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# Worldwide Report

EPIDEMIOLOGY

No. 339

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## WORLDWIDE REPORT

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### CONTENTS

#### WORLDWIDE AFFAIRS

- Conference Airs Role of Firms in Third-World Medicine  
Abuses  
(AFTENPOSTEN, 11 Oct 83, 13 Aug 83)..... 1
- Damage to Central Nervous System, by Trine Hay  
Malaysian, Nigerian Delegates Tell Concern,  
by Peter Beck

#### HUMAN DISEASES

##### AUSTRALIA

- Fourth, Fifth Cases of AIDS Found in Victoria; One Dies  
(THE AGE, 27 Sep 83, 1 Oct 83)..... 4
- Death of Fourth Victim  
New Case, by Mark Metherell

##### CZECHOSLOVAKIA

- Immunization Drive Against Tetanus  
(Dana Zuskova Interview; RUDE PRAVO, 8 Oct 83)..... 6

##### INDIA

- Health Bureau Sees Significant Fall in Cholera  
(PATRIOT, 12 Oct 83)..... 8

Correspondent Reports Mystery Disease Epidemic (THE HINDU, 15 Oct 83).....	10
Reports on Plagues Outbreak in Himachal Refuted (PATRIOT, 14 Oct 83).....	12
Briefs	
Viral Fever Deaths	13
Polio Deaths Reported	13
Encephalitis Epidemic	13
INDONESIA	
Briefs	
Jambi Town Declared Rabies-Infected Area	14
LIBERIA	
Briefs	
New Leprosy Cases	15
MALAYSIA	
Briefs	
Dengue Outbreak at University	16
Typhoid Reported in Malacca	16
NAMIBIA	
Health Director Announces Five Plague Deaths (Peter Honey; THE STAR, 4 Oct 83).....	17
NEW ZEALAND	
Briefs	
Meningitis on Increase	19
NICARAGUA	
MINSA Combats Malnutrition, Infectious Diseases (EL NUEVO DIARIO, 11 Oct 83).....	20
Matagalpa Hospital Approaches Completion (Juan Chow; BARRICADA, 1 Oct 83).....	22
PEOPLE'S REPUBLIC OF CHINA	
Li Desheng Appointed Head of Endemic Disease Group (XINHUA, 7 Nov 83).....	24
Endemic Disease Group	
Li Chairs Meeting on Diseases	

Changes in Typhoid Fever in Xian (Wang Nengping; JIEFANGJUN YIXUE ZAZHI [MEDICAL JOURNAL OF CHINESE PEOPLE'S LIBERATION ARMY], No 3, 1983).....	26
SOUTH AFRICA	
Rabies Death Troubles Veterinarians in Natal (THE CITIZEN, 4 Nov 83).....	27
Briefs	
TB, Other Statistics	28
Ten Rabies Deaths	28
SPAIN	
Briefs	
Guinean Guest Worker Malaria	29
SWAZILAND	
Briefs	
Diarrhea in Pigg's Peak	30
THAILAND	
Biological Control of Mosquitos Reported (Niphat Taptagaporn; BANGKOK POST, 9 Oct 83).....	31
ANIMAL DISEASES	
ANGOLA	
Briefs	
Rabies Vaccinations in Malange	33
AUSTRALIA	
Briefs	
Vaccine Aid for Java	34
Leptospirosis Threat	34
Fish Disease	34
INDIA	
Indian Army Mules Afflicted by Killer Disease (THE STATESMAN, 18 Oct 83).....	36
Briefs	
Rinderpest in Delhi	38

## INDONESIA

Foot-and-Mouth Disease Spreading (KOMPAS, 24 Sep 83).....	39
Status of Foot-and-Mouth Disease, Anthrax, Rabies Epidemics Detailed (KOMPAS, 4 Oct 83).....	41
Briefs Antianthrax Vaccination Campaign	44

## SOUTH AFRICA

Mystery Disease Kills Pretoria Giraffes (THE CAPE TIMES, 27 Oct 83).....	45
---	----

## ZIMBABWE

Drive Underway To Fence Off Foot-and-Mouth Disease (THE HERALD, 6 Oct 83).....	46
---	----

## PLANT DISEASES AND INSECT PESTS

### BARBADOS

Concern Over Smut Disease Brings Call for Action (BARBADOS ADVOCATE, 10, 11 Oct 83).....	47
Experts' Recommendations Spread of Disease	

### COLOMBIA

Coffee Rust Eradication Effort Begins (Jose Ramon Nunez; EL TIEMPO, 24 Oct 83).....	49
--	----

### INDIA

Punjab Haryana Rice Struck by Bacterial Blight (PATRIOT, 23 Oct 83).....	51
PTI Reports Serious Threat to North India Mango (PATRIOT, 15 Oct 83).....	52

## INDONESIA

Worms Destroy Coffee Plants in Aceh (SURABAYA POST, 1 Oct 83).....	54
---	----

## VIETNAM

Briefs	
Haiphong Rice Pest Control	56
Insect, Rat Problems	56
Insects and Diseases Affect Crops	56
Mekong Delta Insect Infestation	56



CONFERENCE AIRS ROLE OF FIRMS IN THIRD-WORLD MEDICINE ABUSES

Damage to Central Nervous System

Oslo AFTENPOSTEN in Norwegian 11 Oct 83 p 30

[Article by Trine Hay: "Health Director at Drug Conference: Habit-Forming Medicines for Third-World Countries"]

[Text] "The medicine industry is producing far greater amounts of habit-forming substances than is necessary for medical use. Much too little attention has been paid to the sale of such substances from industrialized countries to third-world countries, which through the marketing of such preparations have gotten a new abuse problem," Health Director Torbjørn Mork said at a conference which has been arranged by the International Council on Alcohol and Narcotics (ICCA) in Oslo this week.

A good 200 experts from the entire world are participating in the conference, where several representatives from third-world countries also called attention to the dumping by large medicine producers of medicines to countries with a poorly developed control system.

In his address Mork spoke of the fact that pressure must be put on the medicine industry so that the sale and production of chemical substances which affect the central nervous system are restricted. There are unfortunately no means of ordering that this be restricted to what is necessary for medical and scientific use, Mork emphasized, who believes that it must be an international objective to help third-world countries develop a national control system.

The health director believes that there is also reason to believe that the bigger the production and consumption of habit-forming chemical substances are, the bigger the group of abusers will be, whether the substances are procured in a legal or illegal manner.

The World Health Organization has drawn up a list of over 300 medicines which they believe are necessary and which can form a basis for individual countries when they are to select medicines which are to be approved. Of these 30 are so-called psychoactive and most of them are habit forming.

On the other hand, this list has been strongly criticized by the international medicine industry.

"Up to now we have concentrated our attention much too much on the exportation of opium, cannabis and cocaine from third-world countries but done too little to control the medicine industry's sale of substances like LSD and amphetamines to third-world countries," Mork says.

Both on the part of Nigeria and Malaysia it was emphasized in the debate at the conference that medicine producers in industrialized countries take advantage of the lacking control system in these countries. The desire of industrialized countries to control medicines which are exported to third-world countries was being sought.

Information Chief Jan Hagen of the No-Re-Farm medicine producers' joint organization in Norway reacted to the fact that the health director came out with such general criticism of the medicine industry.

"I will not deny that failures occur and that there is some production of habit-forming medicines which unscrupulous producers want to earn easy money on. But the big established producers cannot be hit with this criticism just like that," Hagen believes, who states that they will now turn to the public in order to convince it that the criticism is not proper.

Mork said in a comment to Hagen that he has no problems with documenting the criticism and referred, for one thing, to WHO's recommendation regarding bringing under international control the group with the so-called benzodiazepines, to which Valium also belongs. This includes several habit-forming chemical substances, but such a move is strongly opposed by the international medicine industry.

A representative from WHO presented a new program against drug abuse, which is to go into effect as of 1984. It was emphasized by several participants in the conference that it is important to have an international system to counteract drug abuse but that it is the political will in individual countries which decides whether the work will be successful.

#### Malaysian, Nigerian Delegates Tell Concern

Oslo AFTENPOSTEN in Norwegian 13 Aug 83 p 64

[Article by Peter Beck: "Dangerous Medicine to Third-World Countries"]

[Text] "Representatives of the medicine industry can say what they want. Medicines which are forbidden in industrialized countries or are strictly regulated, or have become too old to use or lack information regarding side-effects, are spread to many countries in the Third World," says Doctor V. Navaratnam, director of Penang University in Malaysia, to AFTENPOSTEN. Doctor Odeide from Nigeria completely supports this claim. Both are delegates to the International Conference on Narcotics and Alcohol in Oslo.

"It is private people who buy these medicines from agents who have again bought these medicines 'legally' from the West's big medicine firms. While you here in Norway, for example, can only buy medicines on prescription at a pharmacy, people in Nigeria can, practically speaking, go to the open market and buy them. The medicine firms think exclusively of profits; if they really regarded it as an ethical question and a challenge, they could investigate these sales channels and stop them," Doctor A.O. Odejide believes.

Dr. Navaratnam from Malaysia says he has observed this in many Asian and African countries: People use medicines which they know little or nothing about. Medicines are often sold in ordinary food stores and are offered for sale in display windows. A doctor can, for example, have ordered an antibiotic and then people run to the store and buy it cheaper than the doctor can sell it for, without knowing that it is often a question of medicines which for a long time might have been regarded as dangerous to use because of their expiration date.

"No one will make me believe that these medicines do not come from the big medicine giants. For example, can you give me the name of a single third-world country which has its own medicine production of appreciable size? None of them can develop the base products which are required, and although the big countries can wash their hands and say that they do not sell anything to third-world countries which is different from products for industrialized countries, practice has shown that it is only a question of other sales channels," Navaratnam says.

8985

CSO: 5400/2503

AUSTRALIA

FOURTH, FIFTH CASES OF AIDS FOUND IN VICTORIA; ONE DIES

Death of Fourth Victim

Melbourne THE AGE in English 27 Sep 83 p 4

[Text] A fourth suspected case of AIDS has been reported to the Health Commission in Victoria.

The victim is being treated as an outpatient at St Vincent's Hospital.

The Health Minister, Mr Roper, said yesterday another man suspected to have the disease was dying in the intensive care unit at St Vincent's.

Mr Roper yesterday gave details of this and two earlier suspected cases. He said in one of these a man had died in Prince Henry's Hospital earlier this year and in the other the man was being treated privately by a Collins Street specialist.

He said the three of the earlier victims had recently travelled to the United States and had shown progressive development of infections associated with immune deficiency.

"All have occurred in males and of the three cases, two had definite homosexual contacts overseas. In the third case no such contact has been acknowledged," he said.

The man dying at St Vincents had a blood transfusion in the US following a road accident a year ago, Mr Roper said. "There is no evidence to show that transmission of the disease has yet occurred in Australia," Mr Roper said.

[Editor's Note: Perth's THE WEST AUSTRALIAN on 3 October, page 5, reports that the St Vincent's AIDS patient in Victoria, age 30, died. The report notes that he had been admitted with "a rare form of pneumonia" and Kaposi's sarcoma.]

New Case

Melbourne THE AGE in English 1 Oct 83 p 3

[Article by Mark Metherell]

[Text] A fifth case of acquired immune deficiency syndrome, AIDS, has been reported to the Victorian Health Commission.

The man, in his early 40s, was admitted to Prince Henry's Hospital several days ago.

A spokesman for Prince Henry's, Dr Bill Appleton, said yesterday that the man, who was suffering a chest infection, was in a serious but stable condition.

The latest case follows the disclosure of two other AIDS cases in Melbourne earlier this week. A man is critically ill in St Vincent's Hospital and another is being treated privately by a Collins Street specialist.

The first death from AIDS in Australia was of a patient at Prince Henry's Hospital in July.

The disease causes a decline in the body's natural defence against some diseases, including viral infections which the body would normally shrug off.

The Health Commission's deputy director of public health, Dr Graham Rouch, said yesterday that there were Federal moves in train which were likely to clarify the diagnosis of AIDS.

Dr Rouch said that the National Health and Medical Research Council was considering a recommendation which would require doctors to notify the serious AIDS cases and other milder conditions, which involved some weakness in the immune system.

CSO: 5400/7510

IMMUNIZATION DRIVE AGAINST TETANUS

Prague RUDE PRAVO in Czech 8 Oct 83 p 2

[Interview with Dana Zuskova, M.D., chief hygienist of the CSR, by Zdena Stepankova: "Three Questions About Vaccination Against Tetanus--An Avoidable Disease"]

[Text] Toward the end of this year district territorial and enterprise clinics will begin revaccination against tetanus for women born before 1952 and men born before 1947 who have been vaccinated in the special vaccination program in 1973-1975 and not revaccinated since then until 1982 for other reasons. This year has not been selected at random but because an important health program, unique in the world, had been inaugurated in the CSR exactly 10 years ago, at the end of 1973. At that time already it was emphasized that the vaccine makes the organism immune against that disease for a period of 10 years. Now that period has expired. We asked Dana Zuskova, M.D., the CSR chief hygienist, to give us more detailed information.

[Question] Was such a far-reaching program worthwhile? What were its results?

[Answer] It was decisively worthwhile; its results were excellent. Tetanus is a serious infectious disease caused by toxic products of the *Clostridium tetani* bacillus. A person becomes infected if this bacillus enters a wound. The bacillus exists outdoors in the soil and dust where it is deposited in animal excrement and, therefore, people become most frequently infected if their wounds get contaminated with soil or dust. And because the tetanus bacillus produces toxins only in an airless environment, particularly dangerous are small, deep wounds which hardly bleed and with which the injured would not seek a physician, for example, punctures caused by a nail, a rose thorn or a splinter. Tetanus is dangerous because it is fatal in 50 percent of cases.

An anti-tetanus vaccination program has been followed in the CSSR since 1952, when children's vaccination began; it was later expanded to adults working in jobs where they are exposed to risks of infection, and of course, to

vaccination following injury. The vaccination program significantly cut the incidence of tetanus. While 137 cases were reported in the CSR in 1950, from 1960 to 1970 only 80 cases were reported annually, and those mainly in elderly persons. Tetanus in children has been completely eliminated.

In 1973-1975 6,500,000 persons were treated in the special vaccination program and consequently, the incidence of tetanus dropped to less than 10 cases annually. Most of them, however, involved citizens who had never been vaccinated or who were insufficiently vaccinated and, again, mostly elderly persons contracted the disease. Nevertheless, mortality in this disease still remains at the 50 percent level.

[Question] We think that we need no more arguments. How will the program be organized? Is revaccination compulsory?

[Answer] Revaccination against tetanus is obligatory and it is in everybody's best interest. We are therefore trying to include in this program as many citizens as possible. I have already mentioned the reasons. This time a single injection is sufficient for revaccination; it will be a concern of district territorial and enterprise physicians, and the decisive period will be the expiration of 10 years since the administration of the last, i.e., third, dose of the vaccine. Again, an entry will be made on the person's ID card. I should like to add that our health services will pay special attention to citizens over 50 years of age.

[Question] What procedure will be followed in the SSR?

[Answer] Exactly the same, which means mass revaccination 10 years after the initial vaccination.

[Question] I thank you for the interview.

9004

CSO: 5400/3002

## HEALTH BUREAU SEES SIGNIFICANT FALL IN CHOLERA

New Delhi PATRIOT in English 12 Oct 83 p 5

[Text] The incidence of cholera in the country has registered a significant decrease over the decades making its eradication imminent, according to the Central Bureau of Health Intelligence, reports UNI.

From 200,000 cases every year in the fifties, it has come down to less than 10,000 in the eighties.

More significantly, the mortality rate among the reported cases has decreased dramatically from more than 50 per cent in the fifties to about five per cent in the late seventies and eighties.

As compared to 95,000 deaths reported in 1953, there were 309 in 1980 and 190 in 1981.

The figures covering the last three decades by the bureau was on the occasion of the centenary year of the discovery of the cholera bacteria.

Poor sanitation being the bane of the country, the decrease in the incidence of other water-borne diseases is equally commendable.

According to the bureau's latest report, about seven million cases of typhoid, infective hepatitis, dysentery and gastro-enteritis--diseases spread by insanitary conditions--are reported from hospitals every year, as compared to about three million cases of other communicable diseases.

Every alternate death due to communicable diseases in hospitals is caused by insanitary conditions.

The decrease in the incidence of cholera appears to be due to extensive inoculations--more than 20 million every year.

Similarly, the decrease in the mortality rate among cholera victims is apparently due to the popularisation of a simple oral hydration formulation that can be prepared at home.



Medical authorities say that as the disease is self-limited, adequate hydration and no antibiotics or other medicines are required.

They, however, feel that unless greater attention is paid to the human carriers of the cholera bacteria rather than the carriage of the organisms by water, the eradication of cholera may remain a distant dream.

CSO: 5400/7033

## CORRESPONDENT REPORTS MYSTERY DISEASE EPIDEMIC

Madras THE HINDU in English 15 Oct 83 p 2

[Text] FOR several weeks now, the old Punjab region extending from Delhi to Amritsar is experiencing an "unhealthy" spell with not even those in their eighties and nineties being able to recall anything like it in the area in the past.

Malaria and monsoon have gone hand in hand in this region for quite some time. But the situation at present is complicated by the "import" of a highly infectious virus from Delhi. The mysterious virus makes it difficult for doctors to decide whether to treat the victims for malaria or viral fever. The symptoms are so confusing. In the absence of a proper diagnosis, treatment is naturally hampered.

The epidemic started in August when symptoms including very high temperature, body ache, diarrhoea and rashes were common. The fever lasted five days with or without medication.

But by the end of September, some fatal cases were reported. Some of the victims had to remain bedridden for up to a month. Among those who died was a staff nurse of the prestigious Post Graduate Institute of Medicine. Other big hospitals have also recorded fatal cases.

The local general hospital and civil hospitals in the district and sub-divisional town are flooded with cases. The Chandigarh General Hospital is getting more than 150 cases a day. There is no household in Chandigarh where at least two members of the family have not been laid up. In congested districts like Jullundur and Ludhiana, every third or fourth person has been sapped of vitality by this close cousin of dengue fever.

Himachal Pradesh has escaped the onslaught of the virus which first made its appearance in the Delhi Asian Games village last year. After remaining endemic there, it assumed epidemic proportions in Central Haryana last month.

According to Dr. I. S. Pathak, Director of the PGI, a decline is discernible and by November it may spend itself out. It is his regret that certain doctors have been using antibiotics rather indiscriminately, thereby causing allergies and side effects.

However, Dr. Pathak and his colleagues in the PGI virology department feel that not many people are likely to contract viral fever in 1984 as resistance against it would have been built up by then. They say that in South India and in the Eastern States resistance against such a virus was noticed earlier. But fear lurks in the minds of doctors that the region may be hit by Japanese encephalitis next year as with the ecological changes and the new crop pattern, the area abounds in stagnant pools. Under similar conditions, Uttar Pradesh and Goa witnessed the outbreak of this epidemic which causes high fever and even paralysis.

CSO: 5400/7040

## REPORTS ON PLAGUES OUTBREAK IN HIMACHAL REFUTED

New Delhi PATRIOT in English 14 Oct 83 p 5

[Text]

The National Institute of Communicable Diseases has said that the reported outbreak of plague in Rohru tehsil of Himachal Pradesh is not correct, reports PTI. A team of experts sent by the Union Ministry of Health and Family Welfare to investigate reported deaths due to plague found that one person had died due to food poisoning while 16 others had died due to droplet infection.

A total of 41 sera samples from patients and contact were collected and tested for plague antibodies and found negative. Samples of blood clots lung smears throat swabs and sputum were also tested. Flex specimen from rodents were also collected and tested. Results of all these tests ruled out reappearance of plague.

Various tests done with these samples, including culture, did not show any evidence of plague. Inoculated animals and processed fleas collected from the area did not show any symptom of the disease up to the 14th day after inoculation. Animals inoculated with inoculum of plague bacilli develop illness in 24-50 hours and die in three to four days.

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These investigations had thus, proved that the incidence of deaths in Rohru tehsil was not due to plague. The investigations showed that a woman had died on 20 August due to food poisoning. Subsequent deaths of 16 others who were her relatives or in close contact with her, were due to droplet infection, according to experts of the institute.

Reports of these deaths had caused alarm throughout the country and the last reported case of plague had occurred in the same tehsil of Simla district between 4 December 1968 and 11 December 1966.

Following reports of death between 20 August and 20 September this year, experts from the National Institute of Communicable diseases, Delhi Central Research Institute Kasauli and Medical College, Simla visited Rohru tehsil to carry out investigations.

CSO; 5400/7041

## BRIEFS

VIRAL FEVER DEATHS--JAIPUR, Oct 10 (PTI)--Viral fever has taken a toll of 21 lives in Dasua tehsil in Jaipur district during the last one month, according to state medical and health department sources here today. The situation in and around Dasua is now under control, the sources said adding that a team of medical specialists have been invited from Delhi to identify the virus responsible for the fever. [New Delhi PATRIOT in English 11 Oct 83 p 7]

POLIO DEATHS REPORTED--THANJAVUR, Oct. 13--Twelve out of 78 children, who were admitted to the Thanjavur Government Hospital in the past five weeks, have died of poliomyelitis, according to a press note issued by the Collectorate. The victims, mostly from Orathanadu and Mannargudi taluks, died soon after admission. The other children are progressing. During September, 56 cases were admitted and 11 of them died. In first week of this month, 22 children were admitted and of them one case proved fatal. On instructions from Mr. R. Sathpathy, Collector, special teams of doctors have rushed to villages to find out the cause of the diseases, symptoms of which are high fever and inability to move limbs. He has also instructed hospital authorities to stock life saving drugs for treating all cases. [Madras THE HINDU in English 14 Oct 83 p 12]

ENCEPHALITIS EPIDEMIC--RAXAUL, Oct. 18--Encephalitis has broken out in an epidemic form at Raxaul and other areas of East Champaran district, reports UNI. Thirty-four people, attacked with the disease, were reported to have been admitted to the local Duncan Hospital in the past 10 days. Unconfirmed reports said some people had also died of the disease. The Zilla Parishad vice-chairman, Mr Hari Shankar Yadav, has urged the district administration to take measures on a war footing. [Calcutta THE STATESMAN in English 19 Oct 83 p 4]

CSO: 5400/7038

## BRIEFS

JAMBI TOWN DECLARED RABIES-INFECTED AREA--Dr Azhari D. C., mayor of Jambi town, states that in connection with Jambi having been declared a rabies-infected area he hopes the municipal health service will provide the best kind of service to members of the community bitten by rabid dogs. Syahriel Nain, chief of the community relations service of the city government, stated on Tuesday [27 September] that the mayor had also instructed the animal service of the Jambi city government to destroy dogs running free outside their homes. The mayor called on residents of the city, and especially those who have dogs, to keep their dogs tied up, to put a muzzle on them, and to register the dogs with the Jambi animal service and have them inoculated against rabies. In the near future all dogs running free will be picked up by officials of the health service, the animal service, the police, and the Jambi city government. The mayor urged district chiefs and chairmen of neighborhood associations to help by spreading the news of his announcement. He called on citizens who find the bodies of dead dogs to move them over to the side of the road, and officials of the animal service will pick them up and bury them. [Text] [Jakarta HARIAN UMUM AB in Indonesian 29 Sep 83 p 5] 5170

CSO: 5400/4319

## LIBERIA

### BRIEFS

NEW LEPROSY CASES--Nearly 4,000 persons have been registered and are being treated as leprosy patients since June 30 this year. This figure represents the highest in months since the National Leprosy Control Program (NLCP) was launched by the Liberian Government in 1974. This was disclosed yesterday by the Acting Chairman of the Leprosy Board, Ministry of Health and Social Welfare, at a luncheon in honor of the visiting Vice President of the German Leprosy Relief Association, Dr. Helmut Muller and party at Oscar's Restaurant, Monrovia. Dr. Siahe-Zoe B. Barh told the Daily Observer that from the time of the launching of the program, 728 patients had been treated and discharged, while "460 new cases were found". [Excerpt] [Monrovia DAILY OBSERVER in English 23 Sep 83 p 12]

CSO: 5400/26

## BRIEFS

DENGUE OUTBREAK AT UNIVERSITY--Bangi, Tues.--Three students at the Universiti Kebangsaan Malaysia here are down with dengue fever over the last four days. Two men were admitted to the Kajang hospital over the weekend with complaints of high fever and rashes on their bodies. They have since been confirmed dengue patients. A third student, a woman, was warded today with suspected dengue fever. The health and the university authorities are fogging the campus grounds to rid the place of mosquitoes. Stagnant pools are also being emptied and abate are added to water holders. UKM Deputy Vice-Chancellor in charge of students affairs, Dr Mohamad Yusof Haji Mohamad Noor, said that the staff and students totaling 6,000 had been alerted to the danger. "They are being advised to seek immediate medical attention if they have any sign or symptom of dengue," he said. Dr Mohamad Yusof said the last dengue outbreak on campus was early last year when about 10 students were hospitalised. [Text] [Penang THE STAR in English 5 Oct 83 p 7]

TYPHOID REPORTED IN MALACCA--Fri.--Twenty-three students and a housewife have been warded in the General Hospital for suspected typhoid. State Health and Medical Services Director Dr Naranjan Singh said today that three of the cases had been confirmed. The others were "suspected cases with signs of typhoid" and the victims were being warded in a special section of the hospital, he said. Dr Naranjan Singh said that the special section was set up to localise the outbreak. He said that efforts were being made to contact all students of a secondary school in Tranquerah who had ate satay during a school function two weeks ago. He said that this was because the wife of the satay seller had been confirmed as the carrier of the disease. He advised those with long standing fever, nausea, loss of appetite and feeling weak, to go to the hospital immediately. Dr Naranjan Singh said that the incubation period for typhoid to develop normally take two weeks, or slightly longer. [as published] He added that the hospital authorities were investigating the outbreak which he described as "a localised one". He also said that co-operation had been sought from other departments to track down the rest of the students and those taking satay from the particular seller. [Text] [Penang THE STAR in English 8 Oct 83 p 6]



HEALTH DIRECTOR ANNOUNCES FIVE PLAGUE DEATHS

Johannesburg THE STAR in English 4 Oct 83 p 7

[Article by Peter Honey]

[Text] WINDHOEK--People are still dying of bubonic plague in Namibia's northern Owambo region.

Another Owambo civilian died last month, bringing to five the number of people struck down by the disease, says the deputy director of national health, Dr Albert Hitzeroth.

A total of 352 people had been treated since March this year--86 of them last month.

The plague was noticeably worse this year. Two people died of it last year.

"The story is not finished; we expect more cases," Dr Hitzeroth said last week.

But it was "most unlikely" the plague would approach the proportions it did in 17th-century Europe, when the "black death" claimed hundreds of thousands of lives.

"That was essentially an urban plague, aggravated by poor sanitation and virtually non-existent refuse removal, which encouraged rodents to breed in great numbers.

"In Owambo we are dealing with a rural plague, which makes spreading by fleas from infected rodents not so easy," Dr Hitzeroth said.

There had as yet been no cases of plague among the military establishment as far as he was aware.

Plague was endemic to the central, most densely populated part of Owambo. It had occurred each year since about 1960, but this year's outbreak was the worst in about 20 years.

The continuing drought in Namibia had drawn rodents closer to human settlements.

He said the bush war had been a hindrance in some parts but to date none of the health teams had been attacked or injured.

In past years there had been cases of health teams setting off land mines while in the field.

CSO: 5400/29

BRIEFS

MENINGITIS ON INCREASE--PA Wellington The number of meningitis cases reported so far this year already exceeds the total number notified each year since 1980. The Health Department's assistant director of disease prevention, Dr John Clements, said 26 cases of meningitis had been reported this year, the highest number since 1979 when there were 49 cases during the year. He said the increase was not surprising and was no cause for alarm. Five cases of meningitis, an inflammation of the layers surrounding the brain, have been reported so far this year in the North Canterbury region. The Christchurch deputy medical officer of health, Dr M. A. Briesman, said that number would not be unusual if there were no more reports this year. The city office had received 30 notifications of meningitis in the last 12 years, with the last "high" being six cases in 1979. [Text] [Christchurch THE PRESS in English 22 Oct 83 p 14]

CSO: 5400/4327

## MINSA COMBATS MALNUTRITION, INFECTIOUS DISEASES

Managua EL NUEVO DIARIO in Spanish 11 Oct 83 p 8

[Text] As of quite recently more than 400,000 Nicaraguan children under the age of 6, that is to say, 68 percent of this population group, suffered from varying degrees of malnutrition, and infant mortality was among the highest on the continent, as 121 infants died before reaching the age of 1 out of every 1,000 live births. In rural areas the rate was 200 infant deaths per 1,000 live births.

In light of this situation, the Health Ministry, with help from international organizations such as the World Food Program and the Italian-Latin American Institute, as well as mass organizations, has spent almost \$200,000 on major nutrition programs over the past several years, and this does not include matching funds from the Revolutionary Government.

The nutrition programs include Complementary Food Drives that by February 1986 will benefit 60,000 persons in the departments of Leon, Chinandega, Matagalpa, Jinotega, Esteli, Nueva Segovia, Madriz, Managua and Masaya.

The country's hospitals are also engaged in food and nutritional programs for children suffering from third-degree malnutrition and serious complications. Moreover, some of them have special treatment rooms in which mothers can continue nursing their babies.

At the same time, more than 18,000 pregnant and nursing mothers are receiving care at all of the country's health-care centers. The incidence of endemic goiters has been cut from 33 percent in 1979 to less than 20 percent today. This is still a major nutritional problem, however, and must be eradicated.

The main cause of goiters is an iodine deficiency in the thyroid gland, and in this regard the Health Ministry has been carefully monitoring the iodizing of salt at the 80 salt plants and 13 processing plants around Nicaragua.

Research is also continuing on nutritional monitoring systems in special regions of the country to identify the symptoms and causes of nutritional problems and, based on the findings, to propose new strategies and health-care projects in conjunction with educational, production, culture and other institutions.

Some of the communicable diseases that can be prevented by vaccination or sanitation measures are malaria, tuberculosis, polio, measles, whooping cough and diarrhea. To the country's disgrace, diarrhea used to be the leading cause of illness and death among children under age 6.

Life expectancy among Nicaraguans used to be 52 years, one of the lowest in Latin America. Maternal mortality was extremely high. Concurrently, drinking water and sewerage systems were available to just a tiny percentage of the population.

The main cause of malnutrition in the country is an insufficient intake of calories due to the poverty and exploitation that have existed for decades in our nation, which has suffered the socioeconomic ravages of Yankee imperialism and the consequences of the Somoza regime.

As of 19 July 1979, however, Nicaragua has been in a position to combat this age-old problem. This government recognizes that Nicaraguans have a basic right to be free from hunger and is carrying forward infant nutrition and chronic malnutrition programs, as well as making sure that sufficient supplies of food are made available and distributed equitably. It is also promoting diet-related education by publicizing nutritional principles.

8743

CSO: 5400/2008

## MATAGALPA HOSPITAL APPROACHES COMPLETION

Managua BARRICADA in Spanish 1 Oct 83 p 12

[Article by special correspondent Juan Chow]

[Text] Matagalpa--After 4 years of hard work by a construction crew of some 300 men, the building housing the nation's most modern hospital, which will serve Region 6 in Matagalpa, was officially handed over yesterday by the regional delegate of the Construction Ministry (MICONS), Rene Solis, to the regional delegate of the Health Ministry, Dr Clarence Silva.

The opening was symbolic, as the facilities are actually expected to be put in use over the next few months. The reason for the delay is that the INAA [Nicaraguan Water and Sewerage Institute] is still working on a solution to the drinking water problem. Although the hospital, which covers 14,000 square meters and is located 2 kilometers from Matagalpa, already has an available supply of drinking water, it cannot operate at full capacity without affecting the water supply to residents of Matagalpa.

It was explained at the ceremony that the work is behind schedule because there is rocky terrain involved that has to be dynamited. The hospital will probably begin operations in January with 170 beds; due to the lack of medical personnel and nurses it will not be able to operate at full capacity, which is 250 spacious beds, 5 operating rooms, 2 delivery rooms and 2,000 outpatient calls a day.

The building alone cost 86 million cordobas. If we add in the cost of complementary facilities and medical equipment, which is already in the country, the total cost comes to 126 million cordobas.

A loan from the IDB [Inter-American Development Bank] provided 60 percent of the project financing, and the remaining funds came from the revolutionary government.

#### The Old Hospital Will Handle Only Deliveries

Before listing the modern features of the Matagalpa Regional Hospital, we should point out first that 44 physicians from the old hospital

in this city, as well as 12 residents and 20 interns will be stationed at the new one. Dr Clarence, who described what was inaugurated as "preliminary facilities," said that the hospital needs at least 65 staff physicians to operate at full capacity.

The old hospital will take care of deliveries and nonsurgical gynecology. Work will now continue on access roads and the installation of the modern medical equipment.

The regional delegate of the Construction Ministry, Rene Solis, said that his workers had begun the project on 15 September 1979 and had made a commitment to complete the building by 30 September of this year; with the help of the Netherlands, which lent the country \$5 million, "we have kept our word," he added.

The hospital has a cafeteria, cold-storage rooms for foodstuffs and medicine, a pharmacy, a storeroom, an auditorium, a full range of fire-fighting equipment, a recreation room and large outpatient waiting rooms. Of the four hospitals that are being built in the country, only the one in Rivas, which the Construction Ministry is putting up, is comparable in size to the one in Matagalpa. The others are in Bluefields and Masaya.

The Matagalpa hospital has its own sewage treatment plant, a central air conditioning unit, an emergency electric power generator, its own access road and its own lighting system. Lastly, when a patient walks out the door of the hospital and heads down to Matagalpa, his cure will become permanent as he gazes from this spot on high at one of the most beautiful landscapes in the world: the pearl of the north, crowned with clean air.

8743

CSO: 5400/2008

PEOPLE'S REPUBLIC OF CHINA

LI DESHENG APPOINTED HEAD OF ENDEMIC DISEASE GROUP

Endemic Disease Group

OW072116 Beijing XINHUA Domestic Service in Chinese 0004 GMT 7 Nov 83

[Text] Beijing, 7 Nov (XINHUA) -- The CPC Central Committee has approved of the readjustment of its endemic disease leading group. The new leading group consists of 43 members. Li Desheng, member of the Political Bureau of the CPC Central Committee, is its leader; and Vice Minister of Public Health Guo Ziheng and Sun Jiben, secretary of the Liaoning Provincial CPC Committee, are the deputy heads.

Li Chairs Meeting on Diseases

OW080035 Beijing XINHUA Domestic Service in Chinese 0112 GMT 7 Nov 83

[Text] Beijing, 7 Nov (XINHUA) -- Li Desheng, head of the CPC Central Committee's leading group for the prevention and cure of endemic diseases, recently invited leading members of provinces, cities and autonomous regions concerned and of relevant departments of the CPC Central Committee to a meeting in Beijing to discuss the prevention and cure of endemic diseases throughout the country.

At the meeting he noted that elimination of poverty should be undertaken in conjunction with efforts of control endemic diseases so that people in areas suffering from endemic diseases may become healthy and prosperous.

Li Desheng said: Success in preventing and curing endemic diseases is an important matter which concerns raising the quality of our people and nation and directly concerns the modernization drive. Our country's remote border areas not only suffer from endemic diseases but are fairly backward economically. We should make special efforts to quickly change their conditions. Party committees and people's governments at all levels should earnestly strive to do this work well. They should have a clear picture of the distribution of endemic diseases and of the extent of their harm in their respective areas, carry out this work in a planned way and constantly check its results.

Li Desheng said: The prevention and treatment of endemic diseases should be undertaken in a comprehensive manner because the work is not just the responsibility of a particular department and is not just a medical problem. In the past light industrial, commercial, water conservancy, geological, agricultural, animal husbandry and scientific research departments made very great contributions to this work. I hope that henceforth these departments will further strengthen their coordination to help solve problems of materials, funds, medicines and equipment encountered in the prevention and treatment of endemic diseases.



Li Desheng noted: It is necessary to respect knowledge and the intellectuals and to give play to the role of endemic disease research personnel. He said that these people have been working in endemic disease-stricken areas for many years. They are leading an arduous but glorious life. Therefore, we should show political concern for their living and working conditions and strictly carry out the policy on intellectuals so that they may apply their knowledge and wisdom to the work of curing patients.

Li Desheng stressed: While implementing the party's economic policy and guiding the masses in developing production, the various areas should strive to carry out well the work of preventing and treating endemic diseases and to improve sanitation conditions. Production potentials can be tapped to the fullest only after the masses' health has been improved.

CSO: 5400/4106

CHANGES IN TYPHOID FEVER IN XIAN

Beijing JIEFANGJUN YIXUE ZAZHI [MEDICAL JOURNAL OF CHINESE PEOPLE'S LIBERATION ARMY] in Chinese No 3, 1983 pp 202-204

[Article by Wang Nengping [3076 5174 1627] et al of 1st Hospital of 4th Military University of Medicine: "Clinical Analysis of Changes of Symptoms of Typhoid Fever Patients in Xian Prefecture"]

[SUMMARY] Analysis of data of 302 bacteriologically verified cases of typhoid fever treated at the 1st Hospital in 1950-79 confirms the existence of similar changes in clinical manifestations of this disease in Shaanxi as it is frequently claimed in neighboring provinces of Sichuan, Shanxi, and Gansu. When these cases are divided into 3 periods of a decade each for comparison, incidence of typical symptoms of high and continued fever, slow pulse rate, lower than 2,000 white cell count, lower than 9.0 g/dl hemoaglobin, enteric perforation and hemorrhage, septicemic myocarditis, etc. is observed to be obviously decreasing. Reasons for the symptoms to become milder are believed to be an obvious reduction of the number of victims below 5 years of age, extensive inoculation, treatment with chloromycetin, and perhaps a mutation of the typhoid bacillus itself. This trend of mild and atypical symptoms makes the disease more difficult to diagnose, however, and it does not make the treatment of chloromycetin-resistant strains less difficult. Continuous vigilance to eliminate carriers and incidence of recurrency is therefore urged.

6248

CSO: 5400/4161

RABIES DEATH TROUBLES VETERINARIANS IN NATAL

Johannesburg THE CITIZEN in English 4 Nov 83 p 12

[Text] DURBAN--A 14-year-old boy has died of rabies in a Durban hospital after being bitten by a stray dog from KwaZulu.

Natal veterinarians have called an urgent meeting with the Department of Veterinary Services after the alleged breakdown of the rabies inoculation programme in Kwa Zulu.

Doctors said the boy, Matteus Gasa, was cutting grass on the banks of the Umgeni River, at Molweni, off the Inanda road, an area where rabies had not been reported before, early in September when he was bitten.

The rabid stray crossed the river, savaged the boy's face and then ran off. It was not seen again.

He was treated at a local clinic where the doctor, unaware that the animal had been rabid, stitched the wounds to his lips and cheek.

More than a month later he became ill and died in the outpatients department of the King Edward VIII Hospital.

Contacts

A spokesman for the South African Veterinary Association said rabies was definitely on the increase again.

"More and more cases are being reported. There have been a number in the Ballito area recently. Most of the positive cases are strays that have come over from Kwazulu, or dogs that have been in contact with Kwazulu strays."

He said representatives of the association would meet the Assistant Director of Veterinary Services for Natal, Dr P J Posthumus, to discuss what action should be taken.

CSO: 5400/27

SOUTH AFRICA

BRIEFS

TB, OTHER STATISTICS--More than 36 000 cases of tuberculosis have been notified by the Department of Health between January and August this year. Other cases notified by the department during the eight-month period include: measles (10 028), cholera (6 202), typhoid (3 685), malaria (1 480), viral hepatitis (1 285), meningococcal infection (359), tetanus (192), rabies--human contacts (87), leprosy (49) and diphtheria (17). [Text] [Johannesburg THE STAR in English 1 Nov 83 p 10M]

TEN RABIES DEATHS--Durban--A spokesman for the KwaZulu Health Department said yesterday that so far this year ten Black people had died of rabies in the region. He confirmed that four had died in the Melmoth area of Zululand after being bitten by rabid dogs in the last two weeks. One was a four-year-old boy and another a 12-year-old boy. They both died in the St Mary's Hospital near Melmoth. Another 14 Black people have been admitted to the hospital after being bitten by rabid dogs. At present a massive inoculation programme against the disease is being conducted by the KwaZulu Health Department. [Text] [Johannesburg THE CITIZEN in English 9 Nov 83 p 11]

CSO: 5400/31

## SPAIN

### BRIEFS

GUINEAN GUEST WORKER MALARIA--During 1982 Equitorial Guinea was the nation that "exported" the most cases of malaria to Spain, according to a study monitoring this disease published in the "Epidemiology Bulletin" of the General Directorate for Public Health. According to the study, with respect to the disease's geographic origin, Africa was responsible for 74.07 percent of these cases with Guinea specifically accounting for 46.91 percent, from guest workers. The total Guinean patient figure was 38. The provinces hardest hit by malaria were Madrid with 23 cases, Barcelona with 11, and Valencia with 11. The majority of the patients were males. [Text] [Madrid ABC in Spanish 3 Nov 83 p 43]

CSO: 5400/2507

BRIEFS

DIARRHEA IN PIGG'S PEAK--SEVERAL people are suffering from diarrhoea in Pigg's Peak and a number of people are said to have been treated by the doctors. This was confirmed by a private doctor Siamek Monadjem who said he has had to treat about 10 people yesterday for diarrhoea. "I have been treating people for diarrhoea since Sunday. It is not very serious and is not a case of cholera but some kind of infection. I do not know what is the cause of the infection," he said. Dr Monadjem said there had always been cases of diarrhoea and vomiting in Pigg's Peak. [Text] [Mbabane THE SWAZI OBSERVER in English 21 Sep 83 p 3]

CSO: 5400/25

## BIOLOGICAL CONTROL OF MOSQUITOS REPORTED

Bangkok BANGKOK POST in English 9 Oct 83 p 7

[Article by Niphat Taptagaporn]

[Text]

SINKING their proboscis, sucking up blood at random and injecting saliva which sometimes can be fatal, mosquitoes attack indiscriminately day or night.

Despite their small size, the disease-carriers can indeed do great damage, inflicting maladies such as malaria, dengue haemorrhagic fever, and encephalitis — all age-old killers of man.

More than ever, health officials are concerned that these diseases, once on the verge of eradication, may break out again, uncontrollably. Reported cases of malaria and other mosquito-related diseases have been steadily on the rise. There will always be a danger, say entomologists, that the diseases will reassert themselves unless new, proper mosquito control measures are introduced.

Not until recently has attention been focused on biological control methods that pit natural predators against the mosquitoes, controlling the growth of larvae and therefore the population of mosquitoes. At the centre of this attention are micro-organisms, among them a new strain of bacteria being discovered recently in Thailand.

"What we are dealing with is living organisms so small that they have easy accessible to any mosquito's breeding place, notably those which have not previously been penetrated by other means of control including other insects and larvae-eating fish," says Dr Siriwat Wongsiri of the Chulalongkorn University's Biology Department.

Currently under study, two strains

of bacteria have been shown in tests to be effective against larvae, and can serve as alternatives to the use of chemicals which is becoming increasingly futile.

The failure of chemical agents to control mosquitoes is made evident by the sheer fact that their numbers are growing rapidly despite stepped-up campaign efforts to reduce them. Today, mosquitoes easily outnumber the world's population, and their numbers seem to be increasing disproportionately fast: a female mosquito, which consumes blood to nourish its eggs, is able to lay 50 to 100 eggs at a time.

Even in the United States, where mosquitoes have long ceased to be a great problem, the fast-increasing number of mosquitoes is now a cause for concern among American entomologists. According to a report published in the July issue of *Discover*, an American entomologist, Dr Donald Sutherland of Rutgers University, says the situation is so bad that "I couldn't breathe because the mosquitoes were rushing up into my nose."

Here in Thailand, more mosquitoes could mean epidemics.

Dr Siriwat confesses: "There is now an urgent need for control of mosquitoes to prevent any outbreak from getting out of hand."

Dr Siriwat, who has carried out extensive research on biological control of the pest, believes that mosquitoes present a far more serious problem than people generally think.

The use of insecticides to control mosquitoes is outdated, and in any

case, the insects have gradually become immune to many of those on the market, says Dr Siriwat, adding: "Vector control can no longer be solely dependent on the use of chemicals."

The Chulalongkorn University entomologist's research work over more than three years has included the study of both vertebrates and invertebrates animals, fish, micro-organisms and juvenile hormones as potential weapons against mosquitoes.

Dr Boonluan Phathumachinda, director of the Department of Medical Sciences' Medical Entomology Division, says that there is now a tendency for larger dosages of insecticides to be used because larvae have become increasingly immune.

The new weapon, a strain of bacterium *Bacillus sphaericus*, was discovered by Dr Somsak Panwatana in Lamphun Province and has been successfully tested against all known types of larval mosquitoes existing in Thailand: *Culex spp.* (nuisance mosquitoes), *Aedes aegypti* (striped mosquitoes), *Anopheles dirus* (malarial mosquitoes) and *Mansonia* (tiger mosquitoes). Its effects vary, depending on water conditions.

When ingested, the bacteria, which produce toxic substances, destroy the cells of larvae from inside their intestines, preventing them from developing to an advanced stage and thus killing them before they can become fully-grown mosquitoes.

This strain of bacteria, which has a toleration of polluted water for a period of six months to a year and kills 90 per cent of larvae, is considered to be suitable for water conditions in Bangkok.

Another type of bacteria which has been found to have a controlling effect on the growth of certain types of larvae is *Bacillus thuringiensis var. israelensis*, more simply known as BTI.

According laboratory tests, the BTI are not very active in polluted water, and prove most effective against larvae of the dengue haemorrhagic fever carrier, *Aedes aegypti* and of malaria-carrying *Anopheles dirus* which breed in clean water.

Unlike chemicals, both strains of germ are harmless to humans and the environment, entomologists assert. Laboratory tests on *Bacillus sphaericus* and BTI sprinkled into the water demonstrated that neither fish nor aquatic insects were harm by the bacteria.

"Chemical control is a relatively cheap measure. But there is always a danger to users if it is not carefully applied. Highly toxic chemicals such as *Dursban* are perilous to fishes and other aquatic insects," Dr Boonluan warns.

On the whole, *Bacillus sphaericus* show greater efficiency than BTI, of which no strain has yet been discovered in Thailand, says Dr Siriwat.

There is no prospect that the bacteria will be available for use in the near future, however, the problem being that they cannot be factory-produced and therefore processed into a commercial product. This difficulty is being studied by various institutions including the Chulalongkorn and Mahidol universities.

Importing them would be too costly. Unfortunately, insecticides for the time being continue to be used at a much lower cost than the bacteria.

Wrote John Langone in the *Discover* report, entitled Biting Back At Mosquitoes: "*Bacillus sphaericus* are not prolific, do not make enough of the poison for commercial use and tend to lose their ability to produce it."

Of BTI, he said: "Preparations are nearly twice as expensive, because the toxin must be laboriously extracted from saclike crystals on the outside of the bacteria. Because it is so hard to purify, mosquito controllers must use more of it to obtain the same results they get with pesticides."

It seems, therefore, that Thai scientists still have a long way to go before the concept can be turned into practice. Meanwhile, chemical substances provide the only available weapon in Thailand's war against old and seemingly perpetual enemies, despite causing degradation of the environment and offering danger to human lives.



## BRIEFS

RABIES VACCINATIONS IN MALANGE--Fernandes Garcia, chief of the Provincial Veterinary Sector in Malanje, disclosed to ANGOP [Angolan Press Agency] that, during the first half of 1983, the aforementioned sector vaccinated 6,197 animals, consisting of 2,000 state-owned bovine livestock and 3,782 privately owned livestock, against rabies and undetected undulant fever. Diseases such as tuberculosis, undulant fever, peripneumonia, dermatosis, "graca" and other ills have been discovered in the production units of Damba, Mandioqueira, Moreira and others. As early as the first half of the year, as that official noted, 38,184 kilograms of fish were inspected in the Domestic Trade and EDIPESCA [Fish Distribution] enterprises; and steps were taken to eliminate parasitism caused by gastrointestinal worms and fluke worms, in the various units. Fernandes Garcia disclosed that, in order to improve the livestock species, 80 head of cattle of the best species will be treated in order to guarantee their efficient reproduction. In conclusion, Fernandes Garcia stated that the peasant sector is faced with major difficulties in controlling the bovine herds in the peasants' possession, owing to the lack of vehicles affecting the Veterinary Services' provincial sector. [Excerpt] [Luanda JORNAL DE ANGOLA in Portuguese 12 Oct 83 p 4] 2909

CSO: 5400/24

BRIEFS

VACCINE AID FOR JAVA--Jakarta, Mon: More than a million doses of foot-and-mouth vaccine donated by Australia have begun arriving here to help control an outbreak of the disease affecting thousands of cattle in Java, Indonesia's most populous island. The first batch of 75,000 doses arrived last week and a total of 1.2 million units, bought from British laboratories, will have been delivered within a few weeks, say officials of the Australian Development Assistance Board. Indonesian authorities have vaccinated about 800,000 dairy cattle and buffalo in infected areas since the disease broke out in the central Javanese district of Blora in July. About 12,900 animals have contracted foot and mouth, of which about 2300 are under intensive treatment, according to the junior Minister for Livestock and Fish Production, Mr Jannes Hutasoit. Almost all of Java's estimated 4.5 million cattle and buffalo will be vaccinated by the year's end. An Australian veterinary expert, Professor Robert Bain, who recently surveyed the outbreak, reported that the situation was under control. Australian authorities here say that there is little danger of the outbreak spreading to Australia where strict quarantine control has kept foot and mouth at bay, for almost a century. [Text] [Perth THE WEST AUSTRALIAN in English 27 Sep 83 p 35]

LEPTOSPIROSIS THREAT--A survey of dairy farmers in Gippsland indicated the need for vaccinating herds against a livestock disease called leptospirosis which can spread to humans, the State Agriculture Minister, Mr Kent, said yesterday. He said 11 per cent of the 1074 dairy farmers tested showed past leptospirosis infections. Results of the first Victorian survey of its kind indicated that dairy farmers in the area had a better than a one in 10 chance of contracting the disease, which is similar to flu, through contact with infected animals, he said. Mr Kent urged dairy farmers to arrange for herd vaccinations. "Dairy farmers who don't vaccinate their herds are obviously running a much greater risk of contracting it themselves." [Text] [Melbourne THE AGE in English 3 Oct 83 p 3]

FISH DISEASE--An environmental study of the Clarence and Tweed Rivers is to be undertaken by the State Government, following the discovery of red spot disease on fish in the area. The Minister for Industrial Development, Mr Day, representing the Minister for Agriculture and Fisheries, Mr Hallam, said fish from the two rivers would be analysed for pesticide residues caused by local farming practices. Fish with red spot disease (or

"Bundaberg disease") are identified by ulceration of the skin. Secondary infection can kill the fish. However, Mr Day said, ulcerated fish can be eaten safely once cooked. [Text] [Sydney THE SYDNEY MORNING HERALD in English 23 Sep 83 p 14]

CSO: 5400/7511

# INDIAN ARMY MULES AFFLICTED BY KILLER DISEASE

Calcutta THE STATESMAN in English 18 Oct 83 p 11

[Text] DEHRA DUN, Oct. 17--A disease that weakens and ultimately kills has started appearing among mules maintained by the Indian Army, reports PTI.

The Army Veterinary Unit is concerned about the malady attacking the mules since they are the vital mode of transportation in mountainous border areas where even helicopters cannot be used.

The mules are used to carry provisions and other everyday items for men in the forward posts.

Unknown about seven years ago the disease has been gradually assuming serious proportions according to sources here.

Biologists at the Forest Research Institute here suspect it is caused by contaminated feed. They have isolated certain disease causing fungus in hay samples sent by the Military Veterinary Hospital here.

The disease diagnosed to be "pulmonary emphisema" is said to be prevalent among mules in almost all the equine centres of the Army.

FRI scientists who analysed hay samples from each of the centres have found that most of the samples had "moderate to heavy infestation of mould fungi including Aspergillus Nidulans and Aspergillus Flavus".

The institute has so far analysed 44 hay samples for fungal infection.

Tissue samples of infected animals had also been sent to the Indian veterinary resewbogist in the veterinary field.

From January to April 1983, Professor Iyer examined materials from 13 mules and all these showed massive damage to liver attributable to "aflatoxin" produced by the Fungus Aspergillus Flavus

IVRI scientists have also recorded nodular lesion in the lung of the mule caused by a species of aspergillus fungus. The Institute's findings also support FRI's diagnosis that the disease in mules is due to injection of contaminated hay.

It is not known how they hay feed supplies to the equine centres were contaminated with the deadly fungus. It is learnt that an expert committee has been set up to decide weather the feed, now stocked at supply centre in Delhi Cantonment, should be used or destroyed.

The aspergillus organism is known to cause nodules in the kidney and attack the brain.

Cases of guttural pouch with abnormal head posture, nasal catarrh, head shyness, sweating, shivering and abnormal respiratory noise have been recorded in the U.S. U.K. and Sweden in animals infected with a nedulaus.

The species Aspergillus Flavus produces a powerful toxin called "aflatoxin" which can contaminate feed and lead to massive damage to liver.

CSO: 5400/7037

INDIA

BRIEFS

RINDERPEST IN DELHI--The Delhi police have imposed restriction on the movement of head of cattle in the south district in view of outbreak of rinderpest. In an order passed on Saturday it has been stated that there is a possibility that movement of cattle specially from Madanpur Khadar Dairy Colony may spread the disease amongst other cattle in the Capital. Additional south district police chief A S Khan said no cattle shall leave or enter Madan Pur Khadar Dairy Colony and no cattle shall enter the South district from outside unless it carried a valid certificate of rinderpest vaccination from an authorised surgeon. The order comes into force with immediate effect. [New Delhi PATRIOT in English 16 Oct 83 p 12]

CSO: 5400/7036

# FOOT-AND-MOUTH DISEASE SPREADING

Jakarta KOMPAS in Indonesian 24 Sep 83 p 2

[Excerpts] Jakarta, KOMPAS--Hoof-and-mouth disease (PMK) in cattle and water buffalo is becoming increasingly widespread in Java. There were 9,473 head of cattle and water buffalo affected during the first week of September. By 2 weeks later there were 12,865 affected. Initially, the disease was identified in 41 regencies, involving 125 districts. By the third week in September the disease had been found in 54 regencies, involving 165 districts.

According to Dr I. G. N. Teken Temadja, a veterinarian and director of animal health in the Directorate General of Livestock, in an interview with a KOMPAS representative last Thursday [22 September], the spread of PMK was the result of the interprovincial cattle trade. Cattle dealers sometimes bought livestock that were already ill because they were cheaper in price. And furthermore, cattle from Central Java sent to Jakarta are usually held for a time in the villages of West Java.

In order to prevent the further spread of PMK, in addition to carrying out mass inoculations in the areas affected or threatened, cattle which are bought or sold must first be vaccinated. Livestock from Java, such as cattle, water buffalo, sheep, goats, pigs, deer, or rabbits, are prohibited from being shipped outside of Java. Animals which have cloven hooves can carry PMK.

Out of the 54 regencies affected, 16 are in West Java; 29, in Central Java; 7 in East Java; 1 in the Special Area of Yogyakarta; and 1 area in metropolitan Jakarta.

All cattle and water buffalo in Java, which total 4.5 million head in all, will be inoculated. Each animal will be inoculated four times: twice this year, once in 1984, and once in 1985. It is hoped that by the beginning of 1986 Indonesia will be free of this disease.

According to data from the Directorate General of Livestock Affairs, at the present time there are still some places affected by PMK where the disease has not yet been brought under control. Out of the 54 regencies affected by PMK, the

disease is not yet controlled in 27 regencies. In 27 other regencies the situation is now secure.

Considered in terms of the districts affected, out of the 165 districts where PMK has been found, the disease continues in 51 districts, while the situation is under control in the other districts.

5170

CSO: 5400/4319



STATUS OF FOOT-AND-MOUTH DISEASE, ANTHRAX, RABIES EPIDEMICS DETAILED

Jakarta KOMPAS in Indonesian 4 Oct 83 p 2

[Article: "Hoof-and-Mouth Disease Beginning to Be Brought Under Control; in South Kalimantan 9 People Die from Rabid Dog Bites"]

[Text] Jakarta, KOMPAS--Hoof-and-mouth disease (PMK), which has been affecting cattle and water buffalo in Java, has begun to be brought under control. Meanwhile, in Irian Jaya pigs affected by anthrax have begun to be inoculated.

This was stated by Prof Dr J. H. Hutasoit, deputy minister for increasing livestock and fisheries production, to the press after meeting with President Soeharto at Independence Palace on Monday [3 October].

According to Deputy Minister Hutasoit, at present Jakarta is no longer affected by hoof-and-mouth disease. There are four provinces which are still affected: West Java, Central Java, the Special Area of Yogyakarta, and East Java.

At first this disease affected 54 regencies in Java, but it is now controlled in 27 of them. The remaining 27 regencies are considered areas which are still affected. In terms of the districts affected, 187 were originally found to have the disease present. However, it has been brought under control in 146 of the districts.

Deputy Minister Hutasoit also said that 22,086 cattle and water buffalo had been affected by hoof-and-mouth disease. However, a large proportion of them have been cured, and only 1,301 are still considered to be suffering from the disease. All cattle and water buffalo continue to be inoculated in Java, and by the end of December it is hoped that they will have been inoculated twice.

Deputy Minister Hutasoit said: "Once they are inoculated, they are immune from the disease for up to 2 months. If they are inoculated once more, they are immune for up to 1 year. Later on, in 1984, they will be inoculated once again."

## Anthrax

He also reported on the inoculation program for pigs affected by anthrax in Irian Jaya. However, because the field is rather difficult to cover, only 500 pigs have been inoculated out of the 30,000 head that must be treated in this way.

In Irian Jaya anthrax is receiving special attention from the provincial government because it had never previously appeared there. In addition to that, anthrax in Irian Jaya affects pigs but not cattle, as in other areas. The deputy minister said: "If anthrax affected cattle, as in Sumbawa, it could have been handled." For future applications a system for preventing the disease needs to be developed.

Anthrax in Indonesia once was found in West Java, West Nusa Tenggara, and East Nusa Tenggara. However, this is no longer the case. The disease is endemic in character, that is, at any given time it may be affecting the livestock. However, it does not spread quickly, like hoof-and-mouth disease, which is epidemic in character. He added: "There is anthrax in other countries, not only in Indonesia."

## Rabid Dogs

Regarding rabies, which not long ago affected South Kalimantan, this has been discussed with the Department of Health, according to Deputy Minister Hutasoit, to ensure that it was properly handled. He reported that 9 people had died from rabies.

It has been difficult to inoculate the dogs in South Kalimantan, according to Hutasoit. This is because the dogs there generally run freely. In fact, according to the regulations in effect since the Dutch colonial period, dogs must wear a collar and be tied up with a rope 3 meters long. However, it is rather difficult to apply this regulation. He said: "Perhaps this regulation must be applied once again, because human beings are affected by the problem."

Rabies is found in East Kalimantan, Central Kalimantan, South Kalimantan, West Java, South Sulawesi, North Sulawesi, North Sumatra, West Sumatra, and Jambi. However, there are still many provinces which are free of this disease, beginning with Bali and going to the East. For that reason shipping dogs from western areas of Indonesia to these other areas is not permitted.

According to information obtained from the Directorate General of Animal Husbandry, for a long time South Kalimantan was known as an area free of rabies. However, in April 1983 65 people were bitten by dogs and cats in Tabalong Regency. In Hulu Sungai Utara Regency 11 people and 5 cattle were bitten by dogs.

Based on the regulations, if a dog bites a person or a cow, it must be regarded as suffering from rabies. For that reason the person or the cow must immediately be examined at a laboratory.

In South Kalimantan, as a result of examinations conducted by the Cattle Disease Research Center, one dog and two cattle have been positively identified as having rabies. Therefore, vaccinations have been undertaken in 33 villages of four

districts in Tabalong Regency and in 14 villages of three districts in Hulu Sungai Utara Regency. A total of 51 dogs, 2,172 cats, and 22 monkeys have been innoculated, while 50 dogs have been destroyed.

Figures on cases of rabies among animals over the last 4 years show that in 1979, out of 1,704 animals that bit other animals or people, 1,363 were tested and found to be positively suffering from rabies. In 1980, out of 2,100 animals tested, 1,023 were found to be positive. In 1981, out of 1,904 animals tested, 1,067 turned out positive. And in 1982, out of 1,562 animals tested, 572 were positive.

Rather high levels of dog bites (more than 150 cases) each year occur in North Sumatra, West Sumatra, North Sulawesi, West Java, and Jakarta.

#### Venereal Disease

Deputy Minister Hutasoit also reported to the president that with regard to venereal disease among cattle and water buffalo in North Sumatra and Aceh "it was not true that this disease could spread to humans." Although the cause of this disease is the IBR virus (Infectious Bovine Rhinotracheitis), it is only dangerous to cattle and water buffalo if it is found together with another disease. Then it becomes a secondary infection.

He said that in fact this type of venereal disease caused the death of 145 water buffalo and three cows in Aceh and North Sumatra. He stated: "However, this was a consequence of another infection that occurred at the same time."

5170

CSO: 5400/4325

INDONESIA

BRIEFS

ANTIANTHRAX VACCINATION CAMPAIGN--The antianthrax vaccination campaign in Paniai in the interior of Irian Jaya has attained satisfactory results. Some 5,300 pigs have been vaccinated and no new cases have been reported since the campaign was launched in September. [Summary] [BK270025 Jakarta Domestic Service in Indonesian 1200 GMT 22 Oct 83]

CSO: 5400/4350

MYSTERY DISEASE KILLS PRETORIA GIRAFFES

Cape Town THE CAPE TIMES in English 27 Oct 83 p 10

[Text]

JOHANNESBURG. — All the giraffes in the Pretoria Zoo have died in the past six months of a mysterious disease which appears to have also wiped out seven giraffes at the Baltimore Zoo in Maryland.

The veterinarian from the Pretoria Zoo, Dr H Ebedes, said all three of the zoo's giraffes had died in May, June and September respectively and he was not sure of the cause of the deaths.

"They usually start getting very thin and lethargic and then they suddenly die. Autopsies have revealed lung and liver complications," he said.

The director of the Baltimore Zoo, Mr Brian Rutledge, said seven of the zoo's nine Angolan giraffes had died and the Pretoria Zoo had reported a similar syndrome.

"A blood parasite is suspected but we don't have proof yet," he said.

Laboratories at Onderstepoort, Pretoria, and the Baltimore Zoo authorities have collaborated in a project to determine the causes of

the illness which, Dr Ebedes said, was not infectious.

"Onderstepoort has requested the veterinary faculty at the Baltimore Zoo to send specimens of various organs which are to be compared with the organs of our giraffes," he said.

"It is certainly a shocking situation which we are very concerned about and we hope to find a solution to the problem which we believe is connected to nutrition of the giraffes."

He added that giraffes were specialized feeders and required a high protein and vitamin A content from a variety of leaves which could not always be provided in the winter months.

The curator from the Johannesburg Zoo, Mr W Labuscagne, said neither of the zoo's two giraffes had been affected by the disease.

"We are extremely aware of the epidemic which has affected the Pretoria Zoo's giraffe population but so far our giraffes are doing well."

## DRIVE UNDERWAY TO FENCE OFF FOOT-AND-MOUTH DISEASE

Harare THE HERALD in English 6 Oct 83 p 3

[Text]

WORKMEN in the south-east and north-west of Zimbabwe are erecting over 2 000 km of fences to cut off thousands of square km of foot-and-mouth disease areas to allow the cattle industry to take a slice of the lucrative European beef market.

Outbreaks of foot-and-mouth have already pushed back the starting date for Zimbabwe's beef marketing drive in the European Community to July next year, and the massive operation now being undertaken is in line with stringent EC requirements, designed to protect cattle there from the disease.

Agreements have already been signed, under the Lome Convention which gives a selected group of Third World countries protection from the normally high European tariffs, to allow Zimbabwe to export 8 100

tonnes of high quality boneless beef to Europe.

Senator Denis Norman, the Minister of Agriculture, has estimated the country could earn up to \$70 million in foreign currency annually from the EC market.

The aim of the operation, estimated to cost about \$2.2 million, is to first isolate foot-and-mouth carrying buffalo inside the Hwange and Gona reZhou national parks, then to establish "vaccination zones" where all cattle will have to be vaccinated against the disease twice a year. Finally, buffer zones are to be set up which will serve as quarantine areas for cattle moving from the vaccination zones.

A buffalo eradication programme on the commercial farms and communal areas in the Lowveld and the north-west, began three years ago has all but ensured that the animals exist only inside the Hwange and Gona reZhou national parks.

In the south-east the first fence — 10 strands of high-tensile steel wire 2m high and supported by heavy duty steel poles — is designed to stop game from crossing the boundaries of the national parks, at a cost of \$6 240 per km.

The second and third fences dividing the vaccination and buffer zones, will be ordinary five strand cattle fences, at \$600 per km.

The only cattle that can move directly out of the vaccination zones will be those intended for slaughter and then only at the Masvingo and Bulawayo abattoirs.

For vaccinated cattle to move out of the zone for sale or stud, they will have to stay in the buffer zone in quarantine for a "considerable period" to ensure there was no chance of carrier animals moving into the "safe" area outside the fences, said veterinary services director Dr Jimmy Thompson. — Ziana.

CSO: 5400/28

CONCERN OVER SMUT DISEASE BRINGS CALL FOR ACTION

Experts' Recommendations

Bridgetown BARBADOS ADVOCATE in English 10 Oct 83 p 1

[Text] It has been suggested that strong action be taken against those farmers who persisted in cultivating a variety of sugar canes that is susceptible to smut disease.

A team of agricultural experts suggested that the authorities make Smut a "notifiable disease" and through legislation prosecute land owners who continued to grow the variety B49119 which is spreading the disease.

The suggestion was one of two options put forward by the team from the Sugar Cane Variety Testing Station and the Ministry of Agriculture.

The other option was to seek the co-operation of landowners to remove every stool of B49119 which the experts said was still scattered "not only in abandoned areas but also in both large and small cultivations" throughout the island.

Whatever the form this option is the obvious one to be desired, they said, since if Government was forced to destroy infected plants charges were bound to be levied for the services.

The officials contended those areas were affected with smut and the variety producing an excessive amount of spores which had started to affect not only newer cane varieties, notably B 73385 and B 72177 but the older varieties, B 62163 and B 63118 as well.

Smut is latest addition to the string of problems which have been confronting the sugar sector in three straight years has produced less than 100 000 tonnes of sugar.

The industry has had to be rescued last year with the injection of a \$20 million soft loan price support mechanism and indications are that further assistance will be given.

The experts, in looking at the 1983 crop, said the poor performance was as a result of a near 10 per cent reduction in acreage harvested and extensive fires.

## Spread of Disease

Bridgetown BARBADOS ADVOCATE in English 11 Oct 83 p 1

[Text] A team of experts has reported that the dreaded smut disease had become more widespread and was causing tolerant varieties of sugar cane to show symptoms of the disease.

In addition the Variety Testing Station has accepted some of the blame levelled against it for spreading the disease.

The team comprising representatives from the station and the Ministry of Agriculture reported that from a survey currently going on it was fairly common to find symptoms on the variety B62163 which was not the case a year or two ago.

It was also very common they said, to find symptoms on two of the newer promising varieties B72177 and B73385.

According to the team: "This is most worrying since it indicates that far from controlling the disease it has become more wide spread with a higher spore level causing tolerant varieties to show symptoms."

The team also reported that there was sufficient evidence to lay a lot of blame of this condition on rogue stools of B49119 and to a lesser extent B4744 which continued to shower the surrounding areas with smut spores.

The experts pointed out there were about 350 acres of B7316 which was too susceptible to the disease to be cultivated under the present conditions and spores released from infected stools of this variety has undoubtedly added to the problem. [as published]

Smut, a disease which has the potentation to destroy an entire sugar crop, reared its ugly head in some canefields and the station had been blamed for spreading the disease through the planting of untested varieties in trials throughout the island. [as published]

"This accusation is to some extent certainly true since many varieties in trials have displayed severe symptoms," the three officers reported.

However, they said that steps will be taken to eliminate the most susceptible varieties before being extended into trials on the estates.

CSO: 5400/7509



## COFFEE RUST ERADICATION EFFORT BEGINS

Bogota EL TIEMPO in Spanish 24 Oct 83 pp 1, 7A

[Article by Jose Ramon Nunez]

[Excerpts] Some 15 million coffee trees on 300 plantations located in the country's richest productive area, Chinchina, Caldas, were sprayed between Saturday and yesterday in the first air assault on the dreaded rust.

The operation cost 21 million pesos and for at least a month, rubiaceous plantations will be able to defend themselves against the fungus, which will no longer be able to develop with the mortal speed that is characteristic.

However, only hours previously a new center of infection was discovered on a plantation in Santa Rosa de Cabal, marking a dangerous advance of the disease toward the south.

Two helicopters carried out the spraying of the rich territory, operating out of a rudimentary base of operations set up on the soccer field of the CENICAFE [Coffee Research Center] experimental farm.

Dozens of flights were made. When the program comes to a close -- it will continue all next weekend -- it will have covered the 3,000 hectares making up the country's most famous coffee belt.

In the first phase, the work lasted over 12 hours. Drops of copper oxychloride and "Bayleton" fell on the threatened leaves and red berries and the atmosphere was heavy with the smell of chemicals.

On Saturday morning, the harvesters -- now the worst carriers of the uncontrollable spores -- returned to their villages, crowded together like tired campers, and the plantations were quiet, the perfect time for technicians in charge of the spraying program.

### New Outbreak

Rust has now reached 32 fertile coffee plantations in Viejo Caldas. The properties are in Chinchina, Palestina and Santa Rosa de Cabal. Some 48,000 plants are affected, of which 36,500 have already been treated with Gramoxone, a mixture whose main active element is the feared paraquat.

When the technicians began their labors on Saturday morning, they were told that another outbreak had been discovered in Santa Rosa de Cabal on the plantation known as La Guaca, belonging to Dario Gomez, now another banned area.

The rust must be scattered over 8,000 hectares, which is what concerns the technicians. The entire coffee zone is therefore considered in danger. The fungus can jump from one plantation to another at any time, whence the importance of the preventive spraying that has been begun.

#### Andean Cooperation

The spraying program which began on Saturday is being financed with funds from the Cartagena Accord and the National Federation of Coffee Growers.

Some \$50,000 are being contributed by the Andean Group in connection with a plan drawn up by ministers of agriculture several years ago aimed at joining funds and technical efforts to fight plant diseases and pests.

In the midst of the current commercial crisis facing the subregion, it can be said that this program is the only one reminiscent of the existence of integration.

11,464

CSO: 5400/2013

## PUNJAB HARYANA RICE STRUCK BY BACTERIAL BLIGHT

New Delhi PATRIOT in English 23 Oct 83 p 12

[Text]

Farmers in Punjab and Haryana growing rice varieties supplied by the Indian Agricultural Research Institute (IARI) are now in panic because majority of their crops have been struck by the deadly bacterial leaf blight (BLB) agricultural sources in New Delhi told PTL.

The varieties have been identified as Pusa-150 Pusa-169, and Pusa-3 though these were not formally released by the Central Varieties Release Committee, they were being supplied to farmers by the IARI regional field station in Karnal.

All these varieties have been found to be susceptible to BLB.

The IARI varieties cover 30 per cent of rice fields in the States.

Another variety, FR-106 released by the State Government has also been struck by the disease. The FR-106 variety covers 70 per cent of the rice fields, the sources said.

According to scientists of the ICAR the disease is caused by the bacteria, 'xanthomonas oryzae'.

They said the deadly bacteria remain inside seeds for a very long

time and sale of such seeds to farmers will help spread the disease throughout the States.

Chemicals and fungicides are unhelpful as the bacteria remain inside the seeds scientists said. Whenever the environment is congenial the disease erupts and leaves start drying up from the tip. In severe cases of infection, the whole plant gets dried up and no grain is formed.

Scientists said that irrigation and fertilizers only speed up the progress of the disease.

With the propagation of seeds from farmer to farmer, the seed-borne disease may spread to more and more fields, it is learned.

The disease, unless checked immediately, will spread over the two States in the coming years. The only way to stop this dangerous trend is to ensure that rice varieties are resistant to BLB before releasing them to farmers.

The disease has been known to occur in eastern and southern States is rare in Haryana and Punjab which are relatively new to intensive rice cultivation.

CSO: 5400/7039

## PTI REPORTS SERIOUS THREAT TO NORTH INDIA MANGO

New Delhi PATRIOT in English 15 Oct 83 p 4

[Text] THE "malformation" in mango--a malady which prevents formation of fruits, is posing a serious threat to this national fruit in northern India. The disease is reported to be spreading to other parts of the country, reports PTI.

The disease has become a drain on the economy of Uttar Pradesh, Bihar Punjab and Haryana, according to an expert of the Indian Agricultural Research Institute (IARI) here.

The entire Indo-Gangetic plains boasting of some of the best orchard handed down from the days of the Moghul emperors are now victims of this malady.

The famous mango varieties, 'Langra', 'Dassehari' and 'Chausa' are susceptible to it. Even the newly evolved hybrids 'Malika' and 'Amrapali' have not escaped the wrath of this disease.

Dr V N Madhava Rao, former dean and professor of horticulture, Tamilnadu Agricultural University, said that the malformation is manifest both on the shoots as well as flower clusters and individual flowers. As the name indicates, shoots and flower clusters become malformed with stunted leaves, flowers and its stalks giving a 'rosette' like appearance.

The floral malformation is particularly dangerous because the affected parts are the flower clusters which become atrophied, and functionally sterile. Once the disease makes its appearance, there is no way of stopping it, Dr Rao said.

Scientists have been waging an unceasing battle against it. Several claims have also been made regarding the cause of this disease, but there is no let up so far, the expert said.

He said, Indian Council of Agricultural Research has taken special steps to investigate this disorder but work done in the last two decades is still inconclusive.

It was first attributed to a virus disease, later, entomologists ascribed it to mites. But plant pathologists traced it to a fungus (*fusarium* sp). On the

other hand, horticulturists and physiologists believed it was due to imbalance and claimed it could be cured through hormonal sprays.

Dr Rao said there is hardly any good mango variety in northern India which is resistant to this disease. As yet, no hybrid has been produced which is even tolerant to this not to speak of resistance.

The expert at IARI said that the disease can be prevented by the spray of a naphthalene acetic acid (NAA) at the time of fruit differentiation. It can also be controlled by 'deplasmimg' panicle when it is one to two centimetre long, he said.

CSO: 5400/7035

WORMS DESTROY COFFEE PLANTS IN ACEH

Surabaya SURABAYA POST in Indonesian 1 Oct 83 p 8

[Article: "Thousands of Hectares of Coffee Plants in Aceh Attacked by Worms"]

[Text] Banda Aceh--Thousands of hectares of smallholder coffee plants in the Pantee Purba Ligan area of Sampoiniet District, West Aceh Regency, have been attacked by worms, with the result that the 1982-83 harvest is a failure.

The worm attack, which occurred 2 months ago in that area, began with the yellowing of the leaves on the coffee plants. A few days later the leaves dried up and began to fall off the plants, while the branches of the plants had holes bored in them by the worms.

Pantee Purba Ligan is located 112 kilometers West of Banda Aceh. It consists of four villages with a total population of 6,500 people. Many of the people of the area make their living as farmers, producing both coffee and cloves, while a small number of people are merchants.

Tengku Ismail Adamy, a community leader and an early figure in the struggle for independence in the Pantee Purba Ligan area, said that the disaster which has affected the coffee growers of the region is really a matter for concern.

The coffee plantations in the area are estimated to cover 9,500 hectares, with annual production exceeding 20 tons of coffee. Meanwhile, efforts to wipe out the worms affecting the coffee plants are still made in the traditional way and often bring no results.

The future of the coffee planters in the area has been brought to the attention of the chief of Sampoiniet District in Lhok Kruet, West Aceh Regency. However, up to the present nothing has been done to deal with the problem.

Increasingly Serious

Tengku Ismail Adamy also said that the plague of worms mentioned above is becoming increasingly serious. At present 5 hectares of smallholder clove plants are

beginning to be affected, and the condition of the branches of the clove plants is the same as that of the coffee plants.

As a result of the fact that the plague of worms has not been dealt with the coffee and clove farmers of the Pantee Purba Ligan area are becoming increasingly concerned because there seems to be no one in authority who can resolve the problem.

Ibrahim Ali, the chief of Sampoiniet District, when he was contacted by an ANTARA representative, did not deny that there is a plague of worms which is spreading and which is attacking smallholder coffee plants.

He was not prepared to discuss what will be done to overcome the worm attacks against the farmers' coffee and clove plants in the area.

5170  
CSO: 5400/4325

## BRIEFS

HAIPHONG RICE PEST CONTROL--In Haiphong's suburban districts of An Hai, Kien An, Thuy Nguyen, Tien Lang, Do Son and so forth, various rice pests have appeared harming the 10th month rice, especially brown leafhoppers, which have been proliferating on Moc Tuyen and BR-2 rice fields. According to reports by the municipal vegetation protection service, the brown leafhopper density has already reached 5,000 per square meter on the pest-afflicted Moc Tuyen rice, and other types of rice pests may further develop in late October. The suburban districts have guided cooperatives in mobilizing their forces, insecticides, and other facilities to combat the brown leafhoppers. They daily keep the cooperatives informed of the rice pest situation and provide them with guidance in tending and protecting the 10th-month rice until harvest. They have also provided them with an additional 3 tons of fuel to help the peasants in combating the rice pests. [Text] [Hanoi Domestic Service in Vietnamese 1100 GMT 25 Oct 83 OW]

INSECT, RAT PROBLEMS--Although the area of rice affected by insects has become smaller compared with last week, as many as 150,000 hectares of 10th-month rice, including some 60,000 hectares in the north, are still being ravaged by insects, particularly by army worms and planthoppers. Apart from being affected by insects, this rice has also been ravaged by rats in certain localities. Insects have also appeared on the newly-planted 10th-month rice in the south. In Minh Hai alone, the area of rice affected by brown planthoppers and stem borers has reached 15,000 hectares. All localities in the south are now concentrating efforts on protecting rice against these insects. [Text] [Hanoi Domestic Service in Vietnamese 2300 GMT 31 Oct 83]

INSECTS AND DISEASES AFFECT CROPS--Rain has reduced the rice area infested with harmful insects and diseases by more than 125,000 hectares compared with the previous week. Some 200,000 hectares of 10th-month rice, mainly in the northern provinces, have been affected by harmful worms, showing that the degree of insect infestation is 4.7 times higher than in the corresponding period of the previous 10th-month crop. From 22,000 to 26,000 hectares of ricefields in each of the provinces of Hai Hung, Ha Bac, and Hghe Tinh have been attacked by harmful insects. [Text] [OW270063 Hanoi Domestic Service in Vietnamese 1100 GMT 20 Oct 83]

MEKONG DELTA INSECT INFESTATION--More than 250,000 hectares of late summer-fall rice and 10th-month rice in various provinces in the Mekong River Delta are being heavily ravaged by insects. These provinces have done everything they can to eradicate the insects and have succeeded in saving more than 150,000 hectares of rice from being destroyed by insects. [Summary] Hanoi Domestic Service in Vietnamese 2300 GMT 20 Oct 83 BK]