The Tamils of Sri Lanka are being hunted with murderous ferocity by the Sri Lanka army and racist extremists. With a view to halt the carnage immediately, I have appealed on behalf of the Tamils to the Prime Minister Tmt. Indira Gandhi today to take the issue to the United Nations Council to ensure the guarantee for the safety of the Tamils and their property.

To focus the attention of the World Community and to persuade the United Nations and other people all over the world who respect freedom, peace and prosperity and to take efforts to stop the ruthless repression perpetrated on Sri Lankan Tamils, the Government of Tamil Nadu have decided to observe a State-wide hartal on 2 August condemning the action of the Government of Sri Lanka and in condoning the atrocities unleashed by racial fanatics.

On the day of the hartal, Ministers, Leaders of various political parties, labour unions and lakhs of people irrespective of parties, caste and creed will participate in mammoth processions and protest meetings.

I appeal to all the political parties and the people of Tamil Nadu to participate in the protest meetings and procession and the total bandh.

I shall send invitations on behalf of the Government to all political parties and leaders, labour unions, businessmen, industrialists etc., to participate in this bandh.

The bandh is to demonstrate the support of 5 crore Tamils to all steps that are likely to be taken by the Government of India which voices its protest against the atrocities committed on minorities the world over and the United Nations, to condemn and curb barbaric acts perpetrated on the Tamils.

Originally the Tamil Nadu Government planned the bandh on 29th July. Since, however, the president of the Republic will be visiting Tamil Nadu on July 29 and 30, it has been decided to organize the bandh on 2nd August.

STATEMENT MADE ON 26.7.83



CHIEF MINISTER URGES PRIME MINISTER

TO RAISE ISSUE AT U.N.

The Tamil Nadu Chief Minister, Thiru M.G. Ramachandran has urged the Prime Minister, Tmt.Indira Gandhi to draw the world attention to the killing of Tamils in Sri Lanka by raising the issue in the United Nations.

In a telex message, the Chief Minister also appealed to the Prime Minister to take appropriate steps to save innocent Tamils in Sri Lanka from the "cruel attack of murderers".

"We thank the Government of India for ex-

pressing their distress over the happenings in Sri Lanka. News covering from Sri Lanka about arson, rioting and ruthless killings of the Tamils is highly disturbing. Violence unleashed by fanatic Sinhalese and the army is causing extreme anxiety and tension among the people here. Please take appropriate steps to save the innocent Tamils in Sri Lanka from the cruel attack of murderers. Would be grateful if you would consider raising the issue in the United Nations with a view to focussing the attention of the world to this terrible issue".

TAMILNADU CABINET DECIDES TO

MOURN THE BRUTAL MURDERS OF

TAMILS OF SRI LANKA—BLACK

BADGES WILL BE WORN

The Tamil Nadu Chief Minister Thiru. M. G. Ramachandran, announced that the Tamil Nadu Government has taken a decision that the Ministers, officials and employees will wear black badges till 2 August, to express its sympathy over the brutal killings of Tamils in Sri Lanka.

The plight of the Tamils living in a minority in Sri Lanka who had been deprived of their basic rights and were made targets of frenzied attacks and killings on the street has caused great anguish.

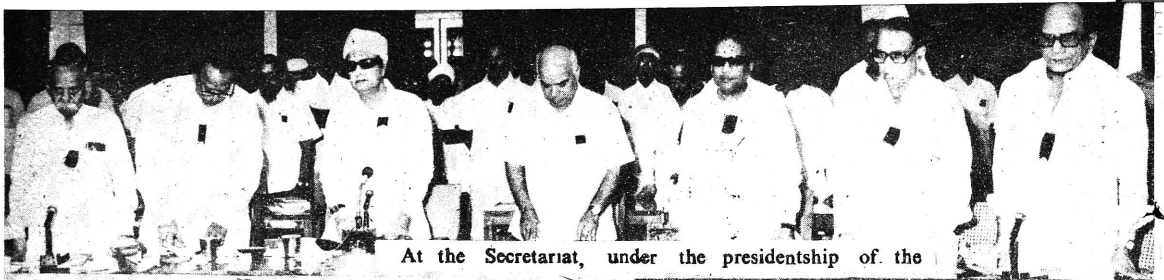
The Tamilnadu Cabinet expressed great shock and distress over the insecurity of life and property of Tamils in Sri Lanka. The

Cabinet observed two-minute silence as a mark of respect.

A resolution urged the Prime Minister Tmt. Indira Gandhi to take the issue to the U. N. for taking appropriate steps. To express its sympathy to the Sri Lankan Tamils, a total bandh will be observed on 2 August, when all Government functions will be cancelled.

The Ministers as also Government officials and employees would wear black badges till that date.

The Cabinet appealed to the general public also to wear black badges to express their sympathy with the Tamils of Sri Lanka.



At the Secretariat, under the presidency of the



Honourable Chief Minister, leaders of all parties paid homage to



Sri Lankan Tamils on 28-7-'83.

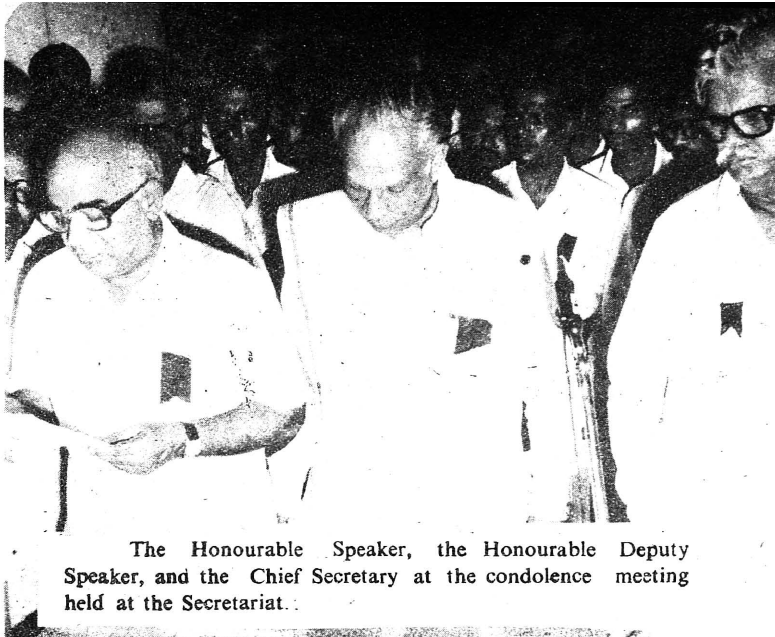


OUR HEART BLEEDS

Sri Lanka today is a smouldering heap of violence and bloodshed and arson. Killing is being carried on in a mass scale. It was blood and tears and brutality. The blood and tears of Tamils and the brutal blood-lust of the Sinhalese and their Army. Hundreds of Tamils

were ruthlessly slaughtered and their houses shops and factories reduced to ashes.

Thousands of Tamils have been rendered homeless. Men and women were hounded out of their homes and killed and massacred brutally. Nor were the children spared.



The Honourable Speaker, the Honourable Deputy Speaker, and the Chief Secretary at the condolence meeting held at the Secretariat.

While people speak about human rights, they are shot at like mere animals and birds in Sri Lanka.

This 20th Century which has witnessed the progress of democracy also witnesses the butchering of people on an unprecedented scale.

A country which has officially declared Buddhism as its State religion, has unleashed arson, loot, violence and murder.

Undertrial prisoners were virtually hacked to death in cold blood. The most shocking aspect of the massacre is that the army men opened the prison cells as also the jail gates to allow professional killers into the cells of these undertrials. These murderers were armed with rifles, rounds and iron rods. Within hours of getting this news, news of more Tamils being murdered by Sinhalese fanatics were received.

The houses of Tamils were set on fire.

The shops of Tamils were looted and gutted.

The factories of Tamils were razed down.

The Tamil women were molested and thrown into fire.

The bodies of Tamils were found rid with bullets.

The Indian Overseas Bank building and the State Bank of India building had both been set on fire.

Tourists from India were also attacked.

Guns, Knives, clubs and rods and hand grenades were used to butcher the Tamils.

A number of atrocities have been committed.

When we learn that the atrocities have been committed by the army our blood freezes.

If the army which is to defend the nation indulges in destruction of their own, where will the people turn to.

We shudder to think about it; our voice breaks and we shed tears of sorrow.

Our honourable Chief Minister who has the interest of the Sri Lankan Tamils at heart has appealed to the Prime Minister urging her to protect the interests of the Tamils.

The Chief Minister has announced that the cabinet will observe a week-long mourning to express their grief over the killing of Tamils in Sri Lanka.

Public functions had been cancelled; the Ministers, Government officials will wear black badges; and a total bandh will be observed for a day on 2 August at the Chief Minister's request.

Government officials, men and women wore black badges and were seen mourning.

Black flags were seen on all the buses. These appeared like banners and were reminding one every moment of the genocide let loose in Sri Lanka.



At bus stops, railway stations, Offices, Post Offices, market places - everywhere when people thronged the talk was about the insane killings in Sri Lanka. Some were overcome by the sad tidings.

The Chief Minister convened an All party meeting on 28th July.

It was decided that the Chief Minister would apprise the Prime Minister of the latest situation and also submit a memorandum.

The following resolutions were passed unanimously at the All-Party meeting.

The meeting observed a two-minute silence as a mark of respect for the Tamils killed in violent attacks mounted by the extremists with the support of Sri-Lanka army and police. It also expressed sympathy for the people injured in the clashes.

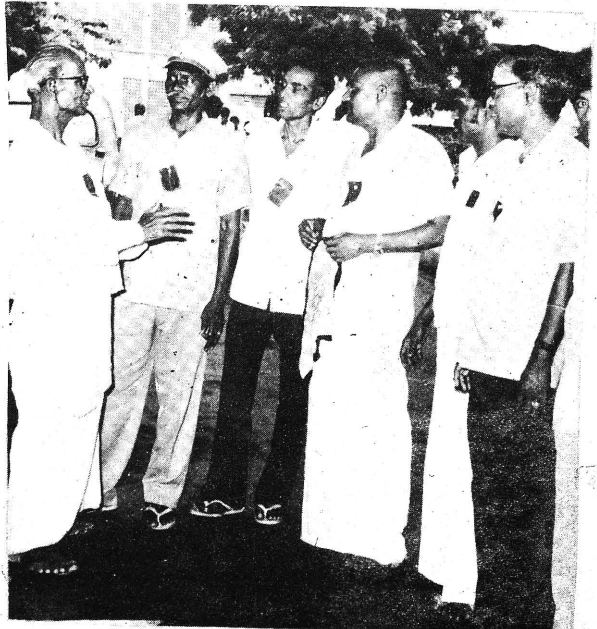
The leaders appealed to the people of Tamil nadu to extend their full cooperation to the state wide bandh on August 2 called by the Tamil Nadu government to press its demands for protection of the Tamils in Sri Lanka.

Another resolution said that Tamil race was being liquidated in Sri Lanka and urged the central government to come forward without any inhibition to prevent this catastrophe. The resolution said that hundreds of thousands of Tamils had been rendered homeless throughout the island. Hundreds of others had been killed. The conference urged the centre to rush relief to those in the refugee camps and are in need of massive relief.

The Prime Minister Tmt. Indira Gandhi spoke to the Sri Lanka President Thiru Jayawardene on the telephone about the serious development there and said that she would be sending the external Affairs Minister Thiru P.V.Narasimha Rao to Colombo for on-the-spot study of the critical situation.

The Prime Minister told Parliament that she had conveyed to the Sri Lanka President the "deep concern" of the people of India, particularly in the South as well as the sentiments expressed by Members of Parliament in the debate on the issue of the Loksabha and in the upper house.

The Prime Minister said that the Indian Government was in receipt of reports of shortages of "some supplies" on the island nation, particularly in the refugee camps set up for the people affected by violence. She suggested to President Jayawardene that the international Red-Cross could be approached for help in the matter. Also, India could assist Sri Lanka in this regard either at the Government level or through voluntary agencies.



DIARY OF EVENTS

26-7-'83

The Chief Minister of Tamil Nadu Thiru M. G. Ramachandran made an announcement that steps will be taken to ensure safety of the Tamils in Sri Lanka. Government decides to observe State-wide bandh condemning the action of the Government of Sri Lanka and in condoning the activities unleashed by racial fanatics.

27-7-'83

The Chief Minister in his telex message urges the Prime Minister to raise issue at United States and take appropriate steps to save innocent Tamils in Sri Lanka from the "Crucial attack of Murderers".

28-7-'83

An all - party meeting was held at the Secretariat condemning the atrocities of the Sinhalese perpetrated against the Tamils in Sri Lanka. The Chief Minister presided over the meeting.

29-7-'83

The Tamilnadu cabinet decides to mourn the brutal murders of Tamils in Sri Lanka and to wear black badges till August 2nd.

31-7-'83

An all party delegation from Tamil Nadu led by the Chief Minister of Tamil Nadu Thiru M. G. Ramachandran, met the Prime Minister in New Delhi to discuss the Sri Lanka situation.

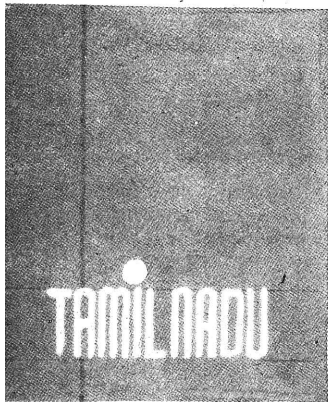
The Prime Minister said that, as a symbol of the Centre's sympathy and solidarity with Tamil Nadu, all Central Government offices will be closed on August 2, during the one-day bandh in the State.

2-8-'83

Total bandh was observed. This is the first time ever ~~that~~ the Central Government officially participated in a bandh called by a State Government since it was aimed at focussing national attention that transcends party politics and parochial consideration.



An all-party delegation from Tamil Nadu met the Prime Minister in New Delhi on Sunday to discuss the Sri Lanka situation. To Tmt. Gandhi's right is the Chief Minister Thiru M. G. Ramachandran, who led the delegation, and to her left are the External Affairs Minister, Thiru P. V. Narasimha Rao, and the Defence Minister Thiru R. Venkataraman, who also took part in the discussions.



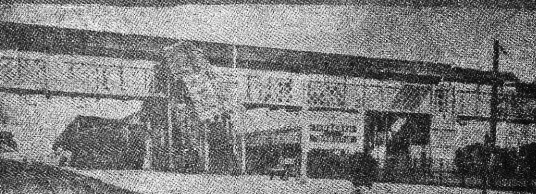
AGAINST HUMAN RIGHTS VIOLATION IN SRILANKA

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**THROUGH
PROCESSIONS,
BANDH**





DESERTS WILL BLOOM

The 235 MW Madras Atomic Power Project at Kalpakkam was dedicated to the nation by Prime Minister Tmt. Indira Gandhi on 23-7-'83. It is the third nuclear power station in the country. Thiru S.L. Khurana, Governor of Tamil Nadu, Thiru M.G. Ramachandran, Chief Minister of Tamil Nadu, Thiru R. Venkataraman, Union Minister for Defence and Dr. H.N. Sethna, Chairman of the Atomic Energy Commission participated on the occasion.

Dr. H. N. Sethna, Chairman of the Atomic Energy Commission, who welcomed the gathering, described the Madras Atomic Power Plant as the "first Indian designed, Indian built and Indian operated" station.

Thiru M. G. Ramachandran, Chief Minister of Tamil Nadu said that the Kalpakkam project on which work started many years ago and which had been blocked by several snags, had now started functioning, thanks to the engineers and technologists. The Chief Minister referred to the power crisis in the state and told that he will meet the Prime Minister at Delhi later on to discuss on the matter. He thanked the Prime Minister for the co-operation extended to the state in commissioning the power station.

Thiru R. Venkataraman, Union Minister for Defence expressed the hope that the establishment of the Kalpakkam atomic power station would be the beginning of a series of similar power plants that Tamil Nadu would have in future. The State was experiencing an acute power scarcity. It had exhausted almost all its hydel resources, and had no facility for starting thermal

stations. He recalled that while he was the Minister for power in the State he had predicted a serious power shortage in the early 80s. and that had come true. The power scarcity had seriously affected the industries located in the State.

Thiru S. L. Khurana, Governor of Tamil Nadu spoke about the tremendous achievements by Tamil Nadu in food production, rural electrification, etc. But it was passing through a difficult time because of the failure of monsoon in the last three years. He said that the commissioning of the Kalpakkam project was a national achievement.

The Prime Minister switched on, the flow of power from the atomic power station to the Southern grid.

As the Prime Minister turned a key on the table before her, the light on the illuminated sign board reading "power flow initiated" flickered signifying the flow of electricity from the first 235 MW unit of the nuclear power station to the southern grid. The Prime Minister also unveiled a commemorative slab.

The Prime Minister while addressing said that this day of dedication was very important for the whole

G. BHASKARAN



country. She said "My mind goes back to the day when my father dedicated the trombay reactor. He drew attention to the location of trombay and the elephanta caves—They are just opposite each other. A reactor, also combines the three aspects of existence that the trimurti symbolises—creation, preservation and destruction. In fact all power is a combination of these three.

As Bhabha Atomic Research Centre is near elephanta, so is this station to Mahabalipuram, one of the great centres of Indian creativity and famous for its art.

I never cease to wonder at the vitality and beauty of the great rock-carving of Arjuna's penance at Mahabalipuram."

Ancient sages and warriors acquired power through tapas while modern nations acquired power through the work of scientists. "We in India want to use whatever power at our command wholly for good and not for any type of aggression. This is true of nuclear power too."

The Prime Minister felt sorry about the disapproval of our policy in this regard by the industrialised nations and their hostility continued, cooperation withheld and follow up on agreements set aside.

Speaking on the long-term perspectives in power planning, the Prime Minister observed there could be no excessive reliance on any one source of power. Hydropower made the country vulnerable to droughts. "We need a balanced combination. Our policy is to harness all sources water, coal, wind, sun, biomass and atom."



"The Government rightly ignored all advice from the developed countries against going ahead with the nuclear power programme," The prohibitive cost argument did not hold good any longer with the cost escalation taking place with respect to oil and machinery.

The Prime Minister said, "thanks to the late Jawaharlal Nehru and Homi Bhabha's vision and ambition, we ignored the counsel of dependency."

She also noted that though India signed an ardent believer in the non-proliferation concept, it had not signed the Non Proliferation Treaty since "in the name of technological collaboration we will not accept discriminatory treatment or any limitation on our freedom of action or judgment." The nuclear weapon States had not stopped their proliferation while they wanted to prevent India from undertaking research even for peaceful purposes.

The country needed advanced technology. The Government had, in fact, liberalised the terms of transfer of technology but the country was against the conclusion of agreements, with the advanced countries which would lead to a perpetuation of dependence. Self-reliance in technology, including nuclear technology, was what the country was after, the Prime Minister said.

She also declared, "Our science, particularly nuclear science, is dedicated to development, the achievement of freedom from want and the provision of essentials and an honourable life for the masses."

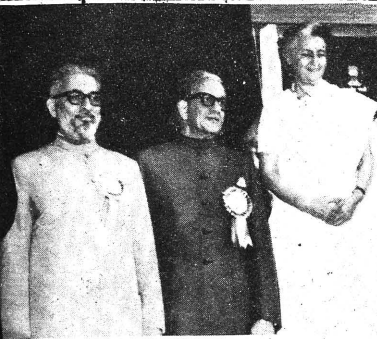
The Prime Minister declared that India has no intention of embarking on any nuclear weapons programme. "We want to make deserts bloom and not make the world a desert."

Referring to the Kalpakkam Atomic Power Station, the Prime Minister said it must really be "dedicated to the Indian engineers, Indian scientists and all those worker and others who have laboured so hard to build it all by themselves."

This plant is for the southern grid and will serve the entire area.

The Prime Minister announced that the Government would be giving a bonus of two per cent to all the employees of the project.

Thiru M. H. P. Rao, Project Director of the Madras Atomic Project proposed a vote of thanks.



Madras Atomic Power Project

COVER STORY

MADRAS ATOMIC POWER STATION.

The Madras Atomic Power Station located at Kalpakkam is the third Nuclear Power Station in India, the first being at Tarapur about 100 K.M. North of Bombay and the second at Rawatbhata 40 K.M. from Kota in Rajasthan. Kalpakkam lies on the East coast of India about 60 K.M. South of Madras, very near Mahabalipuram the famous tourist centre.

DESCRIPTION OF THE PLANT.

The Station consists of two units of 235 MWe gross each. The power will be fed to the southern grid at 230 K.V. through 4 lines, two to Singaperumal Koil, one to Villupuram and one to Arni emanating from the indoor switchyard. This reactor uses natural uranium available in the country as fuel instead of enriched uranium which has to be imported. The moderator and coolant is Heavy Water. While the basic features of the Reactor system at MAPP are similar to those of the fore-runner station in India i.e. Rajasthan Atomic Power Station, a few changes have been made to suit site conditions and to achieve greater availability factor arising out of experience at RAPS.

The full responsibility for the execution of the project, including design, engineering, construction, erection, commissioning and operation rests with the Indian engineers. The foreign exchange component is only 12% of the Station cost, mostly

for the import of special material and equipment. Each reactor building has a double containment consisting of inside prestressed concrete of 0.61 meter thick and outside random rubble masonry of 0.71 meters thick. The circular building of about 40 meters in dia. and 51 meters in height is designed to withstand a pressure of 1.1 Sq. Kg/cm² in case of design basis accident involving the release of high enthalphy steam. The pressure is suppressed in the suppression pool at the basement of the building.

How a Nuclear Reactor Works

A nuclear reactor is simply a source of heat, the heat being produced when the uranium atom splits (fissions). As in a coal-fired station, drive heat produces steam to the turbo-generators and generate electricity.

Natural uranium, the fuel used in this reactor, consists of two kinds (isotopes) of uranium; U-238 and a U-235 in the ratio of 139-1. When a U-235 atom is struck by a slow (or 'thermal') neutron, it will split into two or more fragments. Splitting is accompanied by a tremendous release of energy in the form of heat (200 Mev), radio-activity and two or three fast neutrons. These neutrons, which fly out of the split atom at high speeds, are made to slow down so that they are able to hit another U-235 atom which in turn releases more energy and further sets of neutrons. This self-sustained splitting of uranium atoms is called a 'Chain reaction'.

The slowing down of the fast neutrons is necessary for chain reaction, as otherwise the neutrons would escape without hitting other atoms. This slowing down (or 'thermalisation') of Neutrons is accomplished by letting them collide with atoms of a suitable substance called 'moderator'. In the pressurised heavy water type reactor, the moderator is Heavy Water. Heavy water occurs in nature as one part in 7000 of ordinary water. Its chemical properties are same as ordinary water but differ in physical properties. Its boiling point is 101.4°C and freezing point 3.82°C. Each reactor requires about 235 tonnes of heavy water for use as moderator and coolant.

Description of Reactor :

The reactor is a heavy water-moderated, pressurised heavy water cooled, natural uranium fuelled, horizontal pressure tube type. This essentially consists of calandria, dump tank, moderator connections, helium cover gas connections, coolant tube assemblies, end shield, and coolant feeder piping. The coolant tubes in which fuel resides are located within 306 calandria tubes and are supported by end shields: Heavy water which acts as moderator and reflector is contained in the horizontal calandria vessel during operation and is dumped into dump tank during shut down. Helium occupies the space above. Fuel for the reactor is in the form of bundles 49.53 cm long and 8.13 cm. diameter and each bundle consists of 19 hermetically-sealed zircaloy

tubes containing compacted and sintered pellets of natural UO₂. Loading new fuel into or removing spent fuel from the reactor is carried out by two coordinated, carriage mounted and remotely-controlled, on-power fuelling machines which move in and out of fuelling machine vaults located at either end of the reactor. Twelve bundles reside in each coolant channel of the reactor. Initially 235 Tons of Heavy water and 56 tons of natural uranium are required for each reactor. Subsequently only 100 Kg. of fuel per day is adequate for each reactor. For a coal-fired unit of this size 2,500 tonnes of coal would be required every day.

Heat Transport System :

The heat generated in the fuel bundles, as a result of uranium fission, is removed by the primary heat transport system or primary coolant, which is also heavy water pumped through the pressure tubes around fuel bundles. The primary coolant, in turn, transfers the heat to the light (ordinary) water in steam generators. The resulting steam drives a turbine, which turns a generator to produce electricity.

The residual steam at turbine exhaust is condensed by cooling water from Bay of Bengal.

Turbine Generator :

The turbine is of the horizontal tandem compound, impulse reaction type, 3000 rpm machine with steam conditions of 40 Kg/cm² and 250°C at stop valve inlet. After expansion in single flow HP turbine moisture is extracted in separator-reheater units and steam is reheated to 233°C before it enters the double flow LP turbine. Steam is extracted from suitable stages of the turbine to provide for 6-stage reg-

enerative feed heating, with a final This system is designed to keep air-feed water temperature of 170°C. borne radio-activity in different areas

The generator is rated 264 MVA limits, thereby making operations 16.5 KV. 0.9 P.F. Stator conductors safe.

are water cooled. The stator core and rotor are hydrogen cooled. Since excitation current requirement is large around 2,500 to 5,000 Amps, inductor type high frequency exciter is chosen, to avoid commutation problems experienced in DC generator type exciters.

Cooling Water :

Approximately 2 million litres per minute of sea water is used for condenser cooling and the water for this purpose is drawn from the sea through a submarine tunnel 65 M below bed level with vertical shafts at each end. The tunnel is 468 M. long and 3.85 M. in diameter of horse shoe shape. The sea water pumps are located in a circular pump house around the on-shore vertical shaft. A specially designed in take structure is connected to its vertical shaft at the off-shore end.

Indoor-Switchyard :

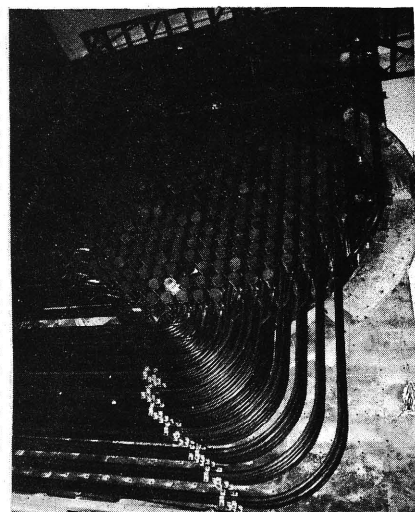
The experience at Tarapur Atomic Power Station which is also a coastal station, indicated that it would be appropriate to build an enclosed switchyard at Kalpakkam where salinity in the atmosphere is high and accordingly, the 230 K.V. Switchyard is built, indoors. This avoids continuous hot line washing of insulators to eliminate tripping of breakers due to flashovers.

Ventilation :

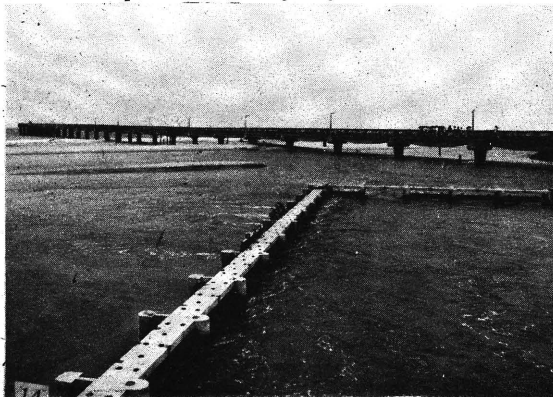
The reactor building ventilation system makes three to four air changes per hour in all accessible areas; the air is exhausted through the inaccessible areas and blown through filters to the main stack

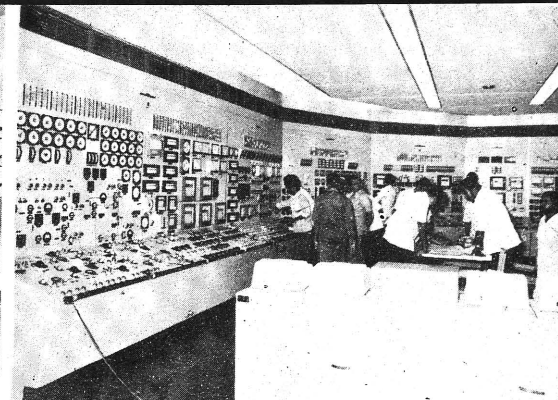
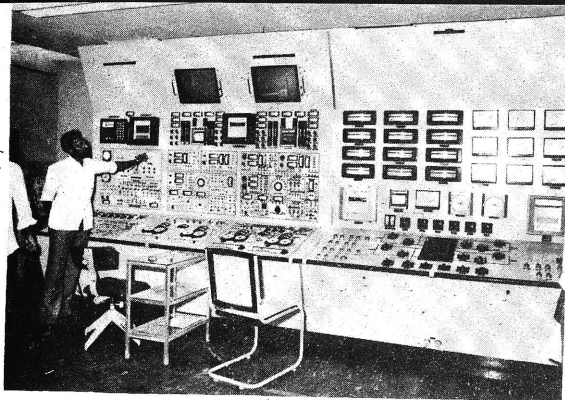
Waste Disposal :

The spent fuel bundles will be temporarily stored in a pool of water in the spent fuel storage bay from where they will be shipped to the reprocessing plant at Kalpakkam coming up later. The spent fuel bay is designed to store and cool the spent fuel from the two reactors



for a period of 15 years plus the discharge of a complete load of fuel from one reactor. Other solid, wastes, such as ion exchange resins, contaminated apparatus, etc. will be disposed off by burial in earth or concrete trenches, concrete-lined holes or concrete monoliths, as may be most appropriate. Liquid wastes will be diluted and discharged with the cooling water into the sea or treated and mixed with cement and stored as solids depending on the radio-activity content by centralized Waste Management Facility. All effluent air, including active or poten-



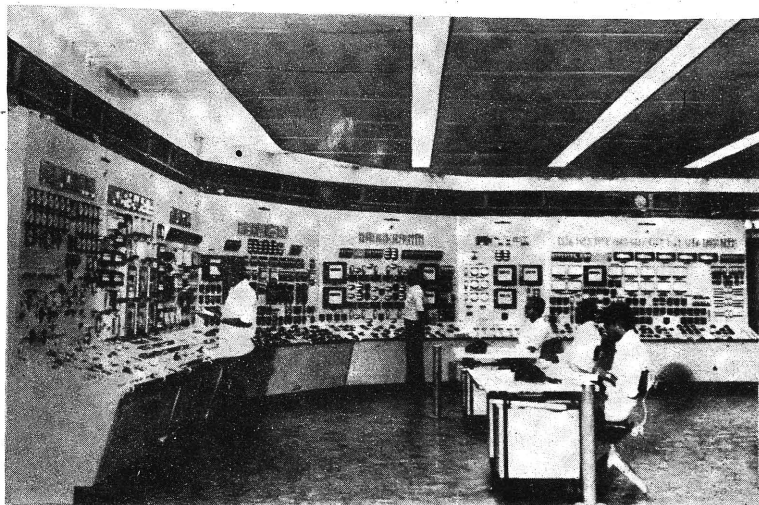


tially active gaseous wastes are mixed with inactive air discharged from the ventilation systems and after passing through special filters, are released through the main stack at a height of 100 metres above ground to facilitate further dilution and dispersion. All the above measures ensure effective control on release of radio-activity to the environment. This release to environment is continuously monitored by sampling of food articles and milk and fish. Heavy water which has been slightly degraded during use

this event, the following jobs were carried out.

The commissioning of the conventional system had been done after completing the preliminary checks-component-wise. The service systems like compressed air, fire fighting, chilled water, domestic water, chlorination, water treatment plant and the electrical output system, process water, process sea water systems and condenser cooling water and ventilation systems have been commissioned and the systems are

auxiliary boiler feed pump were test operated. The precommissioning checks on the turbine generator and the auxiliaries have been satisfactorily done and the turbine was first rolled on 21st May, 1979 using steam from four auxiliary boilers, which were specially procured and commissioned for this purpose. After successful tests on turbine, the generator was synchronised to the grid on 12th July, 1979. Turbine Generator was operated on a few occasions after synchronising for assessing the behaviour of the bearings and



in the reactor will be upgraded in electrolytic cells or distillation columns.

Present status of Commissioning of Unit No. 1

The reactor of Unit-I attained criticality on July 2, 1983. Prior to

regularly operating in the plant.

The auxiliaries of Turbine Generator Systems like Lub. Oil system and purification, stator water cooling system, hydrogen and seal oil system have been commissioned. The main boiler feed pump and 2½ %

tests like oil injection for emergency trip gear, speeder gear, over speed gear and governor regulation were carried out successfully.

The electrical systems have been fully commissioned. 6.6. K. V. distribution system, 415V Class IV system, Class III system and Class

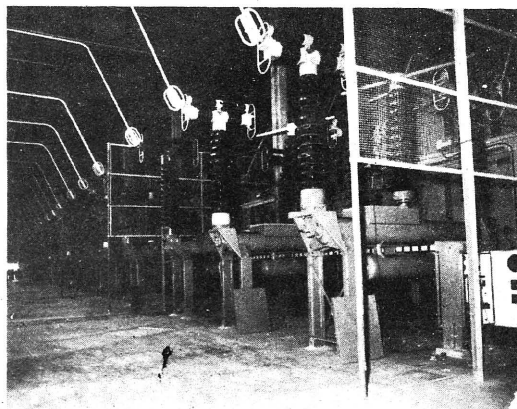
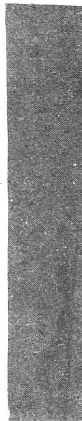
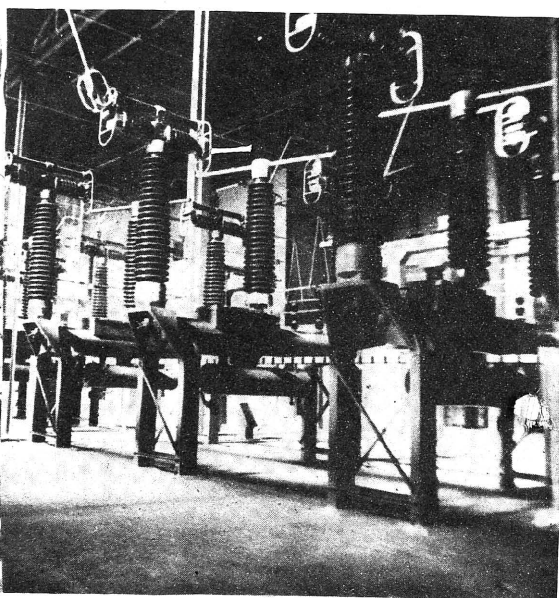
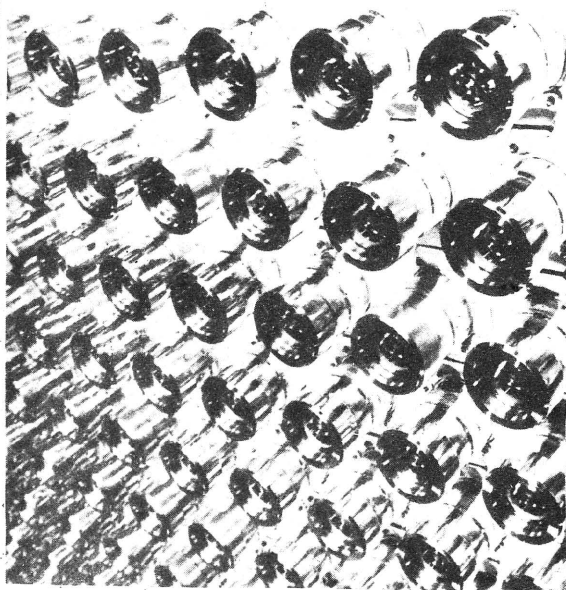
11 system, 250V DC Class-1 system, start-up transformer, Station batteries, diesel generator sets and motor generator sets were commissioned and they are in the operating state. Diesel generator and motor generator sets are operated on scheduled basis.

The Reactor Building containment has been proof-tested and leak rates evaluation was conducted at various pressures. The soundness of the containment integrity of the prestressed concrete has been established beyond doubt in one attempt.

Tests were conducted on Boiler room and Fuelling Machine Vault vapour recovery dryers in the test loop, in order to check their capacities, performance of various equipment, instruments etc.

Test was conducted on one condenser cooling water pump in a closed loop consisting of the pump chamber, discharge conduit duct, condenser discharge piping, seal well and back to pump chamber through a permanently laid hot water recirculation concrete conduit.

The moderator and PHT systems have been fully commissioned and various tests on slow pump up and fast pump up of moderator system were done successfully. The PHT hot conditioning, which is one of the important mile-stones in commissioning the nuclear power plant, was successfully done in December, 1981 by running all the 8 PHT pumps and raising the PHT temperature to 235°C. The system was operated at 235°C for about 14 days to form a hard, uniform adhe-



rent magnetic protective layer at the inner portions of the carbon steel piping of the PHT system.

The shield cooling systems have been fully commissioned.

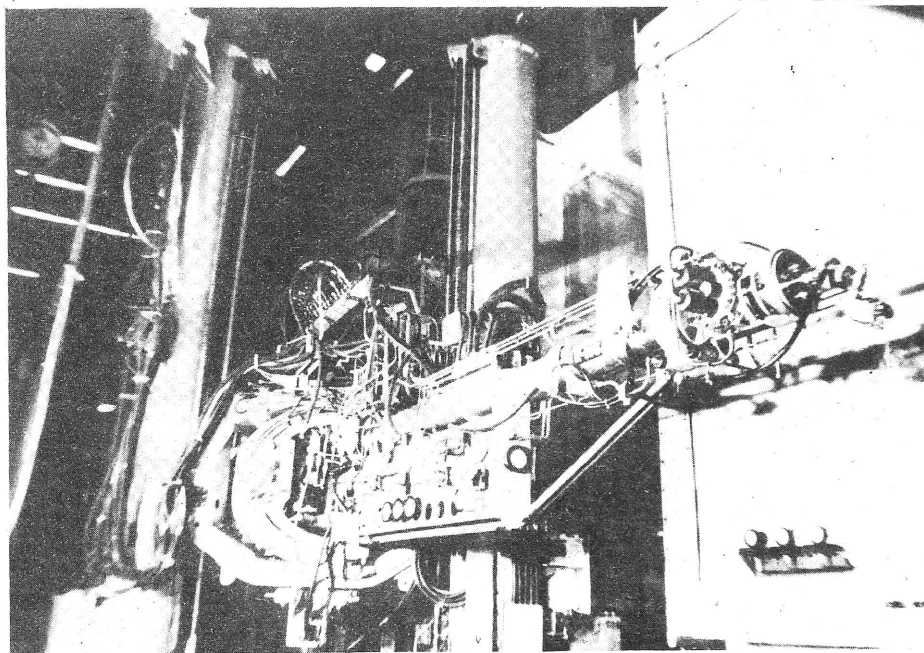
The reactor building ventilation system has been fully commissioned.

Both the fuelling machines have been fully commissioned and fuelling ability has been established on rehearsal facility.

the radiation that can produce charged particles ("ions") in materials, it strikes. There are various types of ionizing radiation; alpha, beta and gamma radiation, X-rays and neutrons each with different characteristics. Atoms that emit these kinds of radiation are said to be radio-active. When radiation passes through human body, radiation energy is absorbed. This may cause biological effect, that may be harmful to the exposed individual and

ful to the exposed individual and

fuel elements. But the neutrons which come out of the fuel in turn causes fission and induces radio-activity on other materials. One such induced radio-active material in heavy water reactors is tritium. Duterium of heavy water absorbs one neutron and changes to tritium. Whenever the fuel cladding failure occurs, radio-active fission products get into coolant. Thus the coolant contains fission products as well as tritium. Whenever, the coolant leaks, radio-active materials come



Costs :

Present Unit-I Cost estimate is Rs. 1188 million and Unit-II Rs. 1270 million. The estimated cost of generation may be around 35 paise per unit.

Radiation in Nuclear Power Station : Uranium-235 on absorbing a thermal neutron splits into two lighter elements called fission products and two or three neutrons releasing about 200 Mev. energy. The fission products are themselves radio-active but are contained in the

outside and contaminate the surfaces and air. Several types of instruments and gadgets are used for monitoring and controlling radio-active exposures. Special work procedures are formulated and strictly adhered to ensure the radiation exposure to the workers and public are well within the limit.

The term radiation is broad and includes such things ; light and radio waves. It is most often used to mean ionizing radiation, which is

radio-active but are contained in the

Presently Unit-I is poised for power generation and Unit-II is expected to be commissioned by 1984-85.

Mr. Chairman,

My Dear Colleagues and Friends,

I am grateful to the Union Minister for Information and Broadcasting, Thiru Bhagat, for having given me this opportunity to participate in the seventeenth conference of State Ministers of Information and to share a few thoughts of the Government of Tamil Nadu with my esteemed colleagues from various States and Union Territories. In this conference, we can take stock of the achievements of the various units of the communication and publicity service in our country, and study with a certain amount of depth the problems that we face in executing the schemes at different levels so that we may be enabled to do better in future.

2. As you are aware, mass communication is an important factor to help build up a democratic society based on the principles enshrined in our Constitution. With the advent of electronic visual medium, its role to fight ignorance, poverty, fatalism and illiteracy cannot be gainsaid. Scientific planning and ingenious implementation of publicity activities are therefore called for. The multilingual and multi-cultural characters of our country, indeed, require pragmatism, co-operation and co-ordination between the Centre and the States.

3. I am happy to say that Tamil Nadu has been doing extremely well in implementing the New 20-point Programme of our respected Prime Minister. On behalf of the Hon'ble Chief Minister of Tamil Nadu, I would like to inform this assembly that the National Planning Commission, in its recent review, declared Tamil Nadu as the 'best performance

Thiru RM. Veerappan

Minister for Information

& Religious Endowments

A New Radio Station & a Colour OB Van for Tamil Nadu



State' in our country under the New Twenty Point Programme. The publicity support given by the State Government in the form of publications, films and press handouts, etc., has accelerated the pace of implementation, covering the target groups and exceeding the targets. I assure the Chairman that the Government of Tamil Nadu will continue to render necessary assistance for all nation-building efforts through organised communication programmes. In this connection, I would like to emphasise that there is a need for better co-operation and co-ordination between various divisions of the Government of India and State Government.

4. Now, I refer to the role of All India Radio. I will be failing in my duty if I do not mention the steps taken by the Centre to establish two district-level Radio stations at Madurai and Nagercoil. The people in this area are anxiously awaiting the inauguration of the stations. I am confident that the station at Nagercoil will shortly commence its broadcast. I also hope that the longfelt need of the people in Madurai district for a radio station could be met before the turn of 1983.

5. All India Radio is nearly forty eight years old in India. Yet, it has to make its voice heard in far-flung villages and tribal areas. But, its area coverage has got to be increased by intrusion into distant places. This can be possible only if new Air Stations are set up or the transmission capacity of existing Stations is increased. I have received representations from all sections of the society pointing out that the programmes of Madras and Tiruchirapalli Stations of All India Radio are very feeble in the entire South Arcot district which has a population of 5 millions. To have reliable reception, installation of a 200-KV Transmitter at the Madras Station is necessary. Mr. Chairman, you may be surprised to know that a vast segment of our population living in the districts of North Arcot, Salem and Dharmapuri in the western region of Tamil Nadu have been denied the benefits of Radio.

Their legitimate demand for a broadcasting station was neglected so far. The claim of nearly 10 million people in this hilly area can no longer be ignored. I therefore reiterate our earlier demand for a new Radio Station in the western region of the State.

6. Television has come to occupy an important place in the communication system of India. It has greater potential than Radio to influence the public, diffuse knowledge, impart social education, alter deep-rooted attitudes and values and enrich the cultural fabric of our people. We are unable to agree with the observation that on the meeting of Secretaries and Directors of Information that on the whole the National Programme on T.V. is satisfactory at present. The National Hook-up telecast programmes require creative planning and imaginative efforts. Scientific demonstrations and educational spot-light with more visuals for the benefit of all sections of the people, including the farmers should constitute an important component of the programmes. The programmes should bring science and technology to the doors of the peasants besides providing entertainment. The bolts and nuts type of knowledge imparted through this medium will have only a transitory value. That is why our Honourable Chief Minister has made the following suggestions:

- (a) Programmes of cultural and educational nature with attractive visuals should be given priority.
- (b) When cultural programmes are telecast from Delhi, at present they are introduced in Hindi and some times in English. Arrangements should be made to have commentary in English and in the relevant national languages of the regions.
- (c) Facilities for subtitling (captions) and for dubbing should be immediately augmented at all TV Centres so that people of that region could easily understand

20
the programme.

- (d) While telecasting developmental programmes, the commentary should be in local language.
- (e) Feature films in colour selected from different regions and different languages should be telecast from Delhi instead of Hindi feature film alone as is done now.
- (f) The duration of national programmes may be revised to one hour from 9-30 P.M. to 10-30 P.M. leaving other timings for regional programmes.
- (g) In the 15 minutes English bulletin in the national net work, 5 minutes may be left to the regional stations to telecast local news in English.
- (h) Provision of second channel in the T. V. network.

7. Mr. Chairman, I am availing myself of this opportunity to thank you and our revered Prime Minister for having withdrawn the Hindi News Bulletin in response to the wishes of the people of Tamil Nadu and the appeal of our Hon'ble Chief Minister.

8. The Television Centres, I understand, exhibit the documentaries of Central Films Division as time-fillers. The Film library in Tamil Nadu has a large number of documentaries in colour and black and white on subjects of common interest. We will be happy to supply prints for exhibition by T.V. Centres all over India.

9. A black and white documentary on the life of Mahatma Gandhi recently telecast by the T.V. Centre, New Delhi, in the series of national programmes, was not understood by the people of our area as the commentary was in Hindi. Such valuable message of films can reach a large number of people if they are telecast in English or other Indian national languages. Our Chief Minister has already drawn the attention of the Centre to this

aspect. I appeal to the Chairman to bear this in mind and design national programmes for the benefit of the people of different national language groups in our country.

10. The Government of Tamil Nadu have been consistently requesting the Centre to allot one colour OB van to Madras TV centre with facilities for colour transmission. The former Information Ministers assured us that our request would be granted after the Non-aligned Meet was over. But the promise was not kept and the people of Tamil Nadu remain bitterly disappointed. A large number of Indian films are produced in Madras, the largest film producing centre in India, and most of them are in colour. That is why we made the request for the allotment of a colour OB van. Madras region, being one of the four major regions in India, did not get its due share, if I may say so. I, therefore, make our rightful claim once again on behalf of the people of southern region and I hope our claim is given due consideration atleast now and a colour OB van is imported and supplied without further loss of time. The works on TV Transmission tower at Kodaikanal have to be expedited. The installation of Micro-wave system should be undertaken by the Ministry of Communications immediately.

10-A: Kodaikanal is now allotted a 10 K.Watt. transmitter as per sanctioned scheme. It may take some more time to be commissioned. In this connection, I want to point out that there is One K.W. Transmitter available with Nagpur station which is also on channel 7. Kodaikanal T.V. station is also a channel 7 station. Hence the one K.W. transmitter lying as surplus in Nagpur may immediately be shifted to Kodaikanal. This will enable 18 million people living in an area of 150 K.M. radius around Kodaikanal to have the benefit of T.V. immediately. So, Mr. Chairman this request may be looked into immediately and suitable orders issued forthwith.

10-B: Mr. Chairman, I am given to understand that there are 41 T.V. stations in the whole of India. It is, indeed, a shocking reality to know that of the total 41 T.V. stations in India,

the Southern region comprising the States of Andhra Pradesh, Karnataka, Kerala, Pondicherry and Tamil Nadu, having 1/3rd of the total population of India have been given 5 T.V.Stations of which, only one station is a full-fledged station ie. Madras, and that too, without any facility for colour transmission.

10-C: Mr.Chairman, on behalf of the Government of Tamil Nadu and our Chief Minister, I gladly welcome the decision of the Government of India to provide T.V.transmission facility in towns having a population of one lakh and above. In this connection, I want to inform the Chairman that we have over 18 towns in Tamil Nadu with a population of one lakh to ten lakhs and as many as 10 major towns including internationally known places like Ooty, Madras and Rameswaram are linked with microwave system. If only a 100 Watt transmitters are installed in such places, the people will have an instant benefit of T.V.

I may request the Union Minister for Information & Broadcasting to give priority to this request and make available atleast ten 100 Watt. transmitters to Tamil Nadu under this scheme.

11. I feel that it is relevant here to point out that the Union Ministry of Information and Broadcasting has not been accorded priority in allocation of finance even though the mass media of the Centre and the States play a vital role for the development of the country. The National Planning Commission does not give due priority to this Ministry as is being done in the case of other service organisations like the Education and Health departments. The meagre outlay of this Ministry is really an impediment for balanced socio-economic growth of the nation. Many schemes demanded by the people remain unfulfilled due to want of resources. I urge this conference to pass a resolution, requesting the Prime Minister through the Chairman to impress upon the National Planning Commission to provide more financial allocation.

12. I want to invite the attention of the conference to the 'Video piracy' which is a matter of great concern to all of us. Video system, as you all know, is a product of the advances in electronics. No doubt that the Video system has been recognised by the world community as a potent medium of education, information and entertainment. It is regrettable that Video system is now in the hands of some anti-social groups. "Video piracy" is a social crime and a contagious disease, calling for early action. To put an end to this piracy trade, I would like to offer my suggestions for suitable immediate action. A licensing system should be introduced for VCR sets as in the case of T.V. sets. The authorised dealers of video tapes should be asked to keep proper accounts of production and distribution of tapes in order to prevent the misuse of the video tapes. The video films meant for exhibition in foreign countries re-enter India illegally and they are shown privately on commercial lines. The so called "Video Clubs" which show such smuggled films also display foreign blue films. Vigilance on the part of Customs department is necessary to curb such undesirable activities. They should also check whether the tapes are licensed or contraband items. I feel that a suitable and urgent central legislation in this regard is necessary.

13. At this juncture, I would like to say a word about the procedure in chalking out programme for TV and All India Radio. I think that my colleagues from other States will stand by me if I say that State Governments should have a role in the formulation and planning of programmes for T.V. centres and Broadcasting stations of All India Radio. The State Governments are concerned with the implementation of various socio-economic measures including the Centrally planned and sponsored schemes like the IRDP, NREP, etc. It is therefore absolutely necessary to consult the State Governments before nomination is made to the Advisory Committees of AIR and TV.

14. I want to draw the attention of this conference to the

present system of nominating members to the Regional Board of Film Censors. The State Governments are directly concerned with the exhibition of films including the enforcement of the Cinematography Act. The reactions of the people and repercussions created by the exhibition of some films are matters under the purview of the State Government. The present system of constituting Regional Board of Film Censors does not take note of this reality into account. It is unfortunate that the State Governments are not consulted when members are nominated to the Board. As a result, certain persons who have no regard for accepted social values and democratic institutions succeed in getting into these bodies. They do greater harm than service because of their pre-conceived notions. It is in the interest of the public and the administration and film industry as well that I plead for nominating members in consultation with the State Governments. Also, our suggestions will enable the Central Media in the States to free themselves from the criticism of partisan attitude and discriminatory approach. In the previous meet held on July 3, 1982, I made a plea with the Government of India for action in this regard. I now request for early reconstitution of the Regional Board of Film Censors.

15. Another subject that merits the attention of the Conference is the censorship of the bulletins by Regional Board of Film Censors. The Government of India have empowered the Chief Producer of the Films Division, Bombay, to release the news reels on his approval, keeping in mind, the censorship guidelines in operation. This has helped the Central Films Division to release the Indian News Reviews promptly. The News Bulletins of Tamil Nadu Films Division are produced by the Director of Information and Public Relations who is a senior IAS officer of the Government of Tamil Nadu. These Bulletins are well received by the people, particularly the rural community. I am not therefore convinced by the argument of the Ministry of Information and Broadcasting that the Central Films Division, has

been granted exemption from the provisions of certification of Films on account of its being a unit of the Ministry of Information and Broadcasting and functional feasibility. I feel that the State Governments deserve similar treatment. I hope that my colleagues from the States, which have films divisions, will appreciate my point and lend their support to my claim. A State Government producing films for free screening for the benefits of the people should not be taxed. I take this opportunity to repeat my earlier request to the Centre to exempt the films of Films Divisions of all States from being taxed.

16. In the field of training technical personnel for various branches of film production and exhibition, we are treated differently, I regret to say this. The Film and Television Institute of Tamil Nadu under the control of Information and Public Relations Department has been catering to the needs of foreign and Indian students. Many of the old students are absorbed in TV Centres and Radio Stations all over India. Some have won laurels. This Institute at Madras is the only institution in peninsular India imparting training in film acting, film processing such as cinematography, sound recording, sound engineering, direction, screen play writing, etc. We have plans to improve the Institute with more advanced courses after modernising the training facilities and equipping the industry with the latest technical instruments and cameras. Modernisation of the institute involves heavy expenditure and import of sophisticated equipments. The project reports for modernisation prepared by experts have already been sent to the Government of India, and we are seeking the assistance of World Bank, UNESCO and UNDP for modernisation programmes. The Film and Television Institute of India, Pune, gets assistance from international bodies. But the Film and Television Institute of Tamil Nadu has no grant of such assistance from the Centre; instead, it is being taxed.

17. I may like to draw the attention of the Chairman to

been granted exemption from the provisions of certification of Films on account of its being a unit of the Ministry of Information and Broadcasting and functional feasibility. I feel cameras, etc., worth about Rs. 25.6 lakhs, we had to pay Rs.22 lakhs as customs duty in the last two years. To import a cine camera for our Films Division, a sum of Rs. 3,63,000 had to be paid as customs duty as against the value of Rs. 3,03,000. This is done inspite of the fact that these equipments are mainly for a teaching institution of a State Government. A training institute of this kind deserves all assistance from the Centre, and I hope that our request for import duty exemption

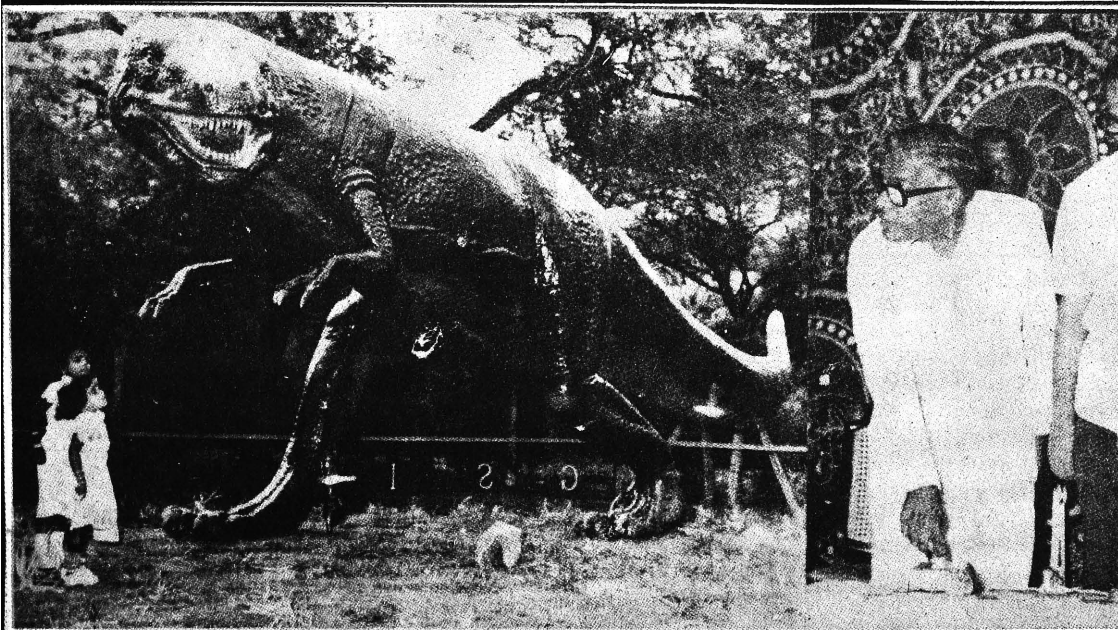
and financial assistance will receive due consideration of the Centre.

18. I once again thank the Chairman for having given me this opportunity to present the views of the Government of Tamil Nadu.

Thank you all

VANAKKAM

*Conference of Information Minister-
on 6th July, 1983 at New Delhi.*



Megalosaurus *for Children's Corner*

A life size fibre glass model of the Pre-historic "megalosaurus" constructed by the Geological Survey of India (GSI) in collaboration with the Tamilnadu Forest Department was inaugurated at the Children's Corner of the Guindy National park. By

Thiru R. M. Veerappan,
Minister for Information and Religious
Endowments.

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corrosive black—
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Fuse units to IS: 2086/1963
L.T. insulators,
L.T. shackle insulators—
Starters for tube lights to
IS: 2215



Bolts M.S. Black
Hex head round body with
hex nuts various sizes and
lengths to IS:1363/67

Rivets M.S.
snaphead in
various sizes and
lengths to ISS
2155/1962 and
steel to ISS 226
with dump test as
per IS 1148/1964



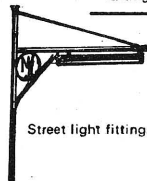
Transmission
Towers—Design,
manufacturing &
Erection



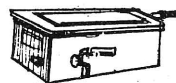
Fire
Extinguishers



Condensers to
IS: 1569
Chokes to
IS: 1534—Part I



Street light fittings

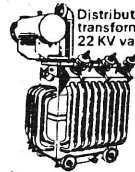


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Coir Fibre
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1964 (G3)—
Cotton tapes Newar
O.G. 25 mm—

Laboratory & Industrial
Chemicals—Organic &
Inorganic Salts and
Solvents—

M.S. Washers plain
punched size M16, to
IS 2016/1967 Table II—
Tread Rubber



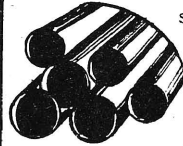
Steel trunks
(black plain sheet)

Distribution
cum Switch
fuse unit "Normal
Unit"
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Cable boxes C. I



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**IMMEDIATE
FUTURE**

KAMARAJ'S BIRTH ANNIVERSARY

The 81st birthday of Kamaraj was celebrated throughout Tamil Nadu on 16th July 1983 by the Tamil Nadu Government.

The Chief Minister Thiru M.G. Ramachandran and his Cabinet colleagues garlanded the statue of the late leader at Anna Salai.

Hundreds of people visited Kamaraj's Thyagaraya Nagar residence and the Kamaraj Mandapam in Guindy and paid homage. The day was also marked by poor feeding and distribution of clothes in several parts of the city.

The celebrations began with the Speaker of the Legislative Assembly Thiru K. Rajaram opening a photo

exhibition. The Defence Minister unveiled a statue of Kamaraj at the latter's Thyagaraya Nagar residence.

The Chief Minister Thiru. M.G. Ramachandran, while addressing said that the Government would constitute committees to write the biographies of Kamaraj and Anna.

The Chief Minister said that he was now following the path of Kamaraj who had never hesitated to change even laws that stood in the way of the upliftment of the poor and the downtrodden.

He also pointed out that one feature in the life of Kamaraj was

that he never misused his position and power. His robust common sense, patriotism and anxiety to serve the poor had made him tower over other leaders.

He also said that it was wrong to judge the eminence of great leaders on the basis of their electoral fortunes. Both Kamaraj and Anna had been defeated in their own respective constituencies but that had not affected their stature in any way.

Thiru. R. Venkataraman, Union Defence Minister, while addressing said simplicity, competence and friendliness were the assets of Kamaraj. It was Kamaraj who set an example to others by his honesty and integrity.

He also added that it was during the Chief Ministership of Kamaraj that an effort was made to set up the atomic power plant at Kalpakkam.

Thiru. S.L. Khurana, Governor of Tamil Nadu while speaking said that the contributions made by Kamaraj at every level had left an indelible impression. A fitting homage to the great leader would be to strive to maintain the unity and integrity of the nation, an ideal very dear to Kamaraj.

Thiru. M.P. Sivagnanam, Chairman, Tamil Nadu Legislative Council, who presided, said Kamaraj's rule



Jabbar, Thiru. Shakkilamani, Thiru. R. Thanushkodi Raja, Thiru. K.S.Krishnamurthi and Thiru. M. Francis Ryan spoke on the occasion paying tribute to Kamaraj.

A life-size statue of Kamaraj was unveiled by Thiru. Venkataraman, Union Defence Minister, at Kamaraj Memorial house in Thyagarayanagar, where the late leader had lived. He also released a souvenir.

The Chief Minister presided over the function.

The statue was presented to the Tamil Nadu Government by a committee constituted by the TNCC(I)

Thiru. R.M.Veerappan, Minister for Information & Religious Endowments welcomed the gathering and accepted the statue on behalf of the Government. Thiru. R.Kannappan, president of the committee, proposed a vote of thanks.

A photographic exhibition on the life of Kamaraj, organised by the Information and Public Relations Department was declared open by Thiru. K.Rajaram, Speaker of the Legislative Assembly at Kalaivanar Arangam.

About 50 photos showing Kamaraj with leaders like Gandhiji, Nehru, Lal Bahadur Shastri, Vinoba Bhave, Rajaji, Periyar, Perarignar Anna and foreign dignitaries like Marshal Tito, his visit to Russia and the articles used by him were on display.

The Speaker Thiru. Rajaram who presided and the Education Minister, Thiru. C. Aranganayagam, paid tributes to Kamaraj's leadership and his participation in the freedom struggle, his role as TNCC President, his stewardship as Chief Minister and later as Congress President. They particularly referred to Kamaraj's introduction of free education and noon meal scheme in the State.

Thiru. S.T. Kasirajan, Director, Information and Public Relations Department, welcomed the gathering. Thiru V.T. Veerappan, Deputy Director, proposed a vote of thanks.

Thiru. Pulamaipithan, Deputy Chairman, Legislative Council, Presided over a poets' meet.

Compiled by Tmt.Mallika



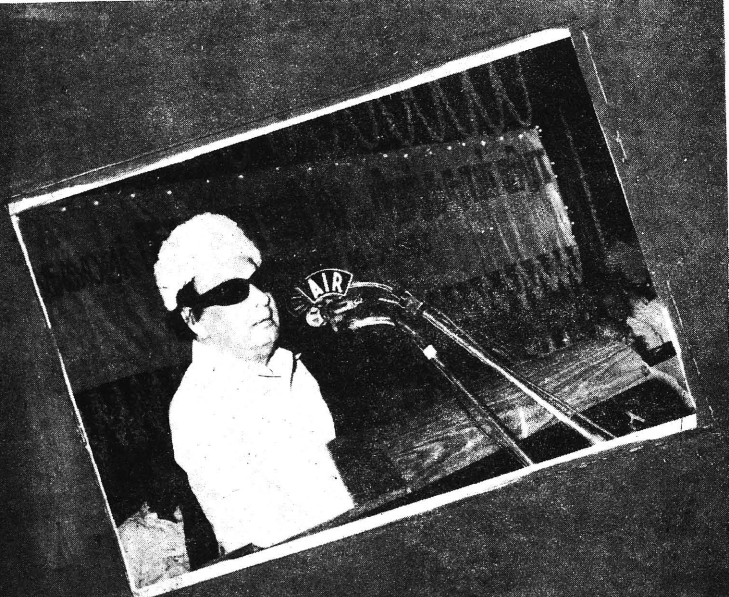
in Tamil Nadu was a glorious chapter.

Thiru. M.Bhaktavatsalam, former Chief Minister, said Kamaraj was a great patriot and freedom fighter.

Thiru. R.M.Veerappan, Minister for Information & Religious Endowments who welcomed the gathering, said that arrangements

should be made to celebrate the birthday of Kamaraj in every state capital as he was a national leader.

Thiru. M.Palaniandi, TNCC (I) President, Thiru. P. Mohammed Ismail, Thiru. S. Andi Thevar, Thiru. G.Murthi, MLAs, Thiru. P.U.Shanmugham, AIADMK General Secretary, Thiru. K.Thangarasu, Thiru. M.Margabandhu, Thiru. V.Balasundaram, Thiru. Chengam





A STEWARDSHIP THAT HAS STOOD THE TEST OF TIME

Thiru P. Harikrishnan
I.P.R.O (Retd.)

It was lucky that when Tamil Nadu came to be circumscribed by her linguistic frontiers the stewardship of the State was left with a large-hearted person like our revered Perunthalaivar Thiru K. Kamaraj. He managed to give the administration a unique mesh of political will prevailing over and guiding the bureaucracy without debilitating it or treating it as a mere tool. So much so the changes which took place after his stewardship were free from the trauma that inevitably attended such changes in other States. Moreover he created the administrative infrastructure for growth in such abundant measure that the State's progress became steady and steadfast. All this because Perunthalaivar managed to have complete grip over the ruling party and enabled the civil servants to do their job without let or hindrance. No wonder then that Pandit Jawaharlal Nehru fondly referred to him as one who "has presided over a Government which has been a model of efficiency and good administration".

administration moulded by the British, punctilious about rules but mpervious to the aspirations of the people; but as he had developed an admiration for their efficiency and dedication to the job, he merely had to give them a new orientation to achieve the remarkable results credited to him. In this task no doubt he was assisted by the euphoria generated by the linguistic statehood and the gloss of freedom which had not worn off during his time. More than anything else his knowledge of the State and the life style of the people was so thorough and so deep that he could always improve upon the notings of officials though made after an exhaustive study. This naturally endeared him to the officials and enabled them to give of their best.

Apart from an intimate knowledge of the State and its people acquired through his long and hectic campaign for freedom and the inimitable rapport he was able to strike with the higher echeleons of the buracracy, Thiru Kamaraj was helped by his unique memory. His memory power was almost super-natural. Some have a good

memory for facts while some are endowed with memory for faces. In Kamaraj it was a person with an outstanding memory for both facts and faces. Thus it was that a 2-way traffic was established in his relationship with the bureaucracy of Tamil Nadu. He learnt to admire the efficiency implicit in working to certain rules and established tenets. The bureaucracy on the other hand learnt from him the felt needs of the people at various levels, and implement schemes for their welfare. His contribution in identifying the places for the location of the various projects of the II and III. Five Year Plans was immense and rewarding for Tamil Nadu. It was a curious irony. The civil servants were all nearing the retirement age and not very enthusiastic to 'learn' anything—while Kamaraj though of the same age i.e. nearing 60, was beginning to learn the art of administration! His infectious enthusiasm made it possible for the teachers and the taught to reverse the roles and enjoy it too. There lies the strength of his stewardship, a stewardship that has stood the test of time for Tamil Nadu.

Perunthalaivar inherited an



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Animal Husbandry Department has recorded significant progress in the recent years in bringing succour to all those living below the poverty line and to improve their standard of living through the implementation of various Animal Husbandry Schemes. The contribution of Animal Husbandry Sector to Net State Domestic Product has increased to Rs. 12,878 lakhs in the year 1980-81 over the years.

Increase in production

There is an increasing trend in milk production of cattle and buffaloes as revealed by the Sample Survey conducted by the department of Animal Husbandry. The average yield of milk per day per cow and per buffalo which stood at 1.888 kgs. and 2.534 kgs. respectively in 1977-78 has been estimated to have increased to 2.018 for a cow and 2.881 for a buffalo in 1981-82. The over all milk production which was 1.68 million tonnes in 1977-78 has increased to 1.886 million tonnes in 1981-82. Egg production has increased by 34.46% in 1981-82 over the production levels of 1977-78 i.e. the production was 682 millions in the year 1977-78 and now has gone to 917 millions in the year 1981-82.

Cattle Development Programmes

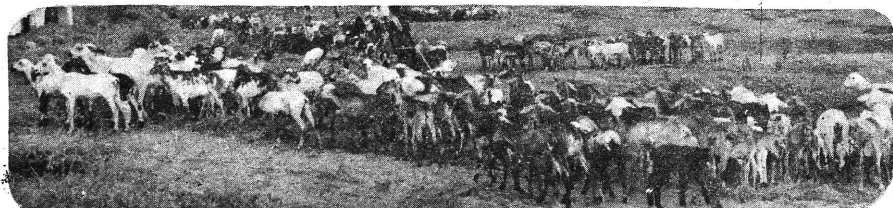
In addition to 7 existing ICDPs, 2 more projects were established during the year 1981-82 at

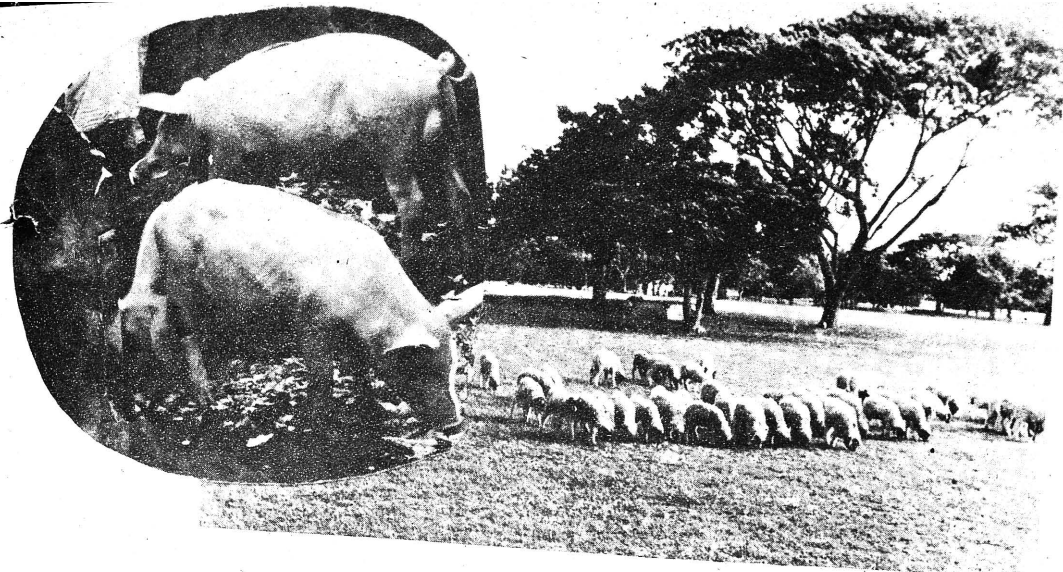
Tambaram and Panruti to cover 1,60,000 breedable cattle population. These projects are expected to result in the production of about 5000 to 6000 improved female progenies every year, increased annual milk production of about 70 Lakh litres and increase in value of cattle to the tune of Rs. 3.0 crores.

In addition to 57 Key Village Blocks, 5 more blocks were started in Thanjavur District during the year 1980-81 to cover 50,000 breedable cattle population. Through a net work of 50 sub-centres, about 20,000 inseminations are being done in a year in these blocks.

With the assistance of Danish Government a Frozen Semen Bank has been established at Exotic Cattle Breeding Farm, Eachenkottai at a cost of Rs. 38.81 lakhs. A liquid nitrogen plant and Freezing Centre has been established at District Livestock Farm, Abishekapatti at a cost of Rs. 14.55 lakhs. Another Frozen Semen Project is being implemented to cover 7 lakhs breedable cows and buffaloes in 5 non-operation districts at a cost of Rs. 117.31 lakhs with the financial assistance of Government of India.

In order to improve the quality of semen for A.I., the bulls maintained in the Bull Stations are replaced in a phased manner. So far 126 jersey bulls, 13 Holstein Friesian Bulls and 120 Murrah buffalo bulls were purchased during the past 3 years.





For the first of its kind, 2 Heifer Production Centres at Pudukottai and Uthagamandalam, 1 Ongole Cattle Breeding Unit at Chinnasalem and a Progeny Testing Scheme for Murrah buffaloes at Orathanad were also established during the year 1980-81 for the progress of cattle development.

Sheep Development

The mass deworming programme for augmenting mutton production has been taken up in the districts of Tiruchi, Pudukottai and Chingleput during the year 1980-81 at a cost of Rs. 3.75 lakhs. The scheme has subsequently been extended to the other Districts in the following years at a total cost of Rs. 38.28 lakhs.

A Goat Breeding Unit was established with a foundation stock of 200 Jamnapari goats at a cost of Rs. 15.98 lakhs at the District Livestock Farm, Pudukottai for improving goat breeding in the State.

Goat is a multi-purpose animal which yields meat and milk. A new scheme was taken up during the year 1981-82 in Rameswaram area for upgrading the local goats at a cost of Rs. 0.51 lakhs.

The number of Sheep Breeding Co-operative Societies were raised to 714 in the year 1982-83 from 311 in 1979-80 with a view to improve the employment opportunities and economic development of the down trodden of the society.

A new scheme to train the rural youths in theoretical and practical aspects of management of sheep, knowledge of symptoms of common diseases and their preventive measures etc. was taken up during the year 1981-82. So far 800 youths have benefitted by this training and this programme is being continued.

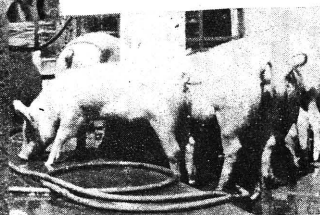
Poultry Development

With the advent of special animal husbandry programme, Poultry Units have been started in the State. With the proliferation of poultry industry, a Poultry Disease Diagnostic Laboratory was established for the first time in the State during the year 1981-82 at a cost of Rs. 2.77 lakhs. This Laboratory provides proper disease diagnostic facilities to the farmers, thereby checking the entry as well as spread of various poultry diseases. Thus the loss due to mortality is arrested to the maximum and the production of eggs in the State has increased by 17.3% during the last 3 years.

Piggery Development

A new step has been taken in the development of piggery by supplying a boar free of cost to each of the 125 selected local pig breeders during the year 1981-82. Under the Special Livestock Production Programmes 100 Piggery Units were started during the years 1981-82 and 1982-83. To meet the animal protein needs, people were encouraged to take up pork eating and necessary propaganda in this direction was intensified during the recent years.





Fodder Development :

In addition to the 4 Fodder Seed Production Units, 2 more units were established at Eachenkottai and Chettinad for making available the fodder seeds and slips to the farmers at subsidised rates. Various kinds of incentives like grant of subsidies for establishment of fodder plots, for conserving and utilising the same economically etc. are extended. Subsidies are given for procuring chaff cutters and for construction of silos. Mini kits are supplied to the farmers in ICDP areas. Fodder seedlings especially Soobabul are also distributed on a large scale. These programmes of fodder development have made substantial contribution for the increased production of fodder in the State.

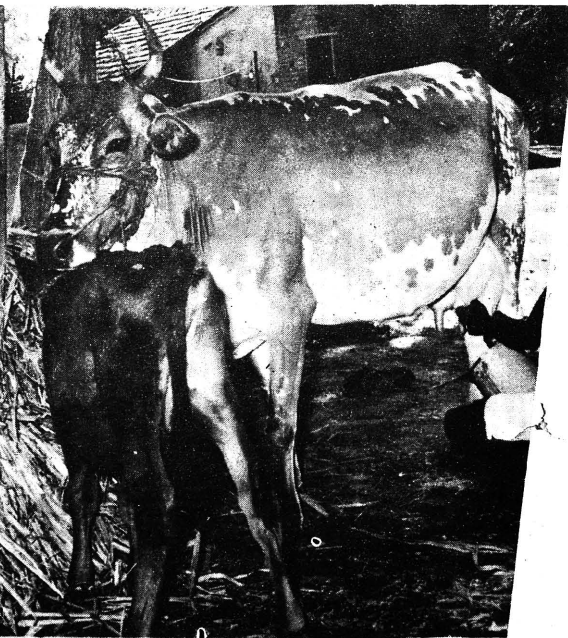
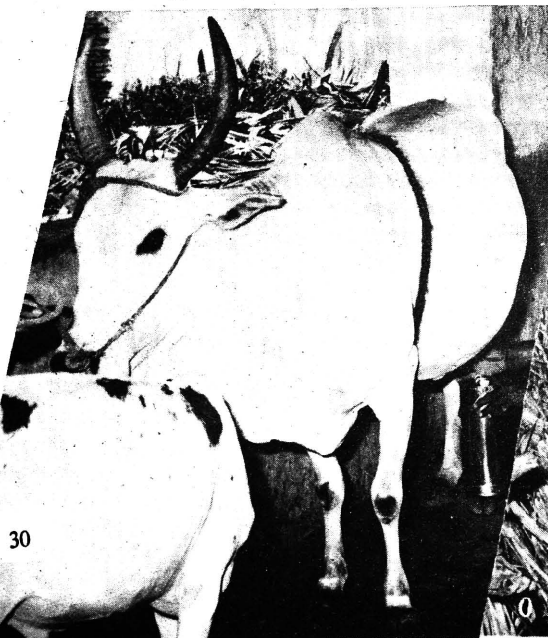
Veterinary Health Services.

55 new Veterinary Dispensaries were established during the year 1980-83. 15 Veterinary Dispensaries were upgraded as Veterinary Hospitals, and 7

Veterinary Hospitals were upgraded as Clinician Centres during the past 3 years to extend Veterinary Health services to more villages. The funds provided for these institutions in this State are significantly higher than in other States. In times of severe drought, the provision is even doubled.

Besides 14 Rinderpest District Squads, 3 Squads were established at Pudukottai, Erode and Virudhunagar at a cost of Rs. 4.27 lakhs during the year 1980-81. Besides 13 checkposts, 3 more checkposts were established in the Nilgiris District during the year 1982-83 for eradicating the dreadful disease Rinderpest that spells heavy mortality and morbidity in livestock. 3 District Squads were provided with vehicles and 2 checkposts were provided with additional staff during the year 1982-83.

For the first time, a X-Ray Unit is being established at Madurai at a cost of Rs. 3.30 lakhs. This Unit is likely to cover annually about 900 animal patients.



A scheme to protect cattle against Foot and Mouth Disease was implemented at a cost of Rs. 7.40 lakhs during the year 1980-81 and is continued under Centrally Sponsored Scheme.

A new scheme for the establishment of Pharmaceutical Division was taken up during the year 1980-81 at a cost of Rs. 16.14 lakhs. for manufacturing various types of quality drugs.

4 Medical Depots were sanctioned to establish during the year 1980-81 at a total cost of Rs. 2.0 lakhs to overcome the difficulty so far experienced in procuring and supplying drugs in time to the Veterinary Institutions.

A Dog Breeding Unit was established at Veterinary Hospital, Saidapet to preserve Rajapalayam and Kompai breeds of dogs in Tamilnadu from extinction at a cost of Rs. 0.50 lakhs during the year 1980-81.

Institute of Veterinary Preventive Medicine, Ranipet.

The various sections of this institute was strengthened during the past 3 years so as to increase the vaccine production. During the year 1980-81, a sum of Rs. 15.38 lakhs was sanctioned for strengthening the Brucellosis Laboratory Unit, Poultry Vaccine Production Section, Duck Plague Vaccine and Cell Culture Fowl Fox vaccine. A sum of Rs. 5.0 lakhs was sanctioned for the construction of staff quarters at the institute of Veterinary Preventive Medicine, Ranipet. A scheme for strengthening of Rinderpest Tissue Culture Vaccine Section has been sanctioned at a cost of Rs. 17.97 lakhs during the year 1981-82.

Special Animal Husbandry Programmes

Special Livestock production programme :

With a view to generate additional employment opportunities and enable the weaker sections to cross the poverty line, this programme is implemented in seven Districts of the State. During the past 3 years i.e. 1980-83, 19857 calves were included to receive calf subsidy. 10,224 sheep units, 2029 poultry units and 100 piggery units were established.

Under Sheep Production Programme, Special attention has been paid for inclusion of women and members of scheduled castes/scheduled tribes as beneficiaries during 1982-83 as indicated below:

Women .. 226

Scheduled Castes/
Scheduled Tribes .. 377

In implementing this programme, Tamilnadu has won the appreciation from Government of India and the World Bank Scientists who visited the State recently.

Integrated Tribal Development Programme :

Under the programme, 489 milch animals, 990 bullocks, 195 pair of bullocks and 13 pair of plough bullocks were distributed. 1192 sheep units, 20 goat units, 65 poultry units and 65 piggery units were established and 2 Veterinary Dispensaries were established under this programme during the past 3 years. Thus 3029 tribal families were benefited.

Hill Area Development Programme :

Under this programme the District Livestock Farm, Udhagamandalam has been strengthened, one Animal Disease Intelligence Unit at Udhagamandalam has been established and 415 sheep units have been established through four Sheep Breeding Co-operatives societies and 40 Piggery Units were also established during 1980-83. Construction of building at Veterinary Dispensary, Kilkundah has been taken up during the year 1981-82. A scheme for fodder development in the District Livestock Farm, Udhagamandalam and Fodder Farm, Kuruthukuli at a cost of Rs. 5 lakhs has also been undertaken.

Provision of Infra-structural facilities for introduction of Frozen Semen Technique to 173 Veterinary Institutions and establishment of 28 mobile Veterinary Units under Integrated Rural Development Programme were the notable achievements during the year 1980-83.

Western Ghat Development Programme :

This programme is to assist Small Farmers/ Marginal Farmers and Agricultural Labourers in calf rearing and it was taken up during 1980-81. So far 2,500 calves were included to be reared for a period of 25 months at a cost of Rs. 22.85 lakhs in the districts of Madurai, Tirunelveli, Coimbatore and Ramnad.

Drought Prone area Programme :

430 sheep units were established in the District of Dharmapuri and Ramnad, 2606 milch animals were distributed in these districts during the year 1980-83 and a sum of Rs. 77.63 lakhs was sanctioned for implementing various schemes in these districts in the year 1981-83. Further, 4 Dispensaries were established in Dharmapuri Veterinary District during the year 1982-83.

When Tamilnadu was in the grip of a severe drought, various programmes were implemented to redress the grievances of the poor livestock owners who were in search of fodder which was a scarce and made resources to mitigate the sufferings due to "drought octopus". This gist of these programmes were as follows :

8474 metric tonnes of paddy straw were distributed to 114252 poor livestock owners at a cost price of 7 to 15 paise per kg. Rs. 34.70 lakhs was spent as subsidy towards the cost of transport, handling charges etc. A sum of Rs. 12.22 lakhs was spent on procurement of paddy straw.

1,44,270 heads of cattle have been protected against foot and mouth disease at cost of Rs. 17.25 lakhs.

A sum of Rs. 50 lakhs was spent towards purchase of curative medicines to provide intensive treatment to the affected livestock in the drought affected areas.

A total of 505 water tubs were constructed in the Veterinary Institutions at a cost of Rs. 7.58 lakhs to provide drinking water to the livestock in the Drought Affected Areas.

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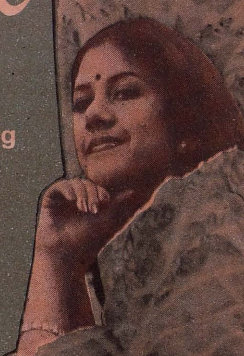
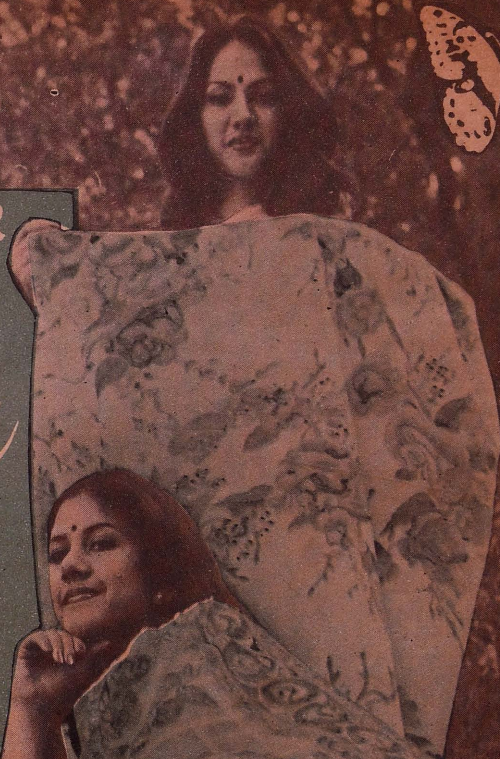
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