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# Worldwide Report

EPIDEMIOLOGY

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WORLDWIDE REPORT  
EPIDEMIOLOGY

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INDIA

## STUDY REPORTS STATISTICS ON ACTIVE TUBERCULOSIS

New Delhi PATRIOT in English 8 Sep 84 p 5

[Text] An estimated 20,000 radiologically active cases of tuberculosis can be found in an average district with a population of 1.5 million in the country, according to an official study, reports PTI.

Of these 5000 cases are infectious at any given time. As per the 1981 census, nearly 10 million persons were suffering from radiologically active disease of lungs, of which 2.5 million were sputum positive or infectious.

It is further estimated that nearly 50 per cent of the total population in the country is infected with tubercle bacilli though apparently healthy. The mortality rate is estimated to be 80 to 100 per one lakh of population.

The prevalence rate of TB is of the same order in rural and urban areas, though it is higher in thickly populated areas.

The national tuberculosis programme is aimed at controlling the disease by extensive detection of cases through a network of district TB centres, both to cure and prevent spread of infectious cases.

Nearly 10.8 lakh TB cases were detected during 1982-83 as against the target of 10 lakh. During 1983-84, detection was 12.08 lakh as against the target of 12.50 lakh.

Maharashtra topped the detection drive during 1983-84 by achieving 149.6 per cent of its target followed by Tripura (131.8 per cent), Himachal Pradesh (112.19 per cent) and Punjab (110.7 per cent).

The case detection target for 1984-85 is 13.75 lakh. Meanwhile, a short course chemotherapy drug regimen containing rifampicin and isoniazid is being introduced on a pilot basis for the control of the disease in eight districts.

The districts are: North Arcot (Tamil Nadu), Nagpur (Maharashtra), Puri (Orissa), Karnal (Haryana), Kanpur (U.P.), Pondicherry, Vidisha (Madhya Pradesh), and Baroda (Gujarat).

## STATISTICS ON CHOLERA, ENTERIC DISEASES IN CALCUTTA

Calcutta THE TELEGRAPH in English 12 Sep 84 p 2

[Text]

Calcutta, Sept. 11: Gastro-enteritis claimed 12 more lives at the Infectious Diseases Hospital at Beliaghata over the past six days, raising the number of deaths this month at the hospital to 22. Of the 589 patients admitted in September, about 200 are from the 24-Parganas, Howrah and Dum Dum and the rest from the city, sources at the hospital said.

One bacillary dysentery death was reported from the Narkeldanga area on August 7, while most of the gastro-enteritis cases were in Tiljala, Topsia, Tangra, Beliaghata, Canal East Raod, Narkeldanga and Raja Bazar. Some cases were also reported from Tollygunge and Lake Gardens in south Calcutta. The hospital sources said the "waterborne disease" had also affected the Entally area and at least 10 patients are admitted from there each day.

"Germs of cholera and Shigella Type-1 have been detected in stool samples sent to the National Institute of Cholera and Enteric Disease," the hospital sources added.

However, the Calcutta Municipal Corporation's (CMC) chief health officer, Dr S. Chowdhury asserted that trend in the city was "not alarming." He alleged that the Infectious Diseases Hospital was maintaining "false statistics" on the number of gastro-enteritis patients in the city and added that the maximum number of such cases were reported

from the suburbs.

Dr Chowdhury said the number of gastro-enteritis cases in the city had fallen significantly over the past seven years. According to the CMC's health department reports, the death rate had been brought down to 500 per year against 1,000 deaths in 1977. However, at least 60 of the 1,800 gastro-enteritis patients at the Infectious Diseases Hospital died last month, indicating a death rate of 720 a year.

Dr Chowdhury also claimed that the Corporation was carrying on intensive inoculation drives in the city slums and over 200 packets of Oral Rehydration Salt (ORS) were being distributed each day.

But official at the Corporation's vaccination centre revealed that the number of people inoculated against cholera each day had fallen to a few hundreds over the last few months against an earlier record of 5,000 inoculations.

The drive has been hampered by the breakdown of a van which transports the inoculation teams and inadequate staff. The drive also remained suspended during the 10-day strike at the Corporation.

An official of the health department said the needles used for inoculation were "not properly disinfected." According to him, 500 persons are inoculated with one needle and only seven needles are provided per month to the vaccination centres by the civic body.



## CONCERN OVER OUTBREAK OF KALA-AZAR IN WEST BENGAL

Calcutta THE STATESMAN in English 15 Sep 84 p 13

[Text] THE West Bengal Health Department is concerned over the outbreak of kala-azar in the districts of West Dinajpur, Malda, Murshidabad and 24-Parganas. Already 1,559 cases of kala-azar have been detected in West Dinajpur, 159 in Malda, 342 in Murshidabad and 32 in 24-Parganas till July. There has been no report of death so far.

Officials of the Health Department said on Friday that the disease was believed to have spread in West Dinajpur from the adjoining districts of Katihar and Purnea in Bihar. In Purnea, 1,662 cases of kala-azar attacks were reported till April this year in which six people had died. In Katihar, 354 attacks and two deaths were reported during the same period. Last year, 5,527 kala-azar attacks and 23 deaths were reported from Purnea and 1,423 attacks and two deaths were reported from Katihar.

The State Health officials recently held a meeting in Calcutta with their counterparts in Bihar for coordinating efforts to check the spread of the disease. The Bihar officials stated at the meeting that kala-azar had also spread to Santhal Pargana and Dhanbad. It is felt that the disease had spread to Malda and Murshidabad from the affected areas in Santhal Pargana. In the 24-Parganas, kala-azar cases were reported from the Barrackpore and Sandeshkhali areas only.

The re-appearance of kala-azar in West Bengal was first noticed in 1975-76. But the disease started spreading alarmingly since 1982 when 1,234 people were afflicted by the disease and three of them died. In 1983, seven deaths were reported against 2,700 cases of kala-azar attacks in the State.

A senior official of the State Health Department denied that the supply of the principal drug, stibionate, was inadequate in the affected districts. He said the problem was not the short supply of the drug but to induce the kala-azar patients, who were mostly poor tribals living in remote villages, to come to the health centres and undergo treatment. He said that steps had been taken to destroy "sand flies", the chief carrier of the disease, in the affected districts.

CSO: 5450/0019

INDIA

BRIEFS

MADHYA PRADESH DYSENTERY DEATHS--Bhopal, Sept 14 (UNI)--Nineteen people have died of dysentery in Konta tehsil in the tribal district of Bastar in Madhya Pradesh, during the past one and a half months, official sources said. The deaths were reported in the Sukma Primary Health Centre (SPHC) area between 19 July and 5 September, Dr Ishwar Das, Principal Secretary, health, Madhya Pradesh Government, told UNI. [Text] [New Delhi PATRIOT in English 15 Sep 84 p 6]

CSO: 5450/0020

LIBERIA

BRIEFS

MEASLES OUTBREAK--An outbreak of measles in Lofa County is reported to have claimed several lives. Today's DAILY OBSERVER quoted missionary sources as saying that up to 100 people have died so far as a result of the outbreak. But confirming report of the outbreak, officials of the Health Ministry said that the information was that 25 persons have died so far. The DAILY OBSERVER stated that so far the measles outbreak is said to have affected Fasima and Bolema, two towns in the vicinity of Belle Yella. The OBSERVER quoted the chief medical officer for preventive services, Dr Mortekeh Galekpah, as saying that the Ministry of Health has already dispatched a team to the area to assess the problem and report back to his office by the end of the week. [Text] [Monrovia Radio ELWA in English 1600 GMT 20 Sep 83 AB]

CSO: 5400/16

## BRIEFS

DENGUE FEVER IN TERENGGANU--KUALA TERENGGANU, Thurs.--A total of 16 cases of dengue fever were reported in Terengganu in the first eight months of this year. State Medical and Health Services director Dr Che Ros Mohamed Nor said today. The latest case was that of a 28-year-old woman from Kampung Tok Jembal who was admitted to hospital in May. He said the dengue situation in Terengganu was "not so grave" and his department was carrying out periodic door-to-door checks to destroy aedes mosquito breeding grounds. Out of 53,172 houses checked so far, 930 were given warning letters and 34 house owners or chief tenants fined for not heeding the warning. He advised the people to report suspected dengue cases in their areas and to keep their compounds clean to prevent the breeding of aedes mosquito. [Text] [Kuala Lumpur NEW STRAITS TIMES in English 21 Sep 84 p 6]

TYPHOID IN KELANTAN--PASIR PUTEH, Tues.--A total of 17 typhoid cases, all primary and secondary school pupils, were reported in this district this month. A spokesman of the health centre here said today they were admitted to several hospitals in Kelantan. Most of them had recovered and sent home, he said. He added that the health authorities had taken several steps to prevent further outbreak of the disease, including checks on school canteens, giving talks on preventive measures to the public and chlorinating wells. [Text] [Kuala Lumpur NEW STRAITS TIMES in English 26 Sep 84 p 6]

DENGUE IN SARAWAK--KUCHING, Tues.--Another case of suspected dengue haemorrhagic fever (DHF) was reported in the state today, bringing to 461 the number of such cases so far this year. The latest victim is a 15-year-old student from Sungai Mador, Bintangor, in the Sixth Division who was admitted to the Sarikel district hospital. A Medical and Health Department spokesman said the number of confirmed cases stood at 47 with two deaths. [Text] [Kuala Lumpur NEW STRAITS TIMES in English 26 Sep 84 p 7]

CHOLERA IN SABAH--KOTA KINABALU, Sat.--Eight cases of cholera were reported in Sabah last week, bringing the total number of such cases to 25 so far this year. Deputy Director of State Health and Medical Services Dr Naranjan Singh said in a statement today three of the cases were reported in Penampang and five in Kota Kinabalu. Two healthy carriers were also detected in a kongsi house at a construction site in Kampung Sembulan. [Text] [Kuala Lumpur NEW STRAITS TIMES in English 30 Sep 84 p 11]

CHOLERA STAGES SABAH COMEBACK--KOTA KINABALU--Cholera has reappeared in Sabah after the state was free of the disease in the first half of the year. Since July there have been 25 cases, all of them on the West Coast--seven affected localities in Kota Kinabalu, three in Penampang and one in Tuaran. But the Deputy Director of the Health Department, Dr Narajan Singh, says the total is considerably down on the corresponding period last year. He added that his department is closely monitoring the situation and all other authorities, and the public, are being urged to co-operate in efforts to stop the disease again. [Text] [Kuala Belait BORNEO BULLETIN in English 6 Oct 84 p 2]

CSO: 5400/4316

HEPATITIS GENES SUBCLONED

Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese No 3, Jun 84 pp 190-192

[Article by Ma Qingjun [7456 3237 6874], Zhou Jianguang [0719 1696 0342] and Liu Chuanxuan [0491 0278 2537], et al., all of the Institute of Basic Medical Sciences, Academy of Military Medical Sciences, Beijing: "Subcloning Hepatitis B Virus Genes by Homopolymer Tailing"]

[Summary] The duplex DNAs were tailed with oligo(dC) or (dG) at both exposed and shielded 3'-OH termini by terminal deoxynucleotidyl transferase (TdT). It was estimated that about 20-30 (dG) were added to the 3'-ends of PstI-cut plasmid pBR322 DNA and the same number of (dC) to the 3'-ends of EcoRI-cleaved HBV genome under the conditions used. The recombinant plasmid was successfully constructed by annealing the tailed DNAs and then introducing them to E. coli RRI cells. The transformants were screened by means of in situ hybridization with <sup>32</sup>P-dA TP labeled HBV probe and the size of the recombinant plasmid was determined by electrophoresis. As a result, 40 positive clones have been obtained. Of the 40 clones, only one expressed the HBV surface antigens and another expressed the core antigens, but responses were weak and variable in solid-phase radioimmunoassay and reversed passive indirect hemagglutination.

9717

CSO: 5400/4155

ANTIGEN HYBRIDOMAS DEVELOPED, ANALYZED

Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese No 3, Jun 84 pp 137-140

[Article by Wang Yanfei [3769 7159 7378], Cancer Institute, Chinese Academy of Medical Sciences, Beijing; Rich Titus and Jack Louis, both of the WHO Immunology Research and Training Center, Lausanne/Geneva, Switzerland; and Silva Tito, Swiss Institute for Experimental Cancer Research, Lausanne, Switzerland: "Antigen Specific T Helper Hybridomas"]

[Summary] T-cell hybridomas which express specificity for *Leishmania tropica* antigens have been developed and analyzed. Somatic cell hybrids were prepared between a thymoma cell line BW5147 and T lymphoblast from CBA mouse sensitized with *Leishmania* antigen. T-cell hybrids 4 B 11, 5 D 7, 4 C 7 expressed both parental surface marker Thy1, 1 and Thy1, 2. They exhibited *Leishmania* antigen specific T helper activity which was mouse H-2 restricted. The helper activity of T-cell hybridomas in B-cell response to a hapten-carrier system needed only the signal from *Leishmania* antigen stimulation, which was not dependent upon the addition of non-specific factors and not related to MAF, IL-2, IFN lymphokines production. The significance of obtaining antigen specific T helper hybridomas in immunological regulation of T-cells and *Leishmaniasis* research are briefly discussed.

CSO: 5400/4155

ANTIGENIC VARIATIONS OF INFLUENZA VIRUSES STUDIED

Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese No 3, Jun 84 pp 157-160

[Article by Wu Siping [0702 1835 1627] and Zhu Jiming [2612 2478 2494], both of the Institute of Virology, China National Center for Preventive Medicine, Beijing: "Antigenic Variation and Temperature-Sensitivity of Influenza B Viruses Isolated in China"]

[Summary] The antigenic relationship between the surface antigens of 28 strains of influenza B viruses isolated in China and abroad from 1940 to 1980 were studied by hemagglutination inhibition test, single haemolysis test and neuraminidase inhibition test, using chicked antisera. Some of the strains were also studied by double immuno-diffusion and hemagglutination tests with monoclonal antibodies. Antigenic drift of both HA and NA proceeded sequentially in four stages. It is postulated that the type B strains, prevalent from 1971 to 1980 and related to B/HK/5/72, may have originated as antigenic recombinants of B/TW/2/62-like virus (providing HA) and such strains as B/Victoria/98926/70 (providing NA). The results of determination of EID<sub>50</sub> and PFU of a member of strains on chicken embryo fibroblast cell cultures at different temperatures suggest that sensitivity to temperature is a characteristic common to all influenza B viruses.

CSO: 5400/4155



ATTENUATION OF RUBELLA VIRUS OBSERVED

Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese No 3, Jun 84 pp 161-164

[Article by Zhao Kai [6392 6963], Han Yaru [7281 7161 0320] and Hao Sulan [6787 4790 5695], et al., all of the National Vaccine and Serum Institute, Beijing; et al.: "Observation on the Attenuation of Rubella Virus Strain BRD II"]

[Summary] In order to obtain an attenuated strain for the preparation of rubella vaccine, the D strain of rubella virus was passaged at 30°C on 2BS human diploid cells (HDC). The data obtained in this study indicate that low temperature passages at 30°C on HDC cultures result in rapid attenuation of the rubella virus.

The BRD II strain we obtained by making 12 passages on HDC cultures at 30°C was shown to meet three main clinical criteria for a live attenuated rubella virus vaccine: good immunogenicity, low reactogenicity and non-communicability. From the results obtained, we come to the conclusion that the BRD II strain could be used for vaccine production.

CSO: 5400/4155

DETECTION, ANALYSIS OF PLASMIDS PROCEDURE DESCRIBED

Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese No 3, Jun 84 pp 185-186

[Article by Yu Xiuqin [0060 4423 3830], Zhou Jianguang [0719 1696 0342] and Ma Qingjun [7456 3237 6874], all of the Institute of Basic Medical Sciences, Academy of Military Medical Sciences: "Simple and Rapid Procedure for Detection and Enzymatic Analysis of Plasmids"]

[Summary] A method for rapid isolation and detection of plasmids is described. The bacterial colonies potentially harboring plasmids were suspended in lysozyme STET, then lysed by boiling and placed into slots of an agarose gel. After electrophoresis, the gel was stained with Et-Br, which can reveal any plasmid under long wave UV lamp. This method was found to be simple, rapid and reproducible, and can be used for the isolation of DNA from various bacteria. The DNA prepared in this way is not very pure, but is pure enough for most direct enzymatic analysis.

CSO: 5400/4155

RENAL HEMORRHAGIC FEVER ANTIBODIES ESTABLISHED, IDENTIFIED

Beijing JIEFANGJUN YIXUE ZAZHI [MEDICAL JOURNAL OF CHINESE PEOPLE'S LIBERATION ARMY] in Chinese No 4, 20 Aug 84 pp 241-244

[Article by An Xianlu [1344 3759 4389], Xu Zhikai [1776 1807 0418], Li Enshan [2621 1869 0810], Zhen Rongfen [3914 2837 5358] and Director Wang Meixian [3076 5019 0341], all of the Fourth Military Medical College, Xi'an; Jiang Kejian [1203 0344 0313] and Gan Rihuai [3927 2480 2037], both of the Health and Anti-epidemic Station, Xi'an, Shanxi: "Establishment and Identification of Hybridoma Cell of Monoclonal Antibodies for Virus of Hemorrhagic Fever with Renal Syndrome (HFRS)"]

[Summary] Ten hybridoma cell lines secreting monoclonal antibodies (McAb) against HFRS virus were obtained by fusion of SP2/0 mice myeloma cells with spleen cells from BALB/C mice or CxS/2 mice immunized with the HFRS virus of strain 82-010H isolated in Shanxi. McAb 4B<sub>9</sub> and 3H<sub>4</sub> were detected with 16 antigen slices prepared with HFRS virus isolated from different areas by indirect immunofluorescent test. McAb 4B<sub>9</sub> showed positive immunofluorescent reaction to the virus strains from heavy HFRS endemic areas (Apodemus agrarius type), but negative to those from light HFRS endemic areas (R. norvegicus type and Apodemus speciosus peninsulac type). McAb 3H<sub>4</sub> was able to distinguish further the virus strains from heavy or light HFRS endemic areas. It may be useful for the typing of HFRS virus serotype or analysis of antigens and, also, epidemiologic investigation.

CSO: 5400/4102

DENGUE VIRUS ISOLATES RAPIDLY IDENTIFIED

Beijing JIEFANGJUN YIXUE ZAZHI [MEDICAL JOURNAL OF CHINESE PEOPLE'S LIBERATION ARMY] in Chinese No 4, 20 Aug 84 pp 245-247

[Article by Yan Guozhen [7051 0948 3791], Zhu Qingyu [4376 1987 0151] and Xu Pinfang [1776 0756 5364], et al., all of the Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences, Beijing: "Rapid Identification of Dengue Virus Isolates by Monoclonal Antibodies"]

[Summary] Thirty-one hybridoma cell lines with the ability of excreting monoclonal antibodies against one to four types of dengue virus have been successfully established by fusion of SP2/0 mouse myeloma cells and splenocytes from mice immunized with reference dengue virus. Antibodies produced by 17 of them were dengue serotype specific as determined by cross immunofluorescence assay. The highly specific results were obtained when 12 dengue virus isolates from various localities in China were rapidly identified by using 4 type-specific monoclonal antibodies under an indirect immunofluorescent assay. The results suggest that the acquired specific monoclonal antibodies can be used as an immunofluorescent diagnostic agent in the rapid identification for dengue virus isolates.

9717

CSO: 5400/4102

PERU

BRIEFS

YELLOW FEVER OUTBREAK--Lima--Peruvian health authorities have detected an outbreak of yellow fever or malaria in the Sullana Province in the northern department of Piura, where 7,600 cases have been reported so far, the region's medical chief, Dr Carlos Gonzalez, has reported. [Text] [Havana Television Service in Spanish 1318 GMT 1 Nov 84 FL]

CSO: 5400/2006

SINGAPORE FACES HEPATITIS-B THREAT

Kuching THE BORNEO POST in English 4 Oct 84 p 2

[Text] SINGAPORE, Wed.--There is increasing awareness of the threat posed by Hepatitis-B (HB) virus as 78 per cent of the world's population of carriers live in Asia. Companies here are planning to send their staff for HB tests and vaccinations.

Describing the move as "forward looking" the Singapore Biotech Pte Ltd's general manager, Dr Khong Peck Wah said here today that these companies were helping to curb the spread and reduce the incidence of HB infection in Singapore, where an estimated 10 per cent of the population are carriers.

Apart from causing cancer, of the liver, HB can also affect the kidneys and nervous system and can result in death although the morality rate is not very high.

Professor Oon Chong Jin, a local expert in HB and chairman of the national scientific advisory committee on hepatitis and related diseases told the rotary club yesterday that "companies should take steps towards screening to see who needs to be vaccinated."

Singapore Biotech, the fifth Asean industrial project started by the Singapore government and summit corporation of the United States to produce HB vaccine locally, has now offered screening services to the public at a nominal fee.

Professor Onn recommended that two tests be conducted, one to determine if a person was a carrier, and a second screening to test for HB antibodies.

"Nothing can be done, in terms of vaccination, for somebody who is a carrier as such people become carriers after being infected by the HB virus and consequently fail to develop antibodies against the virus," he said.

However, there are others with immunity systems which can develop antibodies against the HB virus after infection and these antibodies remain to prevent future infection.

Prof. Onn said these people also did not need to be vaccinated because of their natural immunisation.

People who needed vaccinations were those who had not come into contact with the HB virus, he added.

Following publicity in the local media of the threat of the HB virus last year about 10,000 people have received vaccinations so far.

The government is also embarking on an immunisation programme to vaccinate newborn babies whose mothers are carriers.

Prof. Oon said that local research was being carried to find out more about HB and what could be done about it.

To deal with the problem here, where one in 10 people were HB carriers, with immunisation programme, it had been envisaged that the situation could be brought under control in 50 years covering 90 per cent of the population, he added.

CSO: 5400/4313

YAWS WARNING ISSUED

Honiara SOLOMON STAR in English 14 Sep 84 p 5

[Text] The Ministry of Health and Medical Services in Honiara have notified all Provinces to watch out for yaws following the outbreak in the Western Province this year.

The Chief Medical Officer, Communicable Diseases Dr. N. Kere, told Solomon Star that serological tests taken at the Central Hospital had confirmed 33 positive cases.

"Many more positive cases are expected," said Dr Kere.

The cases confirmed came from Ranongga Island.

Dr Kere said his Ministry had not received any detail of how many cases there were so far identified, but there may be many more.

Health authorities in the Western Province have planned to visit everybody in the villages on Vella Lavella, Ranonga and Simbo.

A report from the Sunset News said every child under the age of 15 will have an injection of penicillin. Close contacts of those with the disease will have a shot, and adults with the disease will have two doses at once.

Several thousands vials of the drug have arrived in Gizo from Honiara for the campaign.

The report said three teams had travelled from Gizo Hospital to various areas.

Each team consist of a team leader, doctor or senior nurse, a nurse aid or a student nurse and a driver.

In most cases, the registered nurse from a nearby clinic would go with the teams.

Doctors say they do not know why the disease has returned but add that it has reappeared in other countries as well where it was thought to have been wiped out.



Dr Geoff Jones, who is co-ordinating the treatment and survey operation, said it is very important that the teams see every body on the three islands if they are to have a good chance at the controlling the disease.

Yaws is a highly infectious disease which causes sores and can have worse effects if untreated.

When yaws first strikes, victims often get small sores which can lead to large ulcers if not treated.

Pains in bones and joints can result.

Dr Jones said that the doctors are presuming initially that between five and 10 percent of the population has the disease, so they are following the World Health Organisation recommendations telling which people in which age groups should get drug treatment.

He said he hoped the campaign will be finished by November, by which time everybody would have seen the yaws team.

"Everybody's cooperation is required to ensure the success of this campaign," Dr. Jones said.

"It will involve a lot of time and work and a steady, efficient approach is essential," he said.

CSO: 5400/4314

SWAZILAND

BRIEFS

VD MOST COMMON DISEASE--Mbabane--Venereal disease has become the most common disease in Swaziland and is spreading faster than any other in the country. The acting director of medical services, Dr Mike Owen, was reported at the weekend as saying that 44 000 cases had been treated in the past 18 months. He said this was a "liberal" estimate and the actual figure could be much higher.--Sapa [Text] [Johannesburg SUNDAY EXPRESS in English 7 Oct 84 p 7]

CSO: 5400/21

BRIEFS

SUSPECTED DENGUE FEVER--WITHIN the last two weeks a virus, suspected to be Dengue Fever, has been rampant among students of the Mount Pleasant Government School, Claxton Bay. And according to concerned parents, "the school staff is unconcerned about our children's health." Reports reaching the EXPRESS San Fernando Desk stated that more than 15 students are at present suffering from such symptoms as fever, vomiting, dizziness, headaches and body pains. As a result, a number of students are being sent home daily due to their illness. One parent, whose son was one of the victims, blamed the insanitary conditions in and around the school for the sudden outbreak. She said "there is a section of the school that is infected with flies." When the EXPRESS San Fernando Desk visited the school yesterday, the principal refused to talk to the press, stating that he did not want any media representatives in his school, "unless the ministry sent them." He refused to comment on the issue, stating: "I have no use for the media. If something is wrong in my school, I will call on the relevant authorities to correct it." [Text] [Port-of-Spain EXPRESS in English 10 Oct 84 p 1]

CSO: 5440/009

ZAIRE

BRIEFS

VIRUS IN TANZANIAN SALT--Bukavu, 5 Oct (AZAP)--The head of the Zairian Control Office, OZAC, at Uvira, Citizen Muderhwa, has disclosed to the press that Tanzanian salt produced at the Uvinza salt mines has been banned from public consumption in Zaire because it contains an unidentified virus that is capable of creating an epidemic. This Tanzanian salt, which is produced at Nyanza, is as refined as sugar and is very white in color. Citizen Bagula Ba Nshembe, deputy head at the OZAC Import Control Department, began destroying 113 kilograms of salt at Bukavu and 138 others in Uvira, South Kivu, during the first fortnight in September, following extensive examination of this salt. Citizen Bagula Ba Nshembe took a sample to be analyzed by the OZAC laboratory in Kinshasa. [Text] [Kinshasa AZAP in French 0950 GMT 8 Oct 84]

CSO: 5400/8

SPREAD OF RABIES IN VICINITY OF TORONTO REPORTED

Toronto THE TORONTO STAR in English 10 Sep 84 p A6

[Article by Victoria Stevens]

[Excerpts] Metro health officials are warning people to be careful around wild animals after indications that a major outbreak of rabies in York region is spreading south.

Scarborough officials report a rabid fox crossed into Metro from Markham last Tuesday, attacked a dog tied in a backyard and tried to break through a screen door into the house.

It was the first incidence of rabid wildlife in Scarborough this year and "there will undoubtedly be more," the city's medical officer of health, Dr Keith Fitzgerald said.

He will be issuing warnings to Scarborough residents this week to watch their animals and to keep them tied up outside.

North York's public health department has sent out a news release warning people to keep away from wild or unfamiliar animals. The release asks the public to report any contact with suspected rabid animals, to keep pets inside at night and vaccinate them once a year.

So far this year, North York has had eight confirmed cases of rabid animals, as many as in all of 1983 and twice as many as in all other Metro municipalities this year.

34 Rabid Animals

But by far the worst situation is in York region, where officials confirmed 34 cases of rabid wildlife in July and August, 25 of them foxes.

The first reports of rabid foxes came from King township. However, a 4-year-old Richmond Hill boy is undergoing rabies treatments after being bitten by a rabid cat on a day-care centre playground last week.

Meanwhile, health and government officials are waiting to see if the epidemic has peaked and will die down or increase and spread into Metro.

This is the fifth major rabies outbreak in York region since 1958, but it's unusual for an outbreak in the summer, said Charles MacInnes, a supervisor with the wildlife research branch of the natural resources ministry in Maple.

Rabies in wildlife is traditionally at its worst in late fall and experts are unsure whether there will be another outbreak later this fall.

#### Definitely Spreading

But there's no question that rabies is spreading southward, said Dr John Hodgkinson, York region's associate medical officer of health. Rabid foxes have been reported south of Richmond Hill in Markham and Vaughan.

Dr Juergen Utpott of the veterinary inspection directorate of Agriculture Canada in Richmond Hill said the spread of the disease in wildlife appears to be moving from north-west to south-east.

Since Sept 1 there have been five more confirmed cases of rabies in York region, four of them foxes, he said.

The situation has brought calls from some local vets and the Ontario Veterinary Association to make rabies shots mandatory for domestic animals.

That move has been proposed in a regulation being circulated to Ontario's medical officers of health for comment. The regulation, which would be part of the new Health Protection and Promotion Act, would give medical officers of health the authority to make rabies vaccination compulsory in high-risk areas.

But Dr Al Evans, senior veterinary consultant with the health ministry, said the regulation is "still at the proposal stage" and the review will take several months.

#### Good Public Response

Hodgkinson said York region is investigating the legality of making rabies vaccinations for household pets mandatory in Richmond Hill, should the situation worsen, but he said the response of the public in voluntarily vaccinating their animals has been "very gratifying."

Officials in neighboring Peel and Durham regions are reporting no rabies problem in their municipalities and aside from North York, Metro's municipalities say they have no problem yet, although there is concern the disease may spread.

CSO: 5420/6

## 15,000 CATTLE DIE IN CAMAGUEY IN FIRST HALF OF 1984

Havana GRANMA in Spanish 9 Aug 84 p 3

[Text] Camaguey--There were 15,297 cattle deaths recorded in this province in the first 5 months of this year, that is, 2,788 more than projected for the period, of which 5,542 were calves, 4,718 were yearlings, and 5,037 were mature animals.

From the veterinarian standpoint, various factors were to blame for this unfortunate situation, most important of which were malnutrition, lung diseases and accidents arising from innumerable deficiencies due to carelessness and irresponsibility, and these were repeated in both cattle units of this location until they became a complex of problems. Worst of all was the number of deaths that have occurred.

Through a series of inspections conducted in the 18 cattle enterprises located in Camaguey Province to analyze cattle mortality, the personnel of the Camaguey Veterinary Medicine Institute (IMV) dealing with cattle-raising repeatedly made precise recommendations in every visit during 1983 and the current year. For the purpose of promoting pertinent measures, the IMV recommends preventive, curative and recuperative courses of action for animals of all ages, in order to prevent their affliction with diseases that ultimately kill them if the suggestions are not followed, and at the same time it has set up a network of hospitals for young animals and recuperative centers for adult cattle.

In light of the certain and serious fact that mortality was increasing, among the things detected and repeatedly examined are the ineffective control and deficiencies regarding waterholes and cattle dips, incorrect classification of cattle according to physical condition, misuse of the enclosure for antiparasitic treatment, and carelessness in preventive rotation. Additionally, insufficient supply of water, sick animals together with healthy ones, excess of "weaned" animals in the dairies, and mishandling of sick and healthy herds as regards hygiene and feeding.

The violations cited suffice by themselves to get an idea of what should be normally done and is not always done, but there is more with respect to negligence which, unfortunately, brought about losses in the cattle population and the dismissal of veterinarians, intermediate level technicians and

management personnel in the units and districts of some enterprises. Thus one can add the lack of shade in recuperative enclosures, poor preparation of the lactocream that is fed to the calves, inconsistency in the quantities provided and the schedules, failure to observe technical norms for the breeding of calves, evidence of animals with keratitis (not a few of which end up blind), crowding, failure to use cradles [cunas] in grazing, nonfulfillment of the zootechnica flow on account of excessive number of grazing calves, calves together with cows in pastures, calves afflicted with omphalophlebitis, deficiencies in protection against epizootic diseases, and animals unvaccinated against carbuncle.

Among the more common conditions that crop up in most enterprises every time a thorough study is made, there stand out the deficiency in the ingestion of colostrum by the calves, cows giving birth in pastures (where they remain with their young for 3 or more days), the presence of outside animals in state units, and the lack of a good inspection of 10 percent of a group of animals dipped against ticks 72 hours after the treatment, in order to verify its effectiveness.

#### Opinions

Dr Silvio Perez, IMV delegate in Camaguey, stressed as an alarming situation which persists in 1984 the losses inflicted on the Camaguey cattle population by hemoparasitosis, whose control does not meet the requirements and whose incidence remains considerable.

"This occurs despite the fact that material conditions at this time are better suited for the control of ticks and hemoparasitic diseases," he said. "Since the first quarter of this year, we have had a more effective product against ticks, an increase in the number of dips and of animals to be dipped, and more availability of specific medicines to control hemoparasitosis."

Dr Ricardo Ayala, assistant technical director of the IMV provincial delegation, reported that 105 sources of acarids have been detected so far this year, with 125,251 animals prone to be carriers, 5,913 sick, and 248 dead from that scourge of cattle raising. "I consider that the lack of effective control of ticks by our technicians has a bearing on this," he pointed out, "as a result of deficient inspection and clinical work at the sites where the dangerous parasite is spreading."

Moreover, Dr Jose Salas, chief of the cattle veterinary service in Camaguey, stated that the elimination of the problems uncovered in the inspection visits to the cattle installations depends in great measure on the control, inspection, guidance and demands of the managing collective.

"We could not place that responsibility on anyone in particular," he underscored, "but implicit in it are the performance and flexibility of the enterprise director, the chief of production, the chief of units and districts, and also of our veterinarians and technicians, who repeatedly and for various reasons fail to carry out their respective roles. We are all involved in that, and we have committed ourselves to improve the mortality



situation in the cattle population, and to make that population grow quantitatively and qualitatively until we surmount the weak or sick animal stage."

#### Implacable Struggle Against High Cattle Mortality

After the unfavorable rate of mortality recorded in the January-May period of the current year, it is worth noting that a slight decline was observed in June, when there were 800 deaths less than in May and 719 less than the average figure for the preceding 5 months, and the results should progressively improve, according to IMV analyses in that connection. The 1984 plan has been rigorously discussed with a view to closing the year with 30,700 deaths in the province, which if attained would be the lowest mortality figure in Camaguey for the past 8 years.

There are 158 veterinarians (55 are women) working in the province at the 18 cattle enterprises in operation. In the state cattle sector, the IMV ministers to 5,514 animals per veterinarian when the norms in that respect establish 1,200, which denotes the extra effort. Some days ago, 12 experienced veterinarians came from Havana to eventually reinforce that activity in the Triangle One and Triangle Six enterprises.

Even so, it is foreseen there will be progress in the diagnostic network, a marked lessening of the brucellosis and tuberculosis programs, and renewed enthusiasm in the current implacable struggle against cattle mortality in all its ample diversity of causes, which we will address in successive reports.

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CSO: 3248/24

## REPORTS ON TUBERCULOSIS IN CATTLE SAID TO BE EXAGGERATED

Calcutta THE TELEGRAPH in English 14 Sep 84 p 6

[Text]

Calcutta, Sept. 13: The director of animal husbandry, Mr Hemendu Guha, today admitted that at least five per cent of the cattle in the state livestock farms were infected with tuberculosis. "This is nothing alarming since a similar situation is prevailing in all the livestock farms in the country," he said.

Reacting to the report published in The Telegraph today, Mr Guha questioned the veracity of the tests carried out by the veterinary doctors of his department. He added that some "politically motivated vested interests" were spreading rumours to embarrass the government. Mr Guha, who is seeking to defend his department, has been in the same post for the last 14 years.

The death rate at the livestock farms was "normal" and The Telegraph report that 70 per cent of the cattle die due to TB infection was not true, Mr Guha said. The animals die due to many other reasons which include the presence of metazoan parasites like fasciola gigantica, he said. Moreover, "how can one say that the animals were dying due to TB infection when the present tuberculin tests were being challenged since they were not foolproof," Mr Guha asked.

Citing a report presented at the Indian Veterinary Research Institute in Uttar Pradesh by a renowned veterinary doctor, Mr

Guha said, "The prevalent method of giving a single intradermal injection in an animal's neck and then determining whether it reacted positively to tuberculosis on the basis of the thickening of the skin was not always correct. Since the whole process is carried out by different doctors, reading errors often creep in," he added.

The report further states that "instead of using tuberculine, the testing programme should be carried out by using purified protein derivatives. And in order to be very sure about TB testing the tuberculine should be imported." The report adds that "TB cases must be examined in detail because large variations in the test results was observed at different times in the year in the same animal." It observes that less than four per cent of the animals that had shown a positive reaction on TB tests earlier were eventually found to have had the infection.

He said, "The chances of germs being transmitted to the consumers is not there because all the milk that is supplied to the city through the Central Dairy and Mother Dairy is pasteurised." Chances of contamination exist only if the milk of the sick cows is consumed raw. The animal husbandry supplies 3,600 kg of milk to the Central Dairy every day and this is less than 10 per cent of the total supply.

SWAZILAND

BRIEFS

INCREASE IN FOOT-AND-MOUTH DISEASE--Mbabane--Swazi authorities are shooting scores of cattle believed to have been stolen in Mozambique and smuggled across the border into Swaziland. The action follows lengthy investigations by the police into a vast cattle-smuggling racket, believed to be responsible for an alarming increase in foot-and-mouth disease that has killed hundreds of cattle. A man had been detained for questioning a Times of Swaziland report said. All butchers and meat dealers in the Lubombo district which borders Mozambique in north-eastern Swaziland have been stopped from slaughtering cattle and selling meat before they obtain official verification from the Veterinary Department. Authorities are conducting a house-to-house search to ascertain how cattle were obtained. Where no documents are available, the cattle are being shot.--Sapa [Text] [Johannesburg THE STAR in English 2 Oct 84 p 4]

CSO: 5400/21

## ARTICLE STRESSES PREVENTIVE INOCULATION OF ANIMALS

Hanoi NONG NGHIEP in Vietnamese 20 Sep 84 p 7

[Article by Nguyen Dang Khai of the Office of Epidemiology, Veterinary Department: "Concentrating Manpower on Successfully Completing Preventive Inoculation in the 1984 Autumn and Winter Seasons"]

[Text] In recent years some dangerous diseases like anthrax and hog cholera tended to spread vigorously in many northern provinces and to last all year rather than for a season. The 1983 anthrax epidemic occurred in 68 villages of 20 districts in 7 provinces and municipalities and killed 373 water buffaloes and cattle; in the first 6 months this year, the epidemic again appeared in Lai Chau, Son La, Ha Tuyen, Lang Son, Cao Bang and Hoang Lien Son Provinces and killed 159 buffaloes and cattle, 100 hogs and 69 horses. A noteworthy fact was that the disease also spread to a number of people. Hog cholera appeared in a scattered manner in almost all northern provinces. In the first 6 months of 1984 alone, nearly 100 pockets of contagion were found and the hogs that suffered from damage numbered over 20,000. In addition, pasteurellosis and swine erysipelas also appeared on a continual basis. The main reason was the fact that annual preventive inoculation was not properly carried out; in many localities, no inoculation was organized even in the old pockets of contagion. In other localities, the epidemic was allowed to take place without any strict measures being taken to resolve the problem. Transporting sick animals and meat of infected animals did not undergo inspecting, preventing, and so on.

The veterinary network in many localities, particularly in the highland provinces, was too poor. Since many villages and cooperatives did not have any veterinary cadres of their own, they were unable to follow closely and to control an epidemic, nor to act in time.

In the last months of the year, as the weather and feeding conditions are unfavorable for animals and transportation of domestic animals normally increases tremendously, this is the time of the year when diseases have a good

chance to strike and to spread; consequently, as inoculation in the autumn and winter seasons is very important, it must be organized on schedule to bring about good results. To do so, first consolidate again the veterinary network of districts, villages and cooperatives and make it an orderly operation with appropriate rewards. Keep enough vaccine, drugs and professional tools ready. Pay attention to properly keeping vaccines of various kinds, mostly the hog cholera and Newcastle vaccines, which must be kept in low temperature (zero degree) from the time they were produced to the time they will be used. To inject vaccine into the right spot and in the right dosage is very necessary as it helps to ensure the efficacy of the vaccine.

The purpose of inoculation still is to prevent cholera, pasteurellosis and swine erysipelas; in the breeder production installations and specialized breeding hog-raising areas, inoculation can be aimed at preventing paratyphoid fever and leptospirosis. As for buffaloes, cattle and horses, pay attention to attaining 100 percent of inoculation against anthrax in the highland and northern provinces, mostly in areas where there are old and new pockets of contagion. In the southern provinces, pay attention to preventing foot and mouth disease for buffaloes and cattle and pasteurellosis and swine erysipelas.

To obtain good results in this inoculation drive, all localities, particularly those in the highlands, must use propaganda to make the people clearly see the adverse effects of epidemics and the usefulness of inoculation for preventive purposes and encourage them to actively respond to it. Firmly deal with on a timely basis problems of sick animals, meat of infected animals and suspected diseases. Set up epidemic control stations on major axes of communications; consolidate the organizational system in the veterinary sector and strengthen its effective guidance; carry out deliveries of materials and drugs to the veterinary sector; and extend the scope of the district responsibility for ensuring the health of domestic animals.

To complete preventive inoculation for the autumn season in August and for the winter season in November is a central task that all localities must concentrate their manpower on fulfilling in a quick and neat manner and at a high rate of success.

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CSO: 5400/4310

## NEW FUNGUS SAID DEVELOPED TO FIGHT PLANT DISEASES

Karachi DAWN in English 20 Oct 84 Business Supplement p IV

[Article by Shamsul Islam Naz]

[Text]

THE plant pathology department of the University of Agriculture, Faisalabad has identified a fungus which possesses antibiotic properties like Penicillin.

This fungus is said to be extremely effective against soil-borne diseases and also demonstrates its hormonal effects in regulating plant growth.

Giving details of this finding to "DAWN" Mian Mumtaz Ali, Vice-Chancellor, termed it "an outstanding piece of research capable of revolutionising agricultural production in the country.

The new fungus will also serve as a "general tonic" for the disease-free soil and will help increase crop yield significantly, the V.C. said. He contended that experiments on this fungus vis-a-vis its effects on agricultural crops, vegetables, fruit trees, sugarcane, wheat, oilseeds, pulses etc. were conducted and "very useful results, have been obtained".

He said that this fungus has multi-dimensional effects on crops; it not only enhances crop yields significantly, but also helps in the control of plant diseases, particularly gram blight and wilt.

The Vice-Chancellor said that plant diseases take a heavy toll of agricultural production every year.

Soil-borne plant pathogens, particularly the root diseases organisms, are highly destructive and constitute a major and complex sector of plant disorders.

### Heavy toll

Moreover, adequate sources of genetic resistance of most of the crops against this malady are not available in the country.

Consequently, it was considered necessary to undertake studies to evolve an effective and practicable control of this disease, he said.

The Vice-Chancellor said that experiments conducted have shown that in the case of rice the yield increased by 25.10 per cent, maize 11.4 per cent, wheat 24.4 to 47.7 per cent vegetables by about 50 per cent and fodder crops by about 30.35 per cent.

### Economical

Investigations have also shown that the application of this fungus has considerable residual effect, as a result of which its application is highly economical. Further researches are being done to establish the chemical basis of this phenomenon and the researchers hope to be able soon to provide further details of the working of this fungal element.

CSO: 5400/4703

## COOPERATIVE EFFECTIVELY FIGHTS AGAINST HARMFUL INSECTS

Hanoi NONG NGHIEP in Vietnamese 20 Sep 84 p 2

[Article by Cao Ba Khoat of Vu Thu Wired-radio Station, Thai Binh: "Campaign To Destroy Harmful Insects To Protect the Tenth-month Rice in Vu Vinh Cooperative"]

[Text] In the 1984 spring rice season, Vu Vinh Cooperative had the highest crop yield in Vu Thu District, Thai Binh Province. Among the intensive cultivation measures it attaches great importance to prevention and control of harmful insects. It has established a science-technology unit for the task of inspecting, discovering and making timely forecasts about harmful insects; organizing sprayings of insecticide; and mobilizing all people for the plant-protecting work whenever insects cause widespread damages. It was due to its interest in the prevention and control of harmful insects that Vu Vinh was recognized in the last few years as a Ten-ton agricultural cooperative.

In the tenth-month season this year, Vu Vinh Cooperative had completed sowing and transplanting in its entire area before the beginning of autumn. When the tenth-month rice plants were showing a nice growth, rice leaf beetles and stem borers caused serious damages to tens of hectares. It established a guidance committee and launched a campaign to destroy insects to save the tenth-month rice, in which it mobilized thousands of people and sent them to the fields to catch the beetles with nets and to tear off with fingers the leaves that had young beetles on them and the rice plants that had been wilted by stem borers. The party committee assigned the deputy chairman of the village people's committee to head the guidance committee in charge of the campaign to destroy harmful insects. The management committee members, science-technology team leaders, head of the control committee, norms-setting cadres, head of the women's association and youth union chapter secretary all joined the guidance committee and were assigned to keep track of specific areas. Production units held meetings among their members to announce the level of pay people would get for destroying harmful insects. This level was set by the guidance committee: cooperative members would get

1 kilogram of paddy for every kilogram of leaves having beetles on them and 2 kilograms of paddy for every kilogram of rice leaf beetles caught with nets. It was clearly pointed out that those people who had taken the green parts of leaves or the leaves that had no beetles on them would receive appropriate punishment. The beetles and infested leaves were to be brought to a specific location to be destroyed. Everyday Vu Vinh Cooperative was able to mobilize nearly 1,000 laborers for going to the fields to destroy harmful insects. If the elderly people and children were included, nearly 3,000 people each day went to ricefields to take part in the campaign to destroy harmful insects to protect the tenth-month rice.

In 3 days, cooperative members took 2,000 kilograms of infested leaves and destroyed more than 10 kilograms of rice leaf beetles. Units 1, 2, 3, 7 and 10 were able to mobilize large numbers of people who destroyed lots of harmful insects. Nearly 40 cadres of the public health office and Vu Thu Hospital II went to the village to join with cooperative members in catching harmful insects. At night, thousands of people went to the fields with lamps to catch stem borer moths. Dong Tien and Phu Hoa Units successfully organized light festivals for catching moths.

After the infested leaves had been removed, the plant protection unit of Vu Vinh Cooperative sprayed insecticide in all ricefields. The cooperative supplied additional nitrate fertilizer and encouraged its members to use stable manure as additional fertilizer to apply to the tenth-month rice plants in order to promote their fast recovery.

Between now and the harvest of the tenth-month rice Vu Vinh Cooperative continues the prevention and control of rice leaf beetles, stem borers and rice ear-cutting caterpillars in order to ensure obtaining a tenth-month rice crop yield of over 40 quintals of paddy per hectare.

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CSO: 5400/4310



PROVINCES FIGHT INSECTS, RATS TO PROTECT RICE CROPS

Hanoi NONG NGHIEP in Vietnamese 20 Sep 84 pp 1, 7

[ Article: " Thai Binh, Hai Hung, Thanh Hoa Organize Efforts To Destroy Rice Leaf Beetles, To Trap Moths, To Kill Rats for Protection of Tenth-Month Rice " ]

[ Text ] The volume of paddy production of Hung Ha District in the 1983-1984 winter-spring season had been reduced by 10 percent mainly because of harmful insects. In this tenth-month rice season, Hung Ha is again the district that has been most severely affected by harmful insects in Thai Binh Province: up to 6,000 hectares of the tenth-month rice have been damaged by rice leaf beetles and stem borers. The density of rice leaf beetles in the tenth-month rice plants has been found to be from 3,000 to 4,000 per square meter.

The district has so far launched an all-people campaign to participate in insect control measures, such as cutting the withered plants, netting rice leaf beetles, cutting the leaves on which eggs have been deposited, using insecticide, applying lime and combining with the use of water to destroy insects and to save the rice plants. In 10 days it was able to mobilize 80,000 people for working in the fields; they cut the withered rice plants, destroyed the rice leaf beetle eggs, used nets to catch 3 tons of beetles, destroyed 13,000 rats and thus saved 2,600 hectares of rice crop.

Hung Ha District adopted a system of work points and exchange for nitrate fertilizer and paid 10-12 dong for a kilogram of rice leaf beetles to encourage cooperative members to fight the insect. It also acquired 30 sprays run by electric motors to assist Hong Minh, Van Lang and Duyen Hai Villages in spraying insecticide. The cooperative members applied additional fertilizer in the ricefields that had been saved from harmful insects in order to promote uniform growth of rice plants.

Hai Hung Province mobilized 369,805 oil lamps in a night-light festival it organized for catching moths. The cooperatives paid for the cost of oil and gave work points proportional to the moths caught by their members as they encouraged them to catch many moths. Many cooperatives in the province organized manpower for trapping moths at night and catching beetles with nets during the day and succeeded in catching millions of moths and tons of rice leaf beetles and thus saving hundreds of hectares of the tenth-month rice from being destroyed by harmful insects.

In addition to trapping moths and destroying beetles, the cooperatives in the province organized the use of traps and poison to destroy rats and were able to kill 20,000 rats. Tu Loc District alone was able to kill 139,518 rats.

The agricultural sector in the province has supplied the districts with 30 additional tons of insecticide, tens of kilograms of rat-killing poison and tens of tons of petroleum. As a result, timely spraying of insecticide has been completed in more than 12,000 hectares of tenth-month rice that had been severely infested by harmful insects. The province now continues to assume leadership over the production installations and to direct their efforts to prevent and control harmful insects for the protection of the tenth-month rice.

Thanh Hoa Province has attached special importance to the prevention and control of harmful insects for the protection of its tenth-month rice crop. From 15 to 25 August, it sprayed insecticide in 16,000 out of 22,500 hectares of ricefields infested by stem borers and rice leaf rollers. It mobilized nearly 200 motorized sprays for reinforcing the manually-spraying forces in the cooperatives in containing the large pockets of contagion in Dong Son, Tho Xuan and Hoang Hoa Districts. Members of many cooperatives in Nong Cong District also did sanitary work in the fields, removed eggs and withered rice plants and used bitter leaves to kill borers of all kinds and larvae. The province as a whole organized simultaneous efforts to trap moths with lamps and to destroy stem borers. Many cooperatives used up to 300-700 lamps each night to trap moths. With some lamps catching up to 30-50 moths a night, the effort was found to be effective in preventing the appearance of borers in the subsequent days.

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CSO: 5400/4310

## ARTICLE SUGGESTS WAYS TO DESTROY RICE LEAF BEETLES

Hanoi NONG NGHIEP in Vietnamese 29 Oct 84 p 2

[Article by N. Q. I. of the Plant Protection Department: "Prevention and Control of Rice Leaf Beetles That Cause Damage to Rice Crop"]

[Text] In the last few years there reappeared the rice leaf beetles that cause damage to rice crops, particularly the tenth-month rice in large areas. If in the past (in the late 1950's and early 1960's) they had been causing damage only in such coastal areas as Quang Ninh, Haiphong, Thai Binh, etc., they have now infested the midland zones and Red River delta provinces. Every year they normally appear in rice plants in April and continue to be present in ricefields until nearly the end of the year. The damage to the spring rice generally is light because there still are few of them and rice plants are about to head, but from the time the tenth-month rice seedlings are planted to the time the tenth-month rice plants head, the beetles multiply excessively and cause severe damage. Tens of thousands of hectares of tenth-month seedlings and rice plants in 1982, 1983 and this year showed totally withered leaves as they had been damaged by rice leaf beetles; the organs in charge of agricultural leadership and cooperative members therefore had to devote considerable labor and energy to their prevention and control and have also been able to draw precious experience from that effort.

This is the way rice leaf beetles appear in our country: Mature beetles appear in spring rice plants and lay eggs on leaves, and then a few tens of days later another batch of mature beetles appears and flies to the tenth-month rice seedlings, where they lay eggs and cause damage. The infested seedlings are planted and thus carry along the beetles, which continue to harm the rice plants. Mature beetles lay eggs on young or fairly young leaves; consequently, from the time the rice plants head, there are very few beetles in ricefields. As we have quite a lot of experience in prevention and control of rice leaf beetles, if we can do a good job, we can eliminate the harmful action of the insect. Prevention and control can be achieved most easily during the stage of maturity. Wherever they are found, use nets and baskets to catch

them. Pay attention to the fact that catching them has to be done in the morning, early evening or on very cloudy days, for on sunny days they hide on the underside or close end of leaves and it is difficult to catch them. Any insecticide (666, Metaphos, diazinon, etc.) is effective and the amount to be used is the same as for other harmful insects. In the stage of eggs and newly-hatched beetles, their prevention and control are more difficult because they stick to the epidermal parts of leaves to eat the chlorophyll and thus to turn the leaves white and wilted. But eggs and the young beetles usually are found on the tips of leaves; therefore, an effective way to destroy the insect is to use fingers and to tear off the ends of seedlings and leaves of rice plants. In the case the beetles have become mature and very numerous and catching them with nets is not enough, in some localities people put drops of kerosene into water in ricefields and then shake the rice plants to make them fall into water and die of kerosene (as in the prevention and control of brown leafhoppers).

Many localities where rice leaf beetles caused serious damages in the tenth-month season this year, such as Thai Binh Province and Kim Son District (Ha Nam Ninh Province), have launched considerably successful campaigns to destroy the insect. Tons of mature beetles have been destroyed by the above-mentioned manual measures. This is an experience that deserves learning, particularly at this time when rice leaf beetles are causing serious damages while there is a real shortage of insecticide in our country today.

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CSO: 5400/4310

## INSECT INFESTATION OF COOPERATIVE RICEFIELDS EFFECTIVELY CONTAINED

Hanoi HANOI MOI in Vietnamese 14 Aug 84 p 3

[Article by Anh Doai: "Dai Dong Effectively Exterminates Rice Pests"]

[Excerpt] However, drought and harmful insects are two great obstacles to the seasonal planting of the 10th-month rice crop.

Based on experiences drawn from the 1983 10th-month and recent spring crops which were heavily damaged by insects, Dai Dong [cooperative in Thach That District] has launched a campaign to use lamps to trap butterflies. After sowing seeds on 100 percent of the planned area, the cooperative has launched an all people's emulation movement to destroy egg nests on seedling leaves but large numbers of rice gall flies and especially stem borers have now appeared. While resolving the problem of spraying insecticides to exterminate these pests, the cooperative has launched an "insect extermination by the entire people" campaign with the "insect extermination by each family and individual" motto and with a prompt commendation and reward policy.

The result is that Dai Dong has achieved the highest effectiveness in the district in the insect extermination drives in the recent past including the spring production season. The quantity of butterflies caught by using lamps weighed 11 kgs and 9,000 stem borers' nests were picked out. The cooperative has drawn 100,733 dong from its fund to quickly reward production units and individuals having destroyed large numbers of insects.

In the past few years, insects reduced Dai Dong's rice output by hundreds of tons per crop. Therefore, the cooperative has now boldly set aside such a large sum of money for rewards. It has set up a campaign guidance committee headed by the cooperative director and has stipulated that all cooperative member households must participate in the insect extermination campaign and that rewards will be offered and penalties meted out appropriately and strictly. A reward of 1 dong will be given to each production unit or individual having picked out 10 insect egg nests; any household refusing to participate in the insect extermination campaign will be criticized over the wired radio loudspeakers and should the rice harvest of this household be afterward affected by the insects' damage, such a case would not be considered by the cooperative and no exemption or reduction would be granted [concerning the paddy obligation].

The result obtained is beyond expectations thanks to this incentive policy with its reward and penalty provisions. People receiving the smallest reward were given each a few dozen dong and most of them were schoolchildren while those receiving the greatest reward were given each more than 100 dong. To date, the insects' infestation of Dai Dong cooperative's fields has been repulsed.

9332

CSC: 5400/4301

## RICE PEST CONTROL CAMPAIGN LAUNCHED IN SOC SON DISTRICT

Hanoi HANOI MOI in Vietnamese 18 Aug 84 p 1

[Excerpt] During the 1983 10th-month and 1983-84 winter-spring seasons, harmful insects developed strongly in the ricefields of Soc Son District; most noteworthy were stem borers which damaged riceplants and greenflies which harmed subsidiary and industrial crops. The district did start and organize the extermination of insects before each of their mighty propagation stages but a superficial guidance led to a very limited result so that the insects continued to cause rather heavy damage.

Realizing clearly the damage done by harmful insects while at the same time sternly reviewing its own guidance shortcomings and developing experiences in directing the extermination of the third generation of stem borers in order to protect seedlings and the early 10th-month riceplants and to positively cope with the fourth generation of these pests, Soc Son District has launched a concentrated campaign to exterminate insects from 3 to 20 August 1984. Following a conference with key cadres from various sectors and production installations which led to an identity of views on this matter, the district has formulated a materially incentive policy and guided the implementation of the pest extermination plan. District party committee members together with heads and deputy heads of various sections, bureaus and mass organizations in the district have personally come to villages to help the local party committees, administration and cooperative management boards motivate and organize the people to exterminate insects.

9332

CSO: 5400/4301

## RICE PEST INFESTATION, CONTROL IN VARIOUS REGIONS REVIEWED

Hanoi NONG NGHIEP in Vietnamese 20 Aug 84 p 2

[Excerpt] Recently, some species of harmful insects have appeared and caused damage to the summer-fall riceplants and the 10th-month ones at the beginning of the latter's cultivation season. The third generation of stem borers has emerged with an unprecedentedly high density among the 10th-month rice seedlings in the Bac Bo delta and midlands. Scores of thousands of butterflies have been trapped each night by means of lamps (incandescent gas mantle lamps or 100-watt electric bulbs). Young insects have heavily damaged the 10th-month rice seedlings and the summer-fall and early 10th-month riceplants. In the Bac Bo delta, the average infestation density is between 50 and 100 insects per square meter, with 200 or more as the maximum and the ratio of withering rice stems ranges between 30 and 40 percent, with a maximum of 80-odd percent. The pest infestation density is lower in the mountain region and former Zone 4. Nevertheless, such a quantity of insects is 10 to 20 times greater than in the past few years. With a density of more than 100 per square meter, rice armyworms have caused heavy damage to seedlings in June. Rice thrips have parched seedlings in many areas. Rice gall flies which damage early rice seedlings are rather abundant in some localities and the ratio of infested rice stems has risen to 30 percent.

The reason for the vigorous expansion of the above-mentioned pests is the fact that a fairly large number of them have moved from the 5th-month and spring to the summer-fall and 10th-month production seasons and that a protracted dry weather and drought have proven favorable for their propagation and deleterious effect.

To limit the harm done by these insects, all localities have taken energetic measures such as using lamps to trap butterflies, picking out egg nests, cutting off withering riceplant stems and damaged ears, spraying chemicals and so forth. Some localities have caught millions of butterflies and cut off many tons of withering riceplant stems.

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CSO: 5400/4301



## PEST CONTROL MEASURES TO SAVE 10TH-MONTH RICE CROP INTENSIFIED

Hanoi HANOI MOI in Vietnamese 21 Aug 84 p 3

[Article by Do Huu Tuyet: "Phuc Tho District Prevents and Exterminates Pests to Protect the 10th-Month Rice Crop"]

[Excerpt] At present, beside applying additional fertilizers, extirpating weeds and puddling the soil in time for the riceplants' growth, Phuc Tho District is waging a new struggle to prevent the occurrence of harmful insects and to exterminate them.

Stem borers heavily damaged last year's 10th-month rice crop, reducing by 25 percent its productivity and the entire district's output. For this reason, Phuc Tho has not waited till the present time to take preventive and control measures; instead, it has set forth the following tasks right at the beginning of the preparations for the 10th-month production season:

- Use of pest-resistant rice varieties.
- Uniform application of technical regulations about intensive cultivation.
- Proper maintenance of sanitation in ricefields.
- Guided use of chemicals according to estimates and forecasts.

In fact, brown planthoppers did the most damage in the past few 10th-month production seasons. However, these pests were basically eliminated from Phuc Tho's ricefields during the past two 10th-month production seasons because this district quickly introduced the planthopper-resistant CR-203 rice variety and grew it on 50 percent of the total acreage. From the 1983 10th-month production season to date, stem borers have become a great danger to riceplants. At present, there is no rice variety that can resist stem borers. Therefore, the district has tried to carry out many tasks the most outstanding of which is to make further progress in uniformly implementing technical regulations on intensive cultivation involving a greater density of riceplants and an early and concentrated application of nitrate as the main fertilizer prior to the transplanting stage. Sowing and transplanting were performed on most of the acreage in July which was the most favourable season. Taking the initiative to cope with stem borers, in late July, the district

set up an antipest guidance committee under the command of the district committee chairman and vice chairman who was also in charge of agriculture. Afterward, cooperatives have in turn set up their own guidance committees which are beginning to carry out activities.

The Vegetation Protection Station in the district had previously sent cadres to cooperatives to survey the pest infestation of the early 10th-month rice crop and of long-term and glutinous rice varieties in order to provide data for organizing the implementation of preventive and control measures in August. According to initial survey statistics, throughout the district, there are 700 pest-infested hectares including 400 hectares afflicted with stem borers and 300 hectares with rice gall flies; in addition, there are army weevils, brown planthoppers and especially leaf rollers. To effectively prevent and exterminate these pests, the district has launched an all-people's campaign to prevent and exterminate pests which involves specific, clear-cut measures, policies and systems of reward and penalty.

While guiding the task of tending the 10th-month riceplants and implementing pest prevention and control measures to protect this crop, the district is also taking adequate flood and typhoon control measures to ensure at all costs the success of this year's 10th-month production season.

9332

CSO: 5400/4301

## CROPS DAMAGED BY PESTS

Hanoi HANOI MOI in Vietnamese 11 Sep 84 p 1

[Excerpts] As of 5 September, according to the Statistics General Department, the country had put 2,828,000 hectares under the cultivation of 10th month rice. Although this only amounts to 89.2 percent of the plan target on the amount of area under cultivation, it does represent a 2.7 percent increase compared to the same period in 1983. The North had put more than 1,305,000 hectares under cultivation, an increase of 0.3 percent, and the South nearly 1,523,000, a 4.9 percent increase compared to the same time last year.

The provinces and municipalities of the North have now shifted their attention to cultivating and protecting 10th month rice. Many localities have completed the first phase of weeding and are now focusing their efforts on the second phase of weeding, having completed 73.5 percent. Some places have begun the third weeding of their rice crop. As a result of timely weeding and the proper application of fertilizer at the right time, the quantity of nitrogen fertilizer applied to rice crops has increased by 6.3 percent compared to the same time last year and this year's 10th month rice is growing well. A rather large amount of 10th month rice, 32.6 percent, has been damaged by pests. In some provinces, much of the rice crop has been damaged by pests: Thai Binh: 57.9 percent; Binh Tri Thien: 52.3 percent; Ha Nam Ninh: 45 percent; and Hai Hung: 43 percent. Due to the pesticide shortage, many localities have combined pesticide spraying with the use of such manual methods as burning lanterns to trap moths, picking off leaves on which eggs have been laid and so forth to exterminate pests and protect their rice crops.

According to the Crop Protection Department (Ministry of Agriculture), rice stem borer moths laid their eggs between 2 September and 10 October, even earlier in Nghe An Province. Moth populations were very large. Leaf roller moths have laid a very large number of eggs, 40 to 100 eggs per square meter on rice that is tillering or heading, as many as 400 to 600 eggs per square meter at some places. These eggs are hatching now. Main and late rice crops will be heavily damaged, especially glutinous rice. Provinces must inspect their rice and take timely measures to control these pests and save their rice crops.

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CSO: 5400/4309

## INSECT INFESTATION IN HANOI DISTRICTS

Hanoi HANOI MOI in Vietnamese 12 Sep 84 p 1

[Excerpt] During this year's 5th month-spring season, due to a prolonged spell of cold weather, the allocation of rice varieties was disrupted and the quality of varieties used was not good. Moreover, because pests from the 1983 10th month season spread into the 1984 spring season, this was the first 5th month-spring season in the outskirts of the city during which there was a high density of many different pests over a large area (about 22,000 hectares, 30 percent of the land under cultivation). In the face of this situation, the city promptly provided close guidance of pest control efforts, which included launching a movement among all the people to use every means at their disposal to control pests. The districts of Thach That, Phuc Tho, Dan Phuong, Hoai Duc and Ba Vi and Tay Son City protected their 5th month-spring crops well and recorded high yields. In Dong Anh, Gia Lam, Me Linh and Tu Liem Districts, as a result of complacency and the lack of well coordinated guidance, pests spread rapidly and caused silver ear over a large area, thereby reducing their spring yields by 3 to 4 quintals per hectare.

Recently, having gained experience from the 5th month-spring season, the city enacted a policy that provides appropriate incentive for cooperative members to control pests and launched a movement among all the people to use every means at their disposal to catch insects day and night. As a result, the city mobilized 1,683,000 persons. They caught nearly 71 million stem borer moths, nearly 800 kilograms of other moths and 21 tons of pests of various types, collected nearly 50 million cocoons...

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## BRIEFS

HA SON BINH INSECTS--The Ha Son Binh provincial agricultural service is launching a campaign to eliminate harmful insects to protect its 10th-month rice-fields. A number of areas have been ravaged by stem borers, brown leafhoppers, and army worms. The province has mobilized all available manpower, equipment, and insecticide to eliminate those harmful insects. [Hanoi Domestic Service in Vietnamese 2300 GMT 30 Sep 84 BK]

RICE PESTS INFEST CROP--Along with accelerating winter crop production, all localities devoted their efforts to controlling harmful insects to protect the rice. Last week's evenly distributed rain slowed somewhat the proliferation of rice pests which, however, were affecting a larger area than in the corresponding period last year. By 25 September, the pest-affected area of the northern 10th-month rice grew to more than 370,000 hectares, or 121 percent of the affected area registered in the same period last year. The localities with serious insect ravages are the Red River Delta provinces and the former Zone 4 provinces. In Ha Nam Ninh, Hai Hung and Thai Binh provinces, in particular, the pest-affected areas vary from 45,000 to over 69,000 hectares. Unless rapidly controlled, the current rice pest ravages will lead to the presence of empty rice ears and, consequently, to declining yields. [Excerpts] [Hanoi Domestic Service in Vietnamese 1100 GMT 1 Oct 84]

RICE CROP HIT BY INSECTS--Even though the rain has come and an effort has been made in the localities to kill insects and save 80,000 hectares of 10th-month rice, there still are 370,000 or more hectares affected by insects. The insect-hit area in such localities as Thanh Hoa, Ha Bac, Hanoi and Haiphong is likely to increase. Stem borers have hatched broadly and butterflies have appeared. In Ha Bac ricefields, there are brown planthoppers and green leafhoppers. Localities are taking appropriate measures to kill insects. They are at the same time harvesting early 10th-month rice and accelerating the planting of winter and winter-spring crops. The areas of plowed 10th-month ricefields and planted sapling beds range from 101.5 to 149.1 percent of those in the same period last year. [Text] [Hanoi Domestic Service in Vietnamese 0500 GMT 2 Oct 84]

INSECTS INFEST RICE CROP--Over the past week many northern localities have actively fought rice pests. However, more than 27,000 hectares of 10th-month rice are still infested with harmful insects. Along with quickly harvesting the summer-fall rice, the southern provinces are now continuing the late

10th-month rice planting. As reported by the Statistics General Department, as of 5 October, the southern provinces had planted nearly 1.75 million hectares of 10th-month rice or 93.7 percent of the planted acreage. Quang Nam-Danang, Nghia Binh, Long An and Ben Tre Provinces had exceeded the acreage plan norms. Apart from the submerged ricefields, about 100,000 hectares of 10th-month rice in the southern provinces are now infested with harmful insects. [Excerpt] [Hanoi Domestic Service in Vietnamese 1000 GMT 10 Oct 84]

HA TUYEN INSECT INFESTATION--Ground beetles, armyworms, stem borers, and leaf rollers have appeared in large numbers in various districts of Ha Tuyen Province. Meanwhile, brown planthoppers have also been reported in certain localities in the province. Thanks to prompt action, some 1,000 hectares of 10th-month rice in these districts have been saved from being ravaged by these insects. [Hanoi Domestic Service in Vietnamese 1300 GMT 12 Oct 84 BK]

THACH THAT DROUGHT--During the 10th-month production season, Thacht That District has met with obstacles and difficulties caused by a drought affecting riceplants on 610 hectares and by the insects' propagation on about 592 hectares but insecticides have been sprayed promptly to exterminate them. In particular, the water supply problem has been compounded by the serious drought but the drought-stricken area has been narrowed down because the city has paid attention to supplying electricity on a priority basis to production installations and also because a heavy rain fell on the afternoon of 3 August. On the other hand, there has been enough water for people to perform plowing, harrowing and hoeing on the area destined for the transplantation of 10th-month rice seedlings. [Excerpt] [Hanoi HANOI MOI in Vietnamese 9 Aug 84 pp 1, 4] 9332

BA VI PEST CONTROL--A protracted hot sunshine period has caused serious drought to more than 1,525 hectares of 10th-month rice in Ba Vi District and inflicted water shortage on nearly 1,000 hectares; harmful insects have infested 5,192 hectares where rice seedlings had been transplanted (including 150 hectares of early riceplants heavily damaged by stem borers). In view of this situation, the District Party and People's Committees have intensively directed cooperatives to actively fight the drought and control insects to save riceplants. All technical cadres of the District Agriculture Bureau and Vegetation Protection Station have come to production installations to guide the implementation of technical measures and to directly help cooperatives. The Suoi Mai Irrigation Corporation has supplied water on a priority basis to cooperatives situated far from the irrigation network and mechanical pumps have been operating without interruption. The Agricultural Material Supply Enterprise has provided more insecticides, spray guns and oil to localities seriously infested with insects. Cooperative members have taken every opportunity to fight the drought by bailing water into fields and dredging irrigation ditches while continuing to use chemical insecticides. All cooperatives have simultaneously launched a campaign against insects' propagation by using lamps to trap butterflies, uprooting insect-infested riceplant stems and zoning off insect extermination areas. [Excerpt] [Hanoi HANOI MOI in Vietnamese 10 Aug 84 p 1] 9332

ME LINH INSECTICIDAL FIGHT--While transplanting rice seedlings to the remaining areas and fully using all small plots to perform additional transplantation, Me Linh District is vigorously shifting to the task of weeding, applying

more fertilizers and exterminating insects to boost the riceplants' growth. Prior to 7 August, the entire district had 800 hectares affected by drought and 2,670 hectares infested with insects of which 1,580 hectares were seriously stricken. Following the recent rainfall and owing to concentrated anti-drought efforts, there is enough water for the riceplants' growth in shallow and low-lying fields but the control of harmful insects and diseases is still a pressing task. To help cooperatives control insects, the district has taken many measures such as disseminating the technique of exterminating each type of insects, launching an emulation campaign to use lamps to trap butterflies and providing insecticides for cooperatives. Though busy with many affairs at the same time, the Cao Minh, Me Linh, Quang Minh and Chu Phan cooperatives and others have appointed a number of laborers to inspect insect-infested fields and spray insecticides. [Excerpt] [Hanoi HANOI MOI in Vietnamese 11 Aug 84 p 1] 9332

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