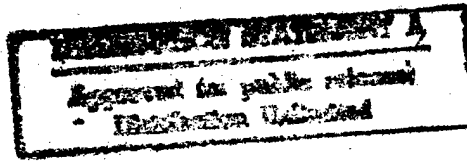


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14 June 1982



# Worldwide Report

EPIDEMIOLOGY

No. 282

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**FBIS** FOREIGN BROADCAST INFORMATION SERVICE

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## BRIEFS

DANISH MINISTER WANTS GDR COOPERATION--Danish Agriculture Minister Bjorn Westh is considering having the EEC Commission make another attempt to establish a cooperation agreement with East Germany covering the reporting and combatting of foot-and-mouth disease. The minister announced this in a reply to the Folketing Agriculture Committee. Up to now the GDR has refused to negotiate with the EEC Commission's Veterinary Department, said Bjorn Westh, who wants attempts to be made to extend cooperation with the East European countries in the veterinary field. The GDR is not a member of the UN Agriculture Organization, the FAO, and the East Germans are not therefore required to supply virus samples to the English Virus Institute in Pirbright for precise classification. But through both the Foreign Ministry and Veterinary Directorate Denmark has requested the GDR to produce such a sample. Bjorn Westh added that the FAO intends to discuss the matter with the East Germans. [Excerpt] [PM190903 Copenhagen AKTUELT in Danish 11 May 82 p 5]

CSO: 5400/2156

FIGHT AGAINST LEPROSY REACHES CRUCIAL POINT

Paris AFRICA AFP in English 4 May 82 pp 1, 2

[Article by Bernard Degioanni]

[Text] YAOUNDE - The fight against leprosy has reached an important turning-point which should lead to the disease being completely wiped out in Africa by the year 2000.

Africa has an estimated 15 million lepers.

Two hundred leprosy specialists who attended a meeting here for one week at the end of April believe this ambitious aim will be realised owing to two new antibiotics which are being used.

But medical experts working with the Geneva-based World Health Organisation (WHO) have always maintained that the cost of their manufacture, as well as their possible side effects, could upset the whole course of current leprosy treatment, usually carried out by one main drug.

This pill "Disulone" or "Dapsone" has always had a double advantage. It is easily administered - the patient just has to take one pill daily - and it is inexpensive.

This means that the leper can easily treat himself at home, in an isolated hut in the bush, with a medical team visiting him once monthly.

But there has been growing resistance to this pill in Africa, and specialists query its usefulness if it is not taken together with the two new antibiotics - "Rifadin", already used against tuberculosis, and "Clofozimin" or "Lamprene".

A spokesman at the headquarters of the Organisation Coordinating the Fight against Endemic Diseases in Central Africa (OCEAC) pointed out here: "By sticking only to Disulone we are harming efforts made over the past 30 years which have cut down leprosy cases by two-thirds".

The essential recourse to the two new antibiotics, whose efficiency is recognised by most specialists, raises, numerous problems about applying them.

There is the question of side-effects, for instance.

The new antibiotics cannot be given to expectant mothers in the first three months of pregnancy, nor to patients also suffering from liver or kidney ailments.

Their wide use would therefore mean the presence of qualified medical staff.

In addition, owing to their high cost, charitable associations would have to give their financial help and in turn doctors would be called on to see the patient was taking the medicine as prescribed.

#### Medical Control

The OCEAC spokesman pointed out that this medical control was not necessary for the "Disulone" pill.

OCEAC considers that a new change in leprosy treatment is more than ever necessary in view of the fact that an efficient vaccine against Leprosy is still a long way off.

But OCEAC points out that at present 80 per cent of leprosy cases are cured.

Experts here said that surgery can also be used to treat certain physical deformities resulting from leprosy.

"Such operations are simple ones and can be done at most surgeries in Africa", one expert said.

The experts noted that leprosy is most widespread in those areas where elementary hygiene rules are ignored.

While the way in which leprosy spreads is still not completely understood, experts believe that it is transmitted "from person to person".

CSO: 5400/5986

DEADLY FORM OF DENGUE FEVER THREATENS NORTH QUEENSLAND

Canberra THE AUSTRALIAN in English 26 Apr 82 p 9

[Article by Joe Begley]

[Text]

**Q**UEENSLAND health authorities fear that a fatal form of dengue fever could break out in the State's north, possibly killing hundreds of people.

The killer variety of the disease is known as dengue hemorrhagic fever. It is responsible for the death of about 50,000 Asians a year.

The health authorities estimate that up to \$5 million would have to be spent over five years to remove its threat to Australia.

The senior entomologist with the Queensland Institute of Medical Research, Dr Brian Kay, described dengue hemorrhagic as "an international traveller".

He said: "It can strike almost anywhere in the world. All you would need is to get one person coming back from an Asian holiday who is carrying it and capable of passing it on to mosquitoes."

There is already a mild epidemic of dengue fever in northern Queensland. The first case of the disease in Australia since 1955 was notified in April last year.

The biggest outbreak has been on Thursday Island, off the northern tip of Cape York Peninsula where there have been 300-400 cases.

There have also been cases reported from other Torres

Strait islands, and in the north Queensland centres of Innisfail, Mossman, Townsville and Cairns.

Dr Kay said that in the last dengue fever epidemic in 1953-55 there were 15,000 cases in Townsville. About one-third of the population was affected.

The disease was mainly carried by a type of mosquito known as *aedes aegypti*.

Dr Kay said recent studies had shown that up to 50 per cent of houses in Townsville were infested with *aedes aegypti*. Parts of Cairns were also infested and the potential for a major epidemic was significant.

With the threat of dengue hemorrhagic being introduced it was urgent for mosquito eradication programs to be started.

If an epidemic occurred on the same scale in Townsville as in 1953-55, more than 30,000 people would contract the disease.

In the event of the dengue hemorrhagic variety being present it would require a mortality rate of only 1 per cent for 300 people to die. "Can you imagine, for instance, what that would do to the tourist economy?", Dr Kay said.

"Potentially, the present situation could develop into something very nasty. It has got to be nipped in the bud.

"The dengue fever problem is a predictable one. It is totally preventable - it should never have happened.

"Local authorities and health authorities became lax

and believed it could not happen again.

"The solution is to get rid of the dengue fever mosquito through eradication programs.

"It has been introduced into Australia and breeds principally in habitats created by man, such as rainwater tanks, drums, tin cans and pot plant bases.

"What is required is a big exercise in which a large team of trained people upturn Queensland to eradicate the mosquito and its breeding areas. This would involve stimulating action and co-operation by local authorities and the public.

"It's a fairly simple procedure, but it takes organisation and money."

Dr Kay said Queensland and Texas were now the only two locations in first world countries where dengue fever remained.

### **RETICULATED**

The disease was largely a problem of underdeveloped countries which did not have reticulated water supplies or adequate health services.

Queensland's Minister for Health, Mr Austin, has also warned that the State is in the grip of a Ross River virus epidemic.

Unlike dengue fever, Ross River virus is transmitted by most species of mosquitoes, and occurs throughout Australia each year.

In 1979, Ross River virus was labelled as "one of Australia's chief exports" when it was transmitted overseas by air travellers and swept through the South Pacific region, affecting as many as 100,000 people.

CSO: 5400/7555

SYDNEY TO HAVE THREE SUBMARINE SEWAGE TUNNELS OFF COAST

Sydney THE SYDNEY MORNING HERALD in English 23 Apr 82 p 3

[Article by Joseph Glascott]

[Text]

After completing seabed geological tests, the Sydney Water Board yesterday gave the go ahead for a \$100 million project for three submarine sewage outfall mains off the Sydney coast.

The program will begin at the end of next year, after detailed planning, with work on the first ocean tunnel from Malabar.

A spokesman for the board said work on two other seabed tunnels from North Head at Manly and from Bondi would begin in succeeding years.

The present estimate of more than \$100 million will probably rise with inflation to almost \$200 million.

Unless the State Government decides to give the board a special loan allocation for the work, it will mean increased water rates for all Sydney householders.

Because the Water Board's loan-raising allocation has been cut, it will have to finance the project from revenue or reserves, other State authorities said yesterday.

The tunnels will carry Sydney's sewage out to sea to counter beach and foreshore pollution.

The Malabar tunnel will be 3.3km long, the North Head tunnel 3.5km and the Bondi tunnel 2.1km.

The submarine outfalls are expected to be completed by 1990 if money continues to be available.

Drilling tests carried out in the past year by the giant English engineering company, Wimpey, with its vessel the MV Geodrill, proved that the tunnels will go

through four ages of rock under the seabed.

The tunnelling project will employ more than 260 men.

Drilling crews of about 10 men operating around the clock will work up to 120 metres below the ocean surface. In some areas they will work in 80 metres of water and 40 metres under the seabed.

Special probing drills will go ahead of the crews to test the undersea rock for faults to protect them from possible flooding.

A spokesman said the board also was spending more than \$50 million on a primary treatment plant at the North Head sewerage works which now discharge raw sewage. Already about \$30 million has been spent on this plant.

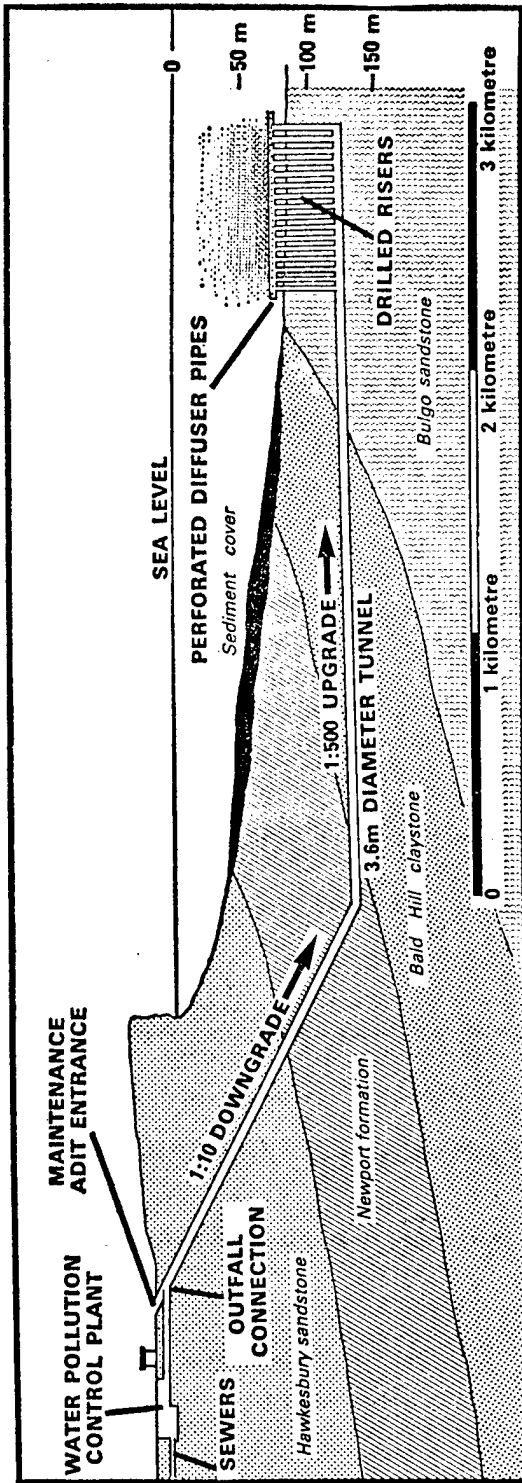
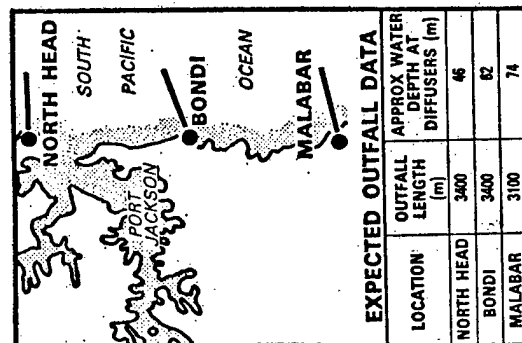
He said the board had decided to start at Malabar because this plant already served the largest population (more than one million people in the southern and western suburbs) and had by far the largest industrial waste load.

The North Head outfall serving 970,000 people north of the Parramatta River and west to Blacktown would be next.

The Bondi outfall, serving 209,000 people in the inner city, the eastern suburbs and some of the inner western suburbs, would follow.

The average daily discharge from the three systems will be about 900 megalitres.

The spokesman said the ocean outfalls would be more than four times cheaper than alternatives such as pumping effluent over the Blue Mountains to the inland.



A cross-section of the construction work facing engineers.

VICTIMS FROM GUINEA WORM, MEASLES REPORTED

Guinea Worm Outbreak

Accra DAILY GRAPHIC in English 8 May 82 p 8

[Article by Kwame Penni]

[Text] **MORE than 350 inhabitants of Nyametwa, Esem and Juabeso in the Sefwi Wiawso district in the Western Region have been attacked by guinea worm.**

Among the victims are nine soldiers from Takoradi, three employees of the Food Distribution Corporation (FDC) and 23 workers of the Cocoa Marketing Board (CMB), including drivers who were on cocoa and foodstuffs evacuation duties in the area.

One of the victims whose swollen left foot has been bandaged and walks with the help of a walking stick told me that some of them were attacked by the disease within less than three months of their stay.

According to him some women traders who have been going to the area to purchase foodstuffs have also been attacked by the disease.

He disclosed that no health personnel have been to the area in connection with the disease.

He said the sources of the inhabitants' water supply "are pools of greyish stagnant water which are full of dead leaves"

and described the situation as serious since most of the affected persons are bed-ridden and cannot go to farm.

He appealed to the health authorities to visit the area to help arrest the situation.

Meanwhile, a 60-year-old tutor of the Takoradi Polytechnic who claims he has an effective herbal treatment for guinea worm has offered to treat free of charge the affected workers who are resident in Takoradi.

The tutor, Mr Edward O. Adu-Darko said it would not take more than three days for the worm to come out on application of the drug.

## Guinea Worm, Measles Noted

Accra DAILY GRAPHIC in English 13 May 82 p 8

[Article by George Sydney Abugri]

[Text]

**THE West Dagomba District Council Primary Health Care Unit is actively engaged in fighting an outbreak of measles and guineaworm at Kusawgu, a village 32 kilometres from Tamale.**

The inhabitants of the villages have reported that 21 children between the ages of nine months and four years have died since the outbreak of the diseases two weeks ago.

Several children of the same age group are on admission at the Damango hospital and the Tamale Central Health Care Unit has treated several people among the 3,000 inhabitants who are suffering from the diseases.

The unit has also treated 22 persons suffering from cough and 16 children from whooping cough.

### Immunisation

To curb the possibility of further outbreak of the diseases, 70 children have been immunised against measles while several others have also been immunised against polio, tuberculosis, tetanus and diphtheria.

Several mothers in the village were educated about measles and its complications as well as the prevention of guineaworm since there is scarcity of drugs for the treatment of the disease.

During the education programme, members of the Primary Health Care Unit noted that epidemics could be avoided or minimised if health care centres are established in some major villages in the region to tackle any signs of an impending outbreak of diseases.

Meanwhile the Primary Health Care Unit has immunised school children in the region against measles.

CSO: 5400/5996

## BRIEFS

CHOLERA OUTBREAK--Nine persons have died within two days following an outbreak of cholera at Nkroful and Amosima, both villages near here, hospital sources confirmed yesterday. On Wednesday morning at Nkroful, the disease claimed eight lives within 12 hours. The next day seven other persons from Amosima were sent to the Central Hospital here where one of them died. According to Mr Kofi Sam, chairman of the Nkroful PDC, who reported the incident to the personnel of the Air Force detachment and the Ministry of Health authorities, several other persons, including children, had been affected by the disease in the two villages. A spokesman for the Ministry of Health here told the 'TIMES' that even though there were no vaccines at the hospital, efforts were being made to bring the situation under control. Meanwhile, an SOS message had been sent to Accra for vaccines and other drugs to combat the situation in the area. [Text] [Accra GHANAIAN TIMES in English 1 May 82 p 5]

CSO: 5400/5996

GREECE

HOSPITAL SURGICAL UNIT CLOSED AFTER TETANUS CASES

Closing Announced

Athens I VRADYNI in Greek 13 May 82 p 14

/Article by Dim. Politis: "Tetanus Threatens Both Patients and Hospital Personnel"/

/Excerpts/ The Nikaia-Piraeus general hospital "Agios Pandeimon" is in a state of alarm over the danger patients and hospital personnel --about 700 persons in all-- are running in contracting tetanus.

Already on Tuesday, the Third Surgical Unit of the hospital was closed after three patients contracted tetanus. These three have been transferred to Loimodon.

Three Cases

The first tetanus case appeared 45 days ago on a patient who had been operated on for gallstones.

A patient who had undergone a hernia operation contracted tetanus 20 days later, while the third case occurred last week on a woman who had been operated on.

All three patients were transferred to the Loimodon Hospital for treatment. Despite this, the hospital administration remained indifferent to the situation, and it was this indifference that has led to the present situation where about 700 individuals, hospital personnel, doctors and patients, are directly endangered.

Scientific experts stressed yesterday that matters have reached such a point that the hospital must be closed to isolate the tetanus.

## No Localization

Up to now, the source of the infection has not been localized, and it could be coincidental that the three patients had been treated at the Third Surgical Unit, given the fact that all the operations took place in regular operating rooms. Consequently, no one knows the source of the infection: in the operating rooms or only in the Third Surgical Unit.

Despite the seriousness of the matter, the hospital administration showed indifference, although the measures it took yesterday should have been taken at least 20 days ago in order to reduce the danger of infection to the hospital personnel, a danger that is now immediate.

## Inoculations Ordered

Athens I KATHIMERINI in Greek 14 May 82 p 1

Excerpts Mrs Stefanou, director of public health in the Ministry of Social Services, announced yesterday that the three cases of tetanus in the Piraeus general hospital "Agios Pandeileimon" are not due to any infection inside the hospital itself.

She stated that this was revealed through cultures made at the medical school microbiological laboratory.

Nevertheless, the three rooms of the Third Surgical Unit where the three patients were being treated have been closed off to decontaminate them. At the same time, antitetanus inoculations have been ordered for all hospital personnel.

Also, in accordance with an announcement of the chairman of the hospital administration, all surgery patients will be inoculated and all scheduled operations will be postponed while strict sterilization measures and frequent taking of cultures are continuing.

At the same time, a more systematic investigation has been conducted in the operating rooms, the patient rooms as well as the special sterilization unit used where it has been determined that there was improper control over its use. Mrs Stefanou stressed that in no place have microbes been found to justify the existence of infection inside the hospital.

5671

CSO: 5400/5324

## ENCEPHALITIS SPREAD IN INDIA NOTED

Kathmandu THE RISING NEPAL in English 5 May 82 p 2

[Text]

—The spread of Japanese Encephalities (JE) across the north and the western coast of India may essentially be a side-effect of economic development. The disease, often popularly called 'brain fever', leads to death in a large number of cases. It is a seasonal disease caused by a virus which is spread by mosquitoes. Many medical experts believe that it is the environmental change caused by the spread of irrigation, which provides a good habitat for the breeding of the mosquitoes, that is responsible for the spread of the disease.

JE is in many ways a new disease for India, especially the manner in which it has assumed epidemic proportions causing considerable anxiety. JE was first noticed in Japan in the latter half of the last century and from there it has slowly spread across southeast Asia. A few sporadic cases were first noted in south India in 1955. But in 1973 there was a large

scale outbreak of the disease in various districts of West Bengal. In 1978, still larger outbreaks occurred in Karnataka, Tamil Nadu, Bihar, West Bengal Assam and Uttar Pradesh. Late last year cases of JE were reported from Karnataka, Andhra Pradesh, Tamil Nadu, and Pondicherry. JE incidence has been steadily growing: 1434 deaths in 1980 as compared to 962 in 1979.

The factors relating to this southwestward spread across Asia still require to be elucidated, says the World Health Organisation. But as Dr. V. Ramalingaswami, Director General of Indian Council of Medical Research, pointed out: "It is possible that environment and ecological changes may be playing a part". Irrigation technology is coming to the rural areas in a big way. Paddy fields with standing water are the main breeding places for the mosquito transmitting JE.

GEOMETRIC RISE:

Analysing the reasons for the 1978 J E epidemic in India, a scientist at the National Institute of Virology at Pune has pointed out that in recent years the area under rice cultivation has grown geometrically; multiple crops are harvested, and more land is flooded by irrigation. A number of Culicine and Anopheline mosquitoes transmit the virus but it is the mosquito with the scientific name *Culex tritaeniorhynchus* that has been identified as the chief carrier JE in India. *Culex tritaeniorhynchus* is primarily a rural mosquito which breeds successfully in rice fields. An expansion in its habitat can lead to an increase in its population. In normal circumstances, the mosquito transmits the virus mainly to pigs and sometimes to large birds like pond herons, egrets and ducks which frequent collections of water such as paddy fields. Cattle also draw away many mosquitoes from men. But while pigs and birds maintain the life-cycle of the virus, cattle do not. In other words, they do not act as reservoirs of the disease. Humans only accidentally enter the transmission cycle of the JE virus.

Another factor which probably keeps the incidence of this dreaded disease in India low, is its limited pig population. During the 1978 epidemic, JE cases

were found widely scattered, giving an average of 1-1.5 cases per village.

#### COMA:

The disease can never spread like malaria which, too, is a mosquito-transmitted disease. But it is the very high case fatality rate that poses the disease as a serious public health problem. Between 20-40 per cent of the patients die and sometimes the death rate can be over 50 per cent. The disease is characterised by fever, headaches, coma and neck rigidity, and it injures the central nervous system of those who succumb to it.

Because of seasonal incidence of the disease, variety of vectors and multiple hosts, control of JE is difficult, especially when man himself is inadvertently helping the mosquito by expanding irrigation facilities without adequate water management.

JE is not just an environmental disease but also a socio-economic disease. The virus affects mainly those who come from the lower socio-economic strata of society. In West Bengal, scientists of the National Institute of Virology found that the prevalence of JE was directly proportional to the local pig population. Human beings most frequently affected with the disease were members of the scheduled castes, the communities that rear pigs

and live in proximity with their animals.

A variety of efforts are needed to minimize the number of JE cases, which include insecticide spraying, draining of stagnant water and health education. People should be taught to use mosquito nets or mosquito repellants, if they can afford them, and to keep pigs at some distance from human dwellings.

In Japan, periodic draining of rice fields, especially during the mosquito breeding season, which kills the larvae breeding in the water, has successfully reduced the incidence of the disease. JE has steadily declined in Japan, China and South Korea but epidemics have been increasingly noted in the last three decades in Vietnam, Thailand, Burma, India and Nepal. Whether measures like draining of rice fields can be successfully implemented in the vast rural areas of India without effective community involvement remains

doubtful.

Among the different types of vaccines against JE, the freeze-dried vaccine prepared from infected mouse brains appears to be suitable for India. The government should shortly begin manufacture of this vaccine at the Central Research Institute at Kasauli. No other country in south-east Asia yet is producing or planning to produce any JE vaccine.

But as the vaccine has to be kept cool during storage and transport, its widespread use is going to be difficult. Therefore, a vaccination campaign would be possible only in a limited area when it is threatened with an epidemic.

The spread of JE is, in fact, just another indicator of the crisis that affects the entire field of vector control today. Chemicals like D.D.T. have failed to destroy disease-carriers like mosquitoes which have developed a strong resistance to them. As a result,

diseases like malaria are growing once again. The changing environment and the continuing state of poverty are spreading new disease like JE or are bringing back old ones like kala-azar (scientifically known as leishmaniasis).

As Prof. Ramalingaswami has pointed out in a speech: "we are at crossroads today with regard to our ability to control diseases transmitted by insect vectors. The health implications of development activities should be given serious consideration before the activities are commenced. They may have beneficial, neutral or deleterious effects on community health. Those that have an impact on environment and ecology need very special attention. The concept of integrated development, so much talked about, must be put into action more convincingly." The growth of JE reminds us once again that everything in nature related to everything else.

CSO: 5400/5988

## BRIEFS

GASTROINTESTINAL DISEASE KILLS 193--Guadalajara, Jal, 24 Apr--The chief of Coordinated Services of the Public Health Department, Dr Alfredo Lepe Oliva, said that this year 193 children died of gastrointestinal illnesses. He pointed out that the hospital centers of the city on the average treated 200 infants with this type of ailment. He added that the temperature reached 35 degrees today and caused more people to be affected by dehydration. He added that these diseases occupy third place among the causes of death in Guadalajara. [Text] [Mexico City EXCELSIOR in Spanish 25 Apr 82 p 8-D] 9678

CSO: 5400/2154

PAKISTAN

BRIEFS

GRANT FOR MALARIA CONTROL--ISLAMABAD, May 19--A 1.5 million dollar grant to Pakistan for malaria control part of six-year United States anti-malaria assistance programme was signed here today by the US Ambassador Ronald I. Spiers and Ejaz Ahmad Naik, Secretary, Economic Affairs Division and Donor M. Lion, Director of the US Agency for International Department (AID) in Pakistan. The grant which the US Ambassador said would support government efforts to control malaria incidence in Pakistan in the first increment of what is expected to be a 41 million dollar grant in the this field during the next six years. The agreement will support technical assistance training, field studies in operational research and commodities and is part of the 1.625 billion dollar aid programme approved for Pakistan by the US Congress earlier this year. [Karachi BUSINESS RECORDER in English 20 May 82 p 8]

CSO: 5400/5997

## BRIEFS

DISEASE AT ONVERWACHT--MORE THAN 1 900 people have died so far at the squatters' camp of Onverwacht, near Thaba-Nchu in the Orange Free State. The camp, established in June 1979 to accommodate people who did not want to belong to Bophuthatswana after the homeland had opted for independence, returned to the public spotlight last week after a claim in Parliament by the Minister of Health, Dr Lapa Munnik, that health service at Onverwacht was as good as in Houghton, the prestigious Johannesburg suburb. "It has as good a health service as any of you people have in Houghton," the Minister told Mrs Helen Suzman, MP (PFP). During a two-day visit, reporters found that 1 949 people had died at Onverwacht since the camp was established, 1 025 of them children. Most of the dead children were under the age of three. By Thursday last week, 11 more people had died. Some 527 people died of a typhoid epidemic in the camp's first year of existence. The greatest killer diseases at Onverwacht now are gastro-enteritis, kwashiorkor and pneumonia. Infectious diseases like measles are also prevalent. A new clinic has been built, but a nursing sister said that the staff of 12 was not coping. Onverwacht has an estimated population of 130 000 and more than 300 patients are treated at the clinic every day. It does not provide a 24-hour service and is closed over week-ends. [Text] [Johannesburg SOWETAN in English 26 Apr 82 p 1]

CSO: 5400/6000

SWEDEN TO AID NATION IN MALARIA CONTROL, RESEARCH

Dar es Salaam DAILY NEWS in English 8 May 82 p 1

[Article by James Mpinga]

[Excerpt]

THE Swedes are throwing their weight behind Tanzania's efforts to contain malaria, a disease whose parasites are now feared to have developed resistance to chloroquin.

According to the Director-General of the Swedish Agency for Research Co-operation with Developing Countries (SAREC), Dr. Lars Anell, Sweden's interest in malaria research was aroused by increasing reports of malarial parasites developing resistance against chloroquin — the main drug that cures the disease.

There is no conclusive evidence as yet about these reports in East Africa, but the World Health Organisation (WHO) has reported that 43 species of malaria-spreading mosquitoes in Latin America and Asia were developing resistance to insecticides faster than health officials could find new ones.

In Tanzania, SAREC's role would be to help fund investigations to establish evidence of chloroquin's impotence against malaria parasites, Dr. Anell said.

However, he said the level of funding would depend on a project write-up from the National Institute for Medical Research. When it finally gets off the ground, the project could also involve direct participation of Swedish scientists working with their Tanzanian colleagues, he added.

CHOLERA CONTAINED AT SCHOOL

Dar es Salaam DAILY NEWS in English 15 May 82 p 3

[Text]

MZUMBE Secondary School in Morogoro is no longer threatened by an out-break of cholera, the school's authorities told the *Daily News* yesterday.

The Acting Headmaster, Ndugu N.R. Nyumba, said that the school authority in collaboration with the Regional Health Office had taken sufficient measures to contain the killer disease.

CSO: 5400/5998

WATER STORAGE TANKS HARBOR HARMFUL BACTERIA

Abu Dhabi EMIRATES NEWS in English 12 Apr 82 p 3

[Article by Rebecca Gander-Banat]

[Text]

ABU DHABI (EN): Officials of the Ministry of Health say the tap water here is safe for use after it has left the desalination plants but that improper storage in tanks for flats and buildings often taints it.

According to Dr. Abdul Wahab Al Muhaidib, Assistant Under-Secretary in Preventive Medicine at the Ministry of Health, random sampling is done on the tap water in various buildings in Abu Dhabi. About 10 samples are collected daily, and select buildings are sampled about every two weeks.

The findings have shown that many of these tanks are infested with algae, which grows on the walls of the tanks. This occurs when tanks are installed improperly and the water inside can't all flow out. When some water remains in the bottom of the tank it stagnates and algae begins to grow. Most of these tanks' covers don't fit properly so that dust can also enter the tanks.

According to Atallah Rabi, Chief of the Environmental Health Division at the Ministry of Health, on inspection of some tanks he has seen insects

"If a person had the maintenance man in his building show him the inside of the tanks, he might stop using the water," said Rabi.

Filtration of this water for drinking, cooking and washing will not rid it of the bacteria, which develops as a result of improper storage, but fortunately the area's high temperatures are helpful in killing anything that should grow in the water, said Dr. Muhaidib.

The Ministry believes the tanks on

the ground should be on the same level as the building for easier cleaning maintenance and replacement, if necessary. In most buildings servicing the tanks is difficult because of their positioning.

If a certain building's water is found to be impure, the Ministry will notify the owner, said Dr. Muhaidib.

But most building owners and the caretakers who they employ care very little about safety, therefore they don't take the necessary steps to improve the quality of water supplied to their tenants, said Rabi. One way to insure the quality of water from these tanks would be to impose a fine for those who refuse to clean up or replace dirty or damaged tanks, he added.

"It is lucky there have been no water borne disease outbreaks here," Rabi said. With the present conditions, this could be expected to occur.

Testing the water in other emirates is done on a much smaller scale because of a shortage of manpower and labs. Even in Abu Dhabi the Ministry would like to be able to take samples more frequently, said Dr. Muhaidib. Work is being done to combat the situation. The Ministry has ordered a supply of testing kits to carry out the procedure where labs are not available.

Because of the pollution caused by bad storage, people are drinking more bottled water (there are six bottling plants in the emirates) and losing faith in the municipality, Rabi said, which is really not to blame.

Most of the water used in the

emirates, about 60 to 70 per cent, is obtained through desalination, with the rest coming from underground wells. 95 per cent of the water used by Abu Dhabi Municipality is desalinated water, processed at two locations here.

Dubai has a high reliance on desalinated water, while Sharjah still uses the underground water (but will begin using desalinated water soon). In Ras Al Khaimah there are some small firms using the reverse osmosis process to produce potable water, while the remaining supplies in the emirates come from underground wells, according to Dr. Muhaidib.

CSO: 5400/4723

## BRIEFS

HIGH RATE VIRAL HEPATITIS--Urban crowding and environmental contamination of the large cities has contributed to viral hepatitis becoming today a frequent problem in the area of public health. This has motivated a group of researchers from the Unit of Clinical Immunology of the Anatomy-Pathology Institute of the Faculty of Medicine of the Central University of Venezuela to undertake an epidemiological investigation in the country in order to find out the incidence of viral hepatitis in the population of Venezuela. Dr Nicholas Blanco when interviewed on this subject stated that in the initial investigation, a high incidence was noted in the cities of Valencia, Caracas and Maracaibo, as well as in areas where beaches are very contaminated. Dr Blanco pointed out that "in the metropolitan area we have observed that the slums of Caracas constitute the principal source of contamination for viral hepatitis." He added that "this disease represents a socioeconomic problem, but to the extent that conditions improve, it is controllable. It is comparable to the big epidemics of influenza and polio." Can hepatitis be prevented? "With intense sanitary campaigns and with the cooperation of the community this disease can be prevented, since the state cannot perform this task alone." Dr Blanco pointed out that there are people suffering from hepatitis who get better without problems, however, there are others who go beyond the chronic stage and if this is associated with malnutrition, it usually leads to cancer of the liver. In conclusion, the immunologist said that in Caracas there is dormant hepatitis in 26 percent of the population. [Text] [Caracas EL UNIVERSAL in Spanish 21 May 82 p 2-31] 9678

CSO: 5400/2153

## CONFERENCE REVIEWS WORK TO ERADICATE MALARIA IN 1981

Hanoi SUC KHOE in Vietnamese 20 Mar 82 p 7

[ Article by Q.N.: " Conference To Review 1981 Malaria Eradication Work" ]

[ Text ] On 25, 26 and 27 February 1982 in Ha Tuyen, the Ministry of Public Health held a conference to review the work of eradicating malaria in the northern provinces in 1981. Attending the conference were more than 100 delegates representing the public health services and the public health-physical education and sports committees of the key districts in charge of eradicating malaria and of the districts having actually eradicated malaria in their localities.

Last year, although the country was still encountering many difficulties, with the concern of the party committee echelons and administrations of all levels added to the efforts of the entire sector, the plan for malaria eradication was still being carried out throughout the country and its major goals were properly achieved.

About spraying DDT to destroy mosquitoes, as of the end of September 1981, 1,600 tons of 75% DDT were used to spray in 3,207 villages and 1,882 work sites, state farms, enterprises and new economic zones, thus providing protection to 11 million people per time. The areas sprayed remained wide, particularly in the high plateaus in the South. Many districts in the provinces of Nghia Binh, Quang Nam-Da Nang, Lai Chau, Ha Tuyen, etc. obtained good results in both volume and time as compared with the plan goals.

Treatment of malaria was provided on the basis of analyzing the characteristics of malaria epidemics in each region. With all hospitals and local public health facilities throughout the country being included, treatment was given to more than 6 million time-patients; more than 100 million pills and more than 1 million vials of medicines for malaria treatment were used. That mostly involved mass treatment and preventive treatment, with about 90 percent of all patients treated being in the southern provinces. Treatment consisting of reducing fever, following up to fight recurrence and dealing with the more serious cases in many hospitals, such as the hospitals in Son Duong, Chiem Hoa (in Ha Tuyen Province), Cho Ra (in Bac Thai Province), Son La and a number of central Trung Bo provinces, was

administered in compliance with the treatment chart suggested by the Ministry of Public Health. Generally speaking, wherever district-level leadership was strict and there were treatment units and local public health network working properly and combining malaria treatment with the overall health management activities, the quality of treatment was guaranteed, malaria detection and patient management were carried out in an orderly manner and with better quality, malaria incidence was obviously decreasing, the pockets of contagion were quickly destroyed and the epidemic was brought under control. Many localities had plans for active prevention and control of malaria and succeeded in lowering malaria incidence.

With such efforts, last year the overall achievement in malaria eradication in the North was generally maintained. Six additional districts in the country were recognized as having actually eradicated malaria: Hon Gai (in Quang Ninh Province), Trung Son (Thanh Hoa), Kinh Mon and Chau Giang (Hai Hung) and Binh Luc and Y Yen (Ha Nam Ninh). As compared with the first 9 months of 1980, the malaria level in 1981 decreased by 16.4 percent; the rate of malaria parasites' presence was 0.37 (0.44 percent in 1980), with the scope of parasitic presence being reduced. Ten out of 18 provinces scored a reduction of 7.8-7.9 percent, with 5 provinces scoring 50 percent -- Bac Thai, Cao Bang, Vinh Phu, Hai Hung and Hanoi. The highlands had a reduction of 5.83 percent and former Zone 4, 31.4 percent. The percentage of villages showing parasitic presence was 6.22 percent (6.99 percent in 1980). In the southern provinces, malaria incidence in a number of areas continued to decrease; however, in many localities, due to the fact that the malaria parasite developed resistance to drug, mosquitoes were very active outdoors, populations were fluctuating, etc., the epidemic picture remained complicated, with the overall malaria level increasing and cases of virulent malaria remaining.

Next to the achievements scored, in every major aspect of the malaria-eradicating work there still were some weaknesses: DDT spraying was not very effective in a number of places, with wasteful use of DDT and poor results; malaria detection and patient management were still underestimated -- this would require the sector as a whole to try even harder to move forward.

To continue reducing the malaria level in the southern provinces, particularly in the Central Highlands, southern Trung Bo and eastern Nam Bo, and in the northern provinces, mostly in the border provinces and former Zone 4, in 1982, the sector as a whole must concentrate its efforts on lowering the malaria parasitic presence index to 0.4 percent for the northern provinces and less than 3 percent (parasitic presence as compared with the number of slides viewed) in the southern provinces. Reduce the proportion of people infected with malaria parasites to 40 percent as compared with 1981; reduce malaria mortality, mostly in the border provinces, new economic zones and industrial crop-growing areas. Continue to expand the movement to get more districts being recognized as having eradicated malaria. Try to have 3-5 districts in the midlands and delta and 1-2 districts in the highlands being recognized as having really eradicated malaria (for the northern districts) or having basically eradicated malaria (for the southern districts).

## NEW ADVANCES IN ERADICATING MALARIA EXAMINED

Hanoi SUC KHOE in Vietnamese 5 Apr 82 p 7

[Article by Q.N.: "Ha Tuyen: New Advances in the Malaria Eradicating Task"]

[Text] In the past years, implementing the Resolution of the Fourth Congress of the Party and the Premier's instruction 261 of 20 June 1977 with the determination to stop malaria recurrence, to gradually lower the MGC[Malaria Germ Carrier] ratio and advancing toward basically eliminating malaria, the province-wide malaria eradicating task has made new advances. DDT spraying to eliminate mosquitoes has become a central duty along with stepping up discovery and complete cure of MGC's. With the professional and technical forces and coordinating contributions of the people and cooperatives, DDT spraying has developed comprehensively, expeditiously, in compliance with regulations, in the proper concentration and directed at proper targets. In the 3 years 1978-1980 alone, the entire province has employed for the ME [Malaria Eradicating] task nearly 44 tons of grain, more than 10 tons of gasoline, nearly 40,000 dong and more than 180,000 work days, used more than 420,000 tons of DDT, and protected more than 1.1 million people, including nearly 120,000 persons of 421 industrial, agricultural and forestry installations and enterprises. Many units have worked satisfactorily, such as Bac Quang, Chiem Hoa, Ham Yen, Son Duong, etc.

The treatment task has been entrusted to district malaria prevention and countermeasure units and to the basic medical network. Insecticides have been used more efficiently and sparingly. During the past 5 years, the entire province has treated more than 360,000 persons, including more than 66,000 treated for fever eruption, 77,000 [sic] for relapse, and nearly 290,000 received preventive treatment.

Malaria discovery and testing have achieved much progress, creating conditions for fast diagnosis and prompt action. Basic medical units in a number of localities such as Bac Quang, Yen Son, Chiem Hoa, etc., have actively and regularly discovered the disease. A number of district general dispensaries and hospitals such as those at Bac Quang, Chiem Hoa, Kim Xuyen (Song Duong), etc., have paid attention to doing the task well. Mobile units have actively discovered and treated patients in principle epidemic areas.

Thanks to the aforementioned endeavors, the province-wide malaria situation was more stabilized in the end of 1980 than ever before. The MGC ratio declined from 1.4 per thousand in 1977 to more than .2 per thousand of the population,

nearly that in the years 1970-1975; the number of disease and epidemic clusters declined significantly. The malaria eradicating task has begun to aim at principle epidemic spots, and the DDT spraying has been done selectively. The goal of the struggle is to liquidate disease clusters of more than 10 MGC's, to narrow the germ originating areas in clusters of five to ten MGC's, and to thoroughly liquidate malaria in villages with one to five MGC's. At present, the province MGC ratio is .22 per thousand of the population, and the malaria ratio declined by 24 percent compared to 1980.

The malaria eradicating task is of special importance in this mountain province of more than 13,000 square kilometers, of more than 700 kilometers of border with China, or 22 fraternal minority nationalities having conservative customs and habits, and a regular state of flux in living conditions among areas.... In order to steadily maintain the achievements, the malaria eradicating task needs to be carried out regularly and actively by establishing quarantine areas in the province and in each district. It is necessary to closely coordinate this activity with the implementation of the five task goals of the sector, linking malaria eradicating with managing the people's health, so as to carry out more satisfactorily the task of discovering, treating and managing malaria patients. In 1982, Ha Tuyen is determined to lower the MGC ratio to less than .1 per thousand of the population, to eradicate it as an epidemic, and to struggle to turn Son Duong into a district that really liquidated malaria.

8418  
CSO: 5400/5968

## ONE HUNDRED TWELVE NEW CASES OF RABIES FOR 1ST QUARTER '82

Rome L'UNITA in Italian 10 May 82 p 6

[Article by Armando Giovannini]

[Text] The rabies epidemic, which came into Italy from Austria in 1977 by way of the Krimmel Pass, has gradually continued to spread. In addition to the spread of the epidemic at this first point of contact, it has crossed the borders at five other points: in 1978, via the Coccau Pass into Friuli; in 1980, via another point into Friuli, this time from Yugoslavia; in 1980, into Val Venosta from Austria; in the winter of 1981, coming from Switzerland, it invaded almost all of Valtellina; and, at the same time, coming from Yugoslavia, it penetrated Trieste Province.

The rabies epidemic in Italy spread at the rate of 40 to 50 km per year, and the same rate was experienced in other European countries, if not a greater rate, because of our deep Alpine valleys whereby, at the end of last year, the infection showed up in 32 communes of 6 provinces (Bolzano, Udine, Trieste, Belluno, Sondrio and Brescia). In the first quarter of 1982, reports came in of 112 cases of rabies in wild animals distributed over 45 Italian communes: Naturno, Senales, Castelbello, Sluderno, Tubre, Parcines, Laces, Silandro, Malles and Curon in Bolzano Province; Grimacco, Pulfero, Savogna, Forni Avoltri, San Leonardo, San Pietro Natisone, Rigolato, Stregno, Cividale and Zuglio in Udine Province; Duberdo, Farra d'Isonzo, Gorizia, San Floriano Collio, Savagna Isonzo and Gradisca Isonzo in Gorizia Province; Duino in Trieste Province; Vigo Cadore and Lorenzago in Belluno Province; Piuro, Valfurva, Valdisotto, Chiuro, Villa Tirano, Sondalo, Villa Chiavenna, Teglio, Valdidentro, Tirano and Chiavenna in Sondrio Province; and Sonico, Vezza d'Oglio, Edolo, Ponte di Legno and Corteno Golgi in Brescia Province. Of these communes, 13 were stricken for the first time in this quarter, just as, for the first time, the epidemic was reported in Gorizia Province.

The disease was reported in 112 wild animals belonging to 4 different species: 98 wolves, 12 badgers, 1 marten and 1 deer.

This is the biggest territorial spread of the epidemic ever reached, whereas the variation in the number of animals stricken (equal to that of last fall and 33 head greater than the number reported in the last quarter of 1981) reflects normal seasonal variations in the epidemiology of rabies.

To study the spread of the infection, wolves are being monitored in the infested areas (Trentino-Alto Adige, Friuli-Venezia Giulia, Veneto and Lombardy), in the Piedmont region and in Valle d'Aosta. The Emilia-Romagna and Tuscany regions, within the framework of specific regional laws, have also recently begun to monitor the wolves.

8568

CSO: 5400/2146

MEXICO CITY RABIES STATISTICS

Mexico City EL DIA in Spanish 19 Apr 82 'metropoli' supplement p 11

[Excerpt] During 1981, in the metropolitan area of Mexico City, seven rabies deaths were recorded and about 23,000 people were inoculated. The over-all dog to human ratio during 1979 was 1 in 6 in the capital city of the republic.

The foregoing forms part of a study undertaken by researchers from the Faculty of Veterinary and Zootechnical Medicine [FMV&Z] of the National Autonomous University of Mexico, and from data from the Ministry of Health and Assistance.

The specialists warned that insofar as it refers to the cited ratio, this is not applicable to most of the municipalities and/or towns, given that the ratio is influenced by population density and other factors in which the ratio undergoes fluctuations which range from 1 to 1 to 1 to 10.

Dr Jorge Cardenas Lara, chief of the Department of Preventive Medicine, and Aline S. Aluja, chief of the Department of Pathology of the FMV&Z estimated that the canine population without leashes in the city's streets is not the responsibility of health or educational authorities, but of all the municipal population.

He said that about 17.56 percent (438,479) of the total canine population is found most of the day on city streets, and 61.74 percent of the total lack leashes when they go out into the street, which represents 1,699,886 animals of the total estimated canine population that have access to the streets without leashes.

In the meantime, antirabies immunization up to 1979 reached only 30 percent of the total canine population, a situation which favors the perpetuation of the rabies problem among these animals.

9678

CSO: 5400/2151

MEXICO

BRIEF

ACAPULCO ANTI-RABIES CAMPAIGN--Acapulco, Gro., 25 April--The Ministry of Health and Welfare [SSA] will intensify its antirabies vaccination campaign in order to prevent the proliferation of the malady in this city. It is estimated that about 26,000 dogs will be vaccinated. The director of the Health Center of the SSA in this port, Doctor Luis Reyes Ceballos, said that from 15 to 20 persons are bitten daily in this city, and that 1 out of every 10 of them shows symptoms of having been bitten by a rabid dog. He added that this city is thought to have the greatest number of dogs in the country and that a campaign to hunt down rabid dogs will also be started. [Text] [Mexico City EXCELSIOR in Spanish 26 Apr 82 p 35-A] 8255

CSO: 5400/2157

## GRAIN PEST: POSES THREAT TO HARVEST

Prague RUDE PRAVO in Czech 5 May 82 p 4

[Article by Dr Vaclav Skuhavy, CSc., of the Entomology Institute of the Czechoslovak Academy of Sciences: "New Grain Pest. Repeated Incidence of Saddle Midges"]

[Text] Starting in late 1981 RUDE PRAVO has been publishing a series of articles on the importance of factors affecting yields of cereal crops, for example use of improved varieties, the effect on yield of crop rotation, the importance of proper soil care, the significance of organic fertilizers, etc.

Various pests and diseases also affect yields negatively. Last year in several regions of Czechoslovakia there was a severe incidence of saddle midges [*Haplodiplosis equestris*], an insect pest which gave the farmers a great deal of trouble. We will have to reckon with it again this year.

In Europe, until 1956, the saddle midge was found mainly on wheat grass, and while it was also found on cereal crops it was not to be considered a very dangerous species of insect. It first occurred as a serious pest in 1956 in grain-growing regions of northern Yugoslavia and since that time, with an increase in intensity of grain growing, it has caused considerable damage in Austria, Holland, Belgium, Denmark, the GDR, England and Sweden.

In Czechoslovakia, before 1971, it was found in 39 places mainly, as before, on wheat grass. The year 1971 may be taken as the year of the first notably damaging incidence in Czechoslovakia. It appeared in large numbers in several fields south of Prostějov in Hana. In the following year it was listed as a harmful factor on maps drawn up by the Central Institute for Agricultural Inspection and Testing. It turned out that it had spread not only within the Hana region [of Moravia] but also in eastern Bohemia and in Slovakia. Data collected from 1972 through 1981 indicate three periods when it occurred to an appreciable extent: the period 1972-1973, the year 1975, and finally the period 1978-1981.

Last year, in particular, because of late development of the grain in regions with low levels of springtime precipitation this species caused significant damage over an extensive territory. the centers of damage were, and will be

this year as well, in central, northeastern and southeastern Moravia, in central and northeastern Bohemia, and in Slovakia in the districts of Martin, Zilina, Povazska Bystrica and Prievidza.

Decline in yields on almost 20,000 hectares have shown that we are dealing with a pest which demands our attention throughout all of our territory.

The saddle midge is a small midge whose larvae develop on the stalks of wheat and barley and occasionally certain varieties of rye. It winters in the soil, where it forms a chrysalis. In late May and early June, depending on temperature conditions, these [cocoon] hatch into adult insects, which lay eggs on the leaves. These eggs hatch into larvae, which create a kind of disfigured little saddles on the stalks. These formations/constructions have given the insect the descriptive name "saddle" in most European languages. When a large number of "saddles" are formed the supply of nutrients to the ears is interrupted and in the case of a very severe incidence the stalks actually break under their weight.

What is the reason for the appearance of the new pest? In a sample region chosen for the study of this species, an area near Prostejov, we were able to confirm by our own observations the data of foreign authors, [who state] that this species becomes significant where there is no crop rotation within the framework of the sowing process. In 120 control fields barley and wheat were attacked only 11 percent of the time when sown after other crops, while in the second year of sowing the same grain crop consecutively this figure was more than 30 percent and in the third [year] over 65 percent. In 1981 workers of many unified agricultural cooperatives and state farms were able to verify this fact for themselves.

Under the guidance of workers of the Entomology Institute of the Czechoslovak Academy of Sciences, a list of recommendations was drawn up with the aim of minimizing losses due to this pest. It concerns equally agricultural methods which inhibit the growth of the saddle midge, the control of its hatching, and the use of insecticides to exterminate it.

The consecutive planting of grain crops should be limited, in areas of extremely severe incidences oats, on which the saddle midge does lay eggs but on which the larvae do not develop, should be used as a crop, or, where appropriate, certain varieties of rye should be planted. One should plant winter rather than spring wheat, and sow Vala, Kosutka, and Odra varieties, which are less susceptible than others. In endangered areas one should limit the growing of wheat and barley on private plots, which are reservoirs for the saddle midge, eradicate wheat grass in fields, since this is the original food plant of the saddle midge, and ensure frequent mowing of field boundaries and ditches where wheat grass grows. Chemical warfare is based on the use of several insecticides during the period after hatching of the adults, a short period of 3 to 7 days after the carefully conducted control of hatching of the insect from the soil (late May to early June).

It is essential to consider the occurrence and the significance of the saddle midge within the wider context of agriculture problems in general.

As agricultural production becomes concentrated and specialized we must keep in mind the dangers associated with this. If grain crops are sown in succession it follows, according to the rules pertaining to pests and diseases, that we are creating favorable conditions for their spread and growth. This is true for the concentrated growing of rapeseed and other crops. We can of course wage chemical warfare against harmful factors, but this sets up a vicious cycle, where one poor shot calls for further ones. The more unstable the natural systems and the lower the diversity of species in the whole area, the more vulnerable such systems are, requiring the addition of substantially larger amounts of additional energy, in the form of fertilizers, machine labor and mechanization.

We should therefore welcome the fact that there is currently a move towards limiting the concentration of crops to a profitable level. This decrease is motivated primarily by economic factors (for example the distribution of potatoes or vegetables from selected districts to other districts or counties at great distances): one should not, however, forget that there are above all ecological reasons.

There has been a decline in the number of centrally issued directives. This makes it possible for workers of agricultural establishments to increase the diversity of crops and varieties grown. Also concerned is a moderate increase in the acreage devoted to oats, especially in areas situated more than 400 meters above sea level. Oats are important not only as an irreplaceable component in feed mixes for young animals but also as a natural exterminator of the saddle midge. The latter does lay eggs on it, as was already mentioned, but more than 90 percent of the larvae hatching from these eggs die.

Agriculture, especially the growing of crop plants, is a complex and sensitive biological system, the success of which is determined by a large number of factors. These factors must be considered as a whole. It would be a mistake to overestimate the effect of only some of them and on the other hand to underestimate the others. A successful agriculturalist has [always] been and must be not only an economist but also an ecologist.

9832

CSO: 5400/3005

## WEST GERMANY PROVIDES AID IN BATTLE AGAINST GRASSHOPPERS

Tananarive MADAGASCAR-MATIN in French 9 Apr 82 pp 1-2

[Text] Once again German-Malagasy cooperation holds center stage. Eight months after the big "council of war" held in Ambatomena by all those responsible for the anti-acridian campaign on the island--a meeting at the end of which it was publicly announced that the danger presented by these small insects equipped with two threadlike antennae and commonly called grasshoppers by the entire agricultural sector is increasingly alarming and that the means available to the Ministry of Local Administration [tutelle] far from meet the needs--the FRG has not remained insensitive to this "SOS."

A large shipment of equipment for the anti-acridian campaign was unloaded yesterday from an Air Madagascar Boeing 747. Several hours later, the equipment was officially turned over to Rabe Raphael, secretary general in the Ministry of Agricultural Production and Agrarian Reform [as published; MDRRA], by Mr Von Stechow, first counselor of the FRG embassy in Tananarive.

Rabe Raphael described the current invasion of grasshoppers over a total area of 1 million hectares as unequivocally "a national scourge." The FRG's contribution to this "battle," which comes to us after a "very brief delay," was stressed by the secretary general, as was the "quality and quantity" of this cooperation. In this connection, he refused--because it would have taken too long--to cite other activities of his ministry that are receiving assistance from the FRG. As an example, however, he spoke of the widely known operation FIFABE [expansion unknown] in the Mahajanga Faritany, which, if all goes well, will make that region into another "Malagasy rice granary"; operation "Port Berge," which is going to be started shortly (integral development) [as published]; and the road construction work that also concerns his ministry because it facilitates the shipment of agricultural products.

The absence of communication channels is a significant deterrent to regional development.

This West German gift consists of 5 tons of pesticide products (including insecticides for grasshoppers!), 20 Honda Cross 185 cm<sup>3</sup> motorcycles with

spare parts and 70 superlight, motor-driven sprayers. The total shipment is worth 59 million Malagasy francs. Moreover, a West German expert in anti-acridian matters is expected in Madagascar in the near future. And a sum of about 400,000 Malagasy francs for the maintenance of these materials will complement the aid figure.

Von Stechow, first counselor of the FRG embassy, who represented the Bonn government at this small ceremony accompanied by his colleague, Rolf Herden, in his own way also emphasized the danger to the Malagasy economy represented by the resurgence of grasshoppers in cultivated areas. He spoke of the FRG's cooperative solidarity with Madagascar. One example among others: yesterday's gift, which will be of great utility to us but which is far from meeting our needs.

The situation is now becoming increasingly alarming. The whole country is threatened by grasshoppers except for the eastern region, which is basically forested and climatically unfavorable to the return of these small insects. The "council of war" in Ambatobe reported that 250,000 to 300,000 hectares of cultivated land require "serious treatment with anti-acridian products." MDRRA supplies at that time and even today of such products are inadequate to meet the needs of 70,000 hectares. Thanks to this West German aid, we will now be able to meet our most pressing needs.

President Didier Ratsiraka personally and Prime Minister Desire Rakotoarijaona are closely following developments in this sector. The "endangered areas" include the Ejeda-Ankaraobato-Ambovombe-Ihosy-Morondava region. The areas of Ambatondrazka, Tsiroanomandidy, Imerintsiatoskia, Antsirabe, Fianarantsoa, Vohemar and Antsiranana are also involved.

8143

CSO: 5400/5953

## RETHINKING OF MEALYBUG CONTROL MEASURES URGED

Lagos DAILY TIMES in English 12 May 82 p 21

[Text] **T**HERE is the recent story of a man who had been suffering from an incurable skin disease that resembles **craw-craw**. After trying out all sorts of self-medication without success he decided, at last, to seek medical attention.

The first doctor, after looking at the ugly skin eruptions asked: "Hmmm! My friend, for how long have you got this diseases?" "Since the dry season of 1979, sir" came the prompt reply.

"I have a medicine for your sickness which should be rubbed all over your body. My friend, when rubbing this medicine tie a cloth over your nose and your mouth so as to keep off the poisonous vapour. After five minutes, wash it off. A drop of the medicine in drinking water can wipe out your entire village".

The patient got disillusioned. "This doctor's medicine is more dangerous than the **craw-craw**" he murmured. He then threw away the medicine and proceeded to the next doctor. The doctor, after contemplating the deplorable morale of his patient warmed up at last:

"My friend, I can cure you of this **craw-craw**. There is a new method which I have discovered recently which is to introduce a parasite of **craw-craw**. I can introduce a germ which feeds on **craw-craw**. This is called biological control.

But the danger is that after eating all the **craw-craw**, this germ could multiply very fast and may begin to attack even the cells of the body. I say, may" "Give it to me", yelled the patient. "Let me be free from this disgraceful **craw-craw**".

That patient in this story is the Nigerian farmer whose cassava harvest is menaced by mealybug and its "running mate" the green spider mite. The first doctor is the Ministry of Agriculture and Extension Services; the second doctor is the Ministry of Science and Technology.

Every now and again we hear news that new pesticides have been discovered against mealybug. The next dry season we see the mealybug very active in the countryside, torturing cassava foliage, squeezing their foliage, amputating the shoots and laying stems to waste.

As a result of this attack, the harvested tubers simply look like drumsticks!

Now that the National Assembly has voted an enormous sum for mealybug eradication, it is about the right time now that we assess the effectiveness of our pest eradication measures.

### Chemicals

The ministries of agriculture and extension services all over the federation distributed the following plant protection chemicals to farmers in the fight against mealybug. Undane E 20 Folithion, Rogor and Demecon. How do these unsophisticated farmers use them? Open your ears wide and hear news reports.

In Anambra State last May, five villagers died because they ate vegetables which had been ignorantly sprayed with these dangerous chemicals. Since this disaster, pregnant women have refused to eat leafy vegetables and fruits for fear that they might have been contaminated with insecticides.

In our multiple cropping system you soon discover that the farmer

who is spraying against mealybug is also spraying on yams, vegetables, cocoyams, okro and melon at the same time. Spraying against mealybug seems to be more suitable for extensive mono-crop plantations.

The carelessness of our untutored villagers contributes a lot to deaths. In one case, at Awka, a youth drank with a cup which had been used for mixing the dipping insecticide. The water had not gone beyond his throat when he noted the strange taste and expelled the water. All the same he spent a month in hospital.

## BRIEFS

PROGRESS SEEN IN BARK-BEETLE FIGHT--"If the forest owners continue the fight, it will be possible to get rid of the bark beetles this year. All beetle traps must be put in place as soon as possible. Forest owners who neglect this can suffer a big setback," warned Director of Forests Hans Kr. Seip of the Ministry of Agriculture. Beetle traps must be placed on all stump flats which have been cut in the last two years. Moreover, the cutting of newly attacked trees must be given priority this summer. This is an effective control method. New emphasis will be given to the campaign of "searching out and cutting" of newly attacked timber. The Ministry of Agriculture has 15 million kroner at its disposal for this purpose. Even though damage from bark beetles was significantly less in 1981 than in 1980, there are still many bark beetles in Ostland [the region east of Oslo] and in eastern parts of Sorland Province. [Text] [Oslo AFTENPOSTEN in Norwegian 1 Jun 82 p 3]

CSO: 5400/2163

AERIAL SPRAYING OF GRAIN EATING BIRDS

Dar es Salaam DAILY NEWS in English 8 May 82 p 1

[Text]

**TABORA:** Aerial spraying of the grain eating *Quelea* *Quelea* has started in Igunga District here where the birds have wreaked havoc on this season's grain crop.

An official of the Igunga District Development Directorate told *Shihata* in Tabora that a helicopter had been dispatched after a survey team from the Bird Control Unit at Manyoni ascertained the spread of the birds into the district.

The birds were spotted in Igunga two months ago but were later reported to have spread to neighbouring districts of Nzega and Tabora where they attacked paddy and millet farms.

CSO: 5400/5998

STRUGGLE TO PROTECT WINTER-SPRING RICE CROP VIEWED

In Thai Binh, Thanh Hoa

Hanoi NHAN DAN in Vietnamese 15 Apr 82 p 1

[VNA Release: "Thai Binh and Thanh Hoa Have Concentrated on Taking Care of Fifth-Month Spring Rice, Preventing and Eradicating Disease and Insect Damages"]

[Text] The fifth-month spring rice crop in Thai Binh has developed satisfactorily, but about 10,000 hectares of the rice have been damaged by diseases and insects, of which more than 4,000 hectares have suffered from blast. In areas with blast, vegetation protection units and cooperative members have sprayed epidemic clusters and have thoroughly drained water where feasible to fertilize rice plants with powdered lime and ashes along with puddling. The districts have identified blast originating spots and held field meetings of vegetation protection directors, unit leaders and cadres to unify actions on preventing and eradicating disease and insect damages.

Experienced cadres selected by the provincial agriculture service together with vegetation protection stations have come to blast areas to guide prevention and eradication. The Agricultural Supply Corporation has sent from 3 to 4 tons of kitazin to each district and tens of motor sprayers to areas of disease and insect damages.

Implementing product contracts, sectors serving agriculture and collective farmers in Thanh Hoa province have emulated in caring for, fertilizing, and protecting the fifth-month spring rice crop so as to reach an average yield of 24.5 quintals per hectare. Up to 10 April, the cooperatives weeded and applied fertilizers twice to the entire area of fifth-month spring rice and applied fertilizer three times to 50 percent of the area. Seventh percent of the rice crop area in Tho Xuan, Hoang Hoa, Trung Son and Hau Loc districts was weeded three times.

The water conservancy sector has secured irrigation for more than 80 percent of the rice area. The Song Chu and Bac Song Ma Irrigation corporations implementing contracts to water regularly, have flushed 50 to 65 percent of the area from acidity and salt for the new rice cultivation. The entire province has applied an additional average 3 tons of organic fertilizer per hectare, thus bringing the average amount of fertilizer used to 9.4 tons per hectare

since the beginning of the crop season. Nearly 20,000 hectares of intensive cultivation rice in key rice areas of the province have received from 10 to 12 tons of animal manure and from 200 to 300 kilograms of nitrogenous fertilizer per hectare.

Due to prolonged humid weather, blast has appeared in many localities. Thanks to early discovery and to the chemicals available, in the last 15 days of March vegetation protection cells sprayed two or three times, thus rescuing 3,000 hectares of rice plants seriously affected by blast damage. The entire province has enough fuel in reserve to operate pumps, has equipped farmers with more than 400 additional hand-operated spray tanks and has sent a quantity of insecticides to each cooperative to actively prevent and exterminate leafhoppers and various insects and diseases damaging rice plants near the end of the farming season.

#### Battling Pests

Hanoi QUAN DOI NHAN DAN in Vietnamese 16 Apr 82 pp 1, 4

["Localities Throughout the Country Are Strengthening Inspection, Prevention and Elimination of Insects and Diseases, Taking Good Care of Fifth-Month-Spring Rice Crop"]

[Text] Hai Phong--More than 4,000 hectares of rice are being damaged by insects and diseases (essentially stem borers, leaf rollers, blast, etc.); this is about 10 percent of the entire crop area. The infestations are tending to spread rapidly.

Along with providing additional sprayers and supplying additional insecticides to vegetation protection cells and units, the districts have directed the cooperatives in guiding cooperative members' families to coordinate the use of various herbal insecticides.

The six suburban districts of Hai Phong have established one main insecticide spraying unit in each district, which stands ready to support the cooperatives that are seriously infested by insects and diseases and to try to eradicate clusters of insects and diseases upon discovery.

Vegetation protection stations of coastal districts have provided guidance to cooperative members' families on farm sanitation, rational water management, and keeping ricefields from being acid or salty, which is a favorable condition for insects and diseases to develop and harm the salt tolerant rice varieties that have been recently introduced for large-scale sowing and transplanting in this locality.

Bac Thai--In the northern area of the province many clusters of leaf folders have appeared while the central and southern areas have had rice mealy bugs, brown planthoppers, stem borers, silver-leaf disease, and even blast. The localities have mobilized the people to combine the use of chemicals with that of popular prescriptions, and to use combs to comb insects off; to organize insect hunts and the hunting of butterflies of stem borers and leaf rollers

with lighted traps, and to use poisons and poisonous leaves to kill rats and rice mealy bugs. The province has also supplied the cooperatives with additional insecticides, including hopper exterminating poisons, and inspected and repaired more than 500 chemical sprayers. Many insect and disease preventing and eradicating cells of cooperatives in Phu Binh and Dai Tu districts and in Thai Nguyen city have worked efficiently. The province has also reinforced its insect and disease preventing and eradicating unit and is preparing to establish additional vegetation prevention stations in Phu Binh and Bach Thong districts.

The districts have sent technical cadres to cooperatives to guide cooperative members in mixing chemicals to insure proper amount of chemicals per area unit, heighten chemical efficiency, and avoid waste.

Hanoi--Hundreds of cooperatives in Gia Lam, Dan Phuong, Phuc Tho, Ba Vi, Dong Anh and Hoai Duc districts have produced from 1,000 to 2,000 additional tons of manure to fertilize rice plants when they are in boot. In this fifth-month spring crop season, the Hanoi Agriculture Service has made a timely shipment of 7,000 tons of nitrogenous fertilizers, the highest amount ever, to cooperatives; Hanoi is weeding nearly 10,000 hectares of rice for the third time.

Brown planthoppers have appeared in a number of ricefields in the suburban areas of Hanoi with an average of four to five hoppers per square meter. In order to satisfactorily prevent and eradicate the insects that damage rice plants, along with sending more than 110 tons of insecticides of various kinds to the districts, Hanoi has opened training courses to teach cooperative core cadres and vegetation protection units how to prevent and eradicate insects and has simultaneously directed the coordination of the State, the cooperatives and cooperative members to unite in preventing and eradicating rice damaging insects and diseases.

Gia Lai-Cong Tum--Farmers in Gia Lai-Cong Tum Province are concentrating on taking care of ricefields, applying fertilizers and protecting rice plants at the end of the crop season. By the end of March nearly 5,000 hectares had received fertilizers for rice plants in boot and, in general, rice plants have grown satisfactorily with few insects and diseases.

Production installations in the province are reinspecting the whole area and are applying fertilizers in time so as to bring uniform development to the rice plants. Nearly 1,000 agricultural production collecting and cooperatives have provided additional workers for vegetation protection cells and units along with strengthening and consolidating agricultural irrigation development and management cells and teams, repairing drainage pipes and ditches in time to avoid leakage, and maintaining reserve water to prevent drought, especially when rice plants are in boot and bloom.

Ha Tuyen--In the first 10 days of April, cooperatives in rice areas of Son Dong, Yen Son, Ham Yen, Chiem Hoa, Na Hang and Bac Quang districts and of Tuyen Quang city weeded and applied additional fertilizers to nearly 10,000 hectares of fifth-month spring rice, including thousands of hectares of hopper resistant to be used for seed rice and have been weeded and fertilized two or three times. A number of ricefields infected with leaf yellows have been taken good care of by contractors and have turned green again.

Cooperatives in the province have also prepared more than 12,000 tons of manure, tens of tons of powdered lime, nitrogenous and phosphoric fertilizers and insecticides, hundreds of sprayers, etc. to protect flat and terraced ricefields until harvest.

#### Southern Provinces

Hanoi NHAN DAN in Vietnamese 18 Apr 82 pp 1, 4

[VNA News Release: "Prevent and Fight Blast To Protect Rice Crops in the Southern Provinces"]

[Text] In recent years a number of dangerous, main diseases and insects have tended to develop vigorously, regularly causing serious, widescale or localized damage in a number of winter-spring and summer-autumn rice areas of the South. Besides harmful insects such as brown planthoppers, stem borers and leaf rollers, and diseases such as silver-leaf disease and dry stripes, by the winter-spring 1981-82 season blast appeared suddenly and developed very strongly, causing serious local damages throughout the provinces. At its peak, blast damages more than 50,000 hectares, especially in Tien Giang, An Giang, Dong Thap, Ben Tre, Cuu Long, Lam Dong, Phu Khanh and Nghia Binh provinces. The reason is that the widely used short-term main high yield rice species such as NN3A, NN8A, and NN7A, have the common characteristic of resisting brown planthoppers but are contaminated by blast. Because the disease germ is already in the species and because they are constantly moved from one spot to another, from one rice crop season to another, and from one rice bed to another, on encountering favorable conditions the disease will develop causing damage to the rice. Errors and shortcomings in farming will create favorable conditions for the appearance of the disease, thus harming rice plants. They are: sowing and transplanting too late, applying nitrogenous fertilizers in unbalanced proportions with other fertilizers and more than 30 days after transplantations or 40 days after sowing or over fertilizing so as to feed boot and seed when rice plants are growing or applying excessive nitrogenous fertilizers to dry fields, etc.

Second to brown planthoppers, blast is the most dangerous target to aim at for vigorous eradication along with paying attention to preventing and fighting other insects and diseases that damage rice plants, thus protecting the summer-autumn and winter-spring rice crops.

The Ministry of Agriculture requires that agricultural services satisfactorily carry out the following systematic, comprehensive preventive and eradicating measures against blast:

--Widely use the appropriate blast resistant rice varieties selected by the ministry to replace those infected varieties; it is necessary to use them immediately in the 1982 summer-autumn and winter-spring crop production so as to decrease expenses and achieve quick results. For the summer-autumn crop production where there are not enough of the disease resistant rice varieties for the replacement, it is necessary to select the old varieties which are less prone to being infected, such as NN3A and NN8A as the main seed varieties. Areas with little disease can partly use variety NN6A. We must try to limit

the use of variety NN7A to a minimum for it is seriously disease prone. Use variety NN3A as main seeds on sites of high ricefields, dry broadcast ricefields and terraced ricefields for broadcasting and transplanting at the earliest time in the crop season. Variety NN8A must be used as the main variety on moderately marshy, low sites and can be planted later in the season, thus avoiding water logging near the end of the season. Variety NN6A is most appropriate for the summer-autumn season, but due to its being seriously susceptible to being infected, it is to be used only in areas of fluvial alluvial soil. In areas of less infection, it is necessary to satisfactorily prevent and eradicate the disease, advancing toward introducing disease resistant varieties.

The provinces must consider varieties of great promise such as IR-13240-10-1, IR-13240-53-6, and IR-9129-162-3-2-2 which are resistant to blast and brown planthoppers, and to reach high yield.

--Along with seed use, it is necessary to comprehensively apply other preventive and eradicating measures that are appropriate to the characteristics of each locality. Each locality needs to base itself on the characteristics of the aforementioned rice varieties to determine the optimal sowing and transplanting schedule for each rice variety on both large- and small-scale sites.

--Following each harvest, it is necessary to satisfactorily organize the cleaning up of ricefields, paths, and rice beds, and coordinate dryland plowing with land drying, eradicating disease germs, and weeding.

--It is necessary to closely guide the application of various kinds of fertilizers with proper proportions and in time so as to prevent diseases and reach high yield.

--Treat rice seeds bearing disease germs with hot water of 50°C (three parts boiling water mixed with two parts cold water) or with chemicals under guidance by vegetation protection cadres.

--The density of the sowing and transplanting must be reasonable and suitable for intensive farming, for disease prevention and eradicating, and for weeding.

--There must always be water in ricefields. Seed sowing in areas with frequent drought at the beginning of crop seasons on dry-land and terraced rice areas must be carried out when proper humidity is available.

When blast has developed into epidemic, it is necessary to scrupulously carry out the following regulations:

--Do not apply nitrogenous and potash fertilizers to rice plants at any time, do not drain water from ricefields and do not let ricefields dry up. Early in the morning when there is stagnant dew on rice leaves and stems, it is necessary to draw strings taut to jerk dew off onto the soil, keeping them dry. Do not weed and puddle. Return to normal care only after complete recovery from disease.

--Use from 1.5 to 2 liters of kitazin liquid diluted with water to be sprayed uniformly on each hectare; after 5 or 7 days respray or use 20 kilograms of kitizin powder per hectare.

In order to satisfactorily carry out the preventive and eradicating task against blast in the 1982 summer-autumn, it is necessary to do the following immediately:

--Control the quantity of rice varieties that are less contaminated, such as varieties NN3A and NN8A, available in installations so as to settle imbalances between localities of surplus and shortage.

--Each province and district must immediately recapitulate its recent experience in preventing and struggling against blast, incorporate scientific and technological advances, and set up a system of concrete preventive and eradicating methods for each locality.

--From central to regional echelons it is necessary to establish comprehensive, long- and short-term plans on preventing and struggling against blast, the key point of which being to identify seeds meeting the three standards of resistance to blast, resistance to brown planthoppers, and high, stabilized yields.

--Strengthen guidance over the system of vegetation protection stations and farms so as to satisfactorily carry out the estimating and forecasting task.

#### Insect, Disease Elimination

Hanoi NHAN DAN in Vietnamese 20 Apr 82 p 2

[Article: "Prevent and Eliminate Insects and Diseases Damaging Winter-Spring Rice Crop"]

[Text] In recent months the weather in the north was cloudy with high humidity (the average temperature was below 20°C, and the humidity was 85 percent), thus leading to the development of several varieties of insects and diseases, of which blast was most noticeable, that have damaged the winter-spring rice.

Provinces having several areas with insects and diseases have been Thanh Hoa, Ha Nam Ninh, Binh Tri Thien, and Thai Binh. It is necessary to expeditiously inspect ricefields, categorize areas of rice damaged by insects and diseases, especially those ricefields with blast, and apply eradication measures in time. According to estimates by the Vegetation Protection Department, the blast area in this season may be nearly 100,000 hectares because of unbalanced application of nitrogenous fertilizers and of a too thick sowing and transplanting. About 50 to 60 percent of this area is to receive preventive and eradication measures.

Be attentive to the development of blast when rice is maturing rapidly particularly when the rice is heading which is when the disease causes its greatest damage.

Pay attention to preventing and eliminating brown planthoppers on early transplanted rice plants because although there are not many of these planthoppers, they can develop rapidly and cause harm in the coming months when there will be thunderstorms with intervening rain and sunshine.

Vegetation protection forces must have chemicals, pumps, fuel oil, diesel and kerosene available so as to eliminate brown planthoppers in time. Cooperatives in coastal and intensive cultivation areas must pay attention to rice leaf folders that harm MN8 and MN75-10 rice from mid-April on. It is necessary to take preventive measures against stem borers that harm late spring rice crop areas and against rice bugs on hilly lands. Along with preventing and eliminating insects and diseases that damage winter-spring rice crop, the localities need to have appropriate preventive and eliminating measures against the insects and diseases that damage soy, corn, jute, sugar cane, etc.

Build, consolidate and perfect the vegetation protection network at the district and cooperative levels. Try to see to it that from 60 to 70 percent of the districts have vegetation protection stations. Signing economic contracts with districts and cooperatives to prevent and eliminate insects and diseases is a way for vegetation protection stations to fulfill and heighten the production responsibility of those who are in science and technology.

Vegetation protection cells and units must inspect ricefields regularly, discover the development status of insects and diseases on every ricefield, and coordinate uses of chemicals and herbal insecticides. They must closely manage insecticides and have measures to use them very efficiently. Use insecticides with focus on the "four rights" (right chemicals, right time, right place, and right techniques), insuring safety to humans and domestic animals and high yields to crops.

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CSO: 5400/5968

END