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12 January 1978

## WORLD EPIDEMIOLOGY REVIEW

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This serial publication, based on worldwide press and radio reports, contains information on the epidemiology of human, animal, and plant diseases. Disease incidence, reported outbreaks, and various related epidemiological factors are included. Items are presented by country of occurrence rather than by country of original press report.

CONTENTS	PAGE
I. HUMAN DISEASES	
ANGOLA.....	1
ARGENTINA.....	4
BRAZIL.....	5
BRAZIL.....	9
EAST GERMANY.....	13
EGYPT.....	18
GUINEA-BISSAU.....	22
GUYANA.....	23
INDIA.....	24
INDONESIA.....	26
IRAN.....	27
LAOS.....	30
MALAYSIA.....	30
MEXICO.....	31
PEOPLE'S REPUBLIC OF CHINA.....	32
SENEGAL.....	33
TURKEY.....	35
UGANDA.....	35
VIETNAM.....	37
ZAMBIA.....	38

CONTENTS (Continued)

Page

II. ANIMAL DISEASES

AUSTRALIA.....	40
BRAZIL.....	45
CYPRUS.....	47
LAOS.....	48
MALAYSIA.....	49
NIGERIA.....	50
SOUTH-WEST AFRICA.....	51
TANZANIA.....	52
UGANDA.....	52
VIETNAM.....	56

III. PLANT DISEASES AND INSECT PESTS

LAOS.....	59
VIETNAM.....	59
ZAMBIA.....	63

## I. HUMAN DISEASES

### MANILA WHO OFFICE LISTS ASIAN CHOLERA CASES

Kuala Lumpur BUSINESS TIMES in English 7 Oct 77 p 11

[Article by Fernando Del Mundo in Manila]

[Text] From the tiny Gilbert islands in the Asia-Pacific region to the Indian subcontinent, people are dying daily of cholera.

A UPI survey shows the disease is endemic in tropical Asia, particularly in poor countries with sanitation problems.

The regional headquarters in Manila of the World Health Organisation says in a study that in the first seven months of this year, 859 persons have died of cholera and 18,769 have fallen ill in Asia.

Indonesia leads the WHO list with 513 deaths and 10,535 reported cases.

India, traditional home of the disease, recorded 291 deaths from January to July this year.

The WHO report has not yet included the cholera epidemic which so far has claimed 480 lives and stricken 6,000 persons in Bangladesh. The UPI survey showed 117 more cholera deaths were recorded in India in August, bringing the total so far this year to 408.

WHO specialists are unable to say if there are links between cholera cases in Asia and the epidemic raging in the Middle East.

"It's a puzzle," says a WHO spokesman. "There is no way of knowing if what we have here in Asia is tied in with cases reported in Saudi Arabia."

A WHO study says cholera has a characteristic seasonal pattern. The season varies from place to place.

In Dacca, the cholera season follows the Monsoon. The disease disappears during the hot, dry months.

By contrast, in Calcutta the cholera season rises to its peak during the dry season. It ends with the onset of the Monsoons.

The spread of the disease by one person to another is rare, the study says. Because of this, the spokesman says it is hard to say whether the current Middle East scourge has anything to do with Asian pilgrims visiting Mecca.

"Bad environmental sanitation, particularly a lack of adequate supplies of fresh water for personal uses, seems to be the fundamental factor in the spread of cholera," the study says.

In most cases, the disease is transmitted by contaminated food and water. Cholera also thrives in saline areas in places near the sea.

The most common form of treatment is mass inoculation and chlorination of water sources. In areas where sanitation facilities are inadequate, the mortality rate is high.

Indonesia has been adopting measures to improve health facilities and this has resulted in a sharp decline in cholera cases so far this year.

Last year, 1,170 cholera deaths were recorded and 17,122 others were stricken in Indonesia.

The UPI survey shows that in the more affluent nations of Asia such as Singapore, Taiwan, South Korea and Japan, cholera outbreaks are far fewer.

#### Tourists

Japan had its first mass outbreak of cholera in three decades last July. About 90 residents in Arida, Central Japan, were stricken but only one death was reported.

The disease was said to have been carried by Japanese tourists who returned from the Philippines but this has not been confirmed. Despite these incidents, Japan is in control of the situation.

In Singapore, four elderly persons were stricken earlier this month but all have recuperated. The cases were attributed to food peddled by hawkers.

In peninsular Malaysia, four cholera cases were confirmed recently and one death was reported.

The worst affected areas in Malaysia were the states of Sabah and Sarawak on the big island of Borneo where five deaths have been reported and 300 others stricken ill.

Medical authorities say the cholera outbreak in Sabah was confined to Filipino Muslim refugee camps. More than 90,000 Filipinos have fled to Sabah to escape the secessionist revolt in the Southern Philippines.

The refugees live in crowded camps along the coastline. Authorities say so far this year, 150 refugees have contracted the disease and one has died.

In Sarawak, 150 cholera cases have been reported from tribal dwellings. Four deaths were recorded since the outbreak in April. Tent villages have been declared as infected and visits to these areas are prohibited. Muslims going on pilgrimages to Mecca were given double dosages of anti-cholera vaccine.

In the Philippines, eight cholera deaths were reported in the mountain province of Benguet, where the famous tourist resort of Baguio is located. Six-seventh [sic] others were hospitalised early this month.

Filipino authorities say the deaths were caused by infected water buffalo meat the victims had eaten.

Reports reaching the Pacific Trust territory headquarters in Saipan say 147 persons have been stricken in the Gilbert islands. Twelve persons from among the islands' population of 60,000 have died.

#### Outbreak

Officials in the Gilberts report the cholera outbreak was caused by contaminated drinking water.

Authorities in the Pacific Trust territory monitor Air Nauru flights entering Majuro and Ponape from the Gilberts. They say passengers from the Gilberts are ordered held until cleared by U.S. medical authorities.

--UPI.

## ANGOLA

### MEASLES VACCINATION CAMPAIGN

Luanda JORNAL DE ANGOLA in Portuguese 30 Oct 77 p 3

[Excerpts] Because many children die after getting measles, today we are going to discuss this disease. We are going to prevent the deaths of the Pioneers of the Angolan revolution. We are going to fight measles.

How? It is simple. Very simple.

First, vaccinate all Pioneers from 6 months to 5 years of age against measles. A single injection and it is done. Vaccinated for life. This vaccine is going to be distributed under the Expanded Vaccination Program.

Be alert, comrades. After you are notified, take your children to be vaccinated against measles.

Another way of preventing deaths from measles is to have the disease treated at the Health Center. Children who have not been vaccinated against measles will contract the disease.

Only once, but they do contract it. The disease is most debilitating and creates many health complications. The child develops a cold and at times dies from it. That is why the child should start getting treated still during the disease, to resist complications.

Therefore, comrades, we are going to set up a battle front against the disease. We are going to vaccinate our children and deal with measles in a proper manner.

### CAMPAIGN AGAINST TUBERCULOSIS

Luanda JORNAL DE ANGOLA in Portuguese 1 Nov 77 p 3

[Excerpts] There are many tuberculars in the world. In Angola there are between 15,000 and 20,000 patients.

The best weapon to prevent tuberculosis is BCG vaccination. All those under 15 years of age are going to be vaccinated in the RPA [People's Republic of Angola] under the Expanded Vaccination Program. But those 15 years of age or older are also going to be vaccinated if need be. To find out, they can go to the Anti-Tuberculosis Dispensaries of Luanda, Malanje, Benguela, Bie, Mocamedes, Huambo and Huila, or to the Health Center closest to their place of residence. Children should be vaccinated at birth if they weigh 2.5 kilograms or more.

One can contract tuberculosis if not vaccinated. Take care of your health and be alert. If you or any member of your family or an acquaintance catches a cold which becomes persistent, do not waste any time if it lasts more than 3 weeks even though taking some remedies. Go to the doctor, to the Health Center closest to your home or place of work and say, "I have had a cold for more than 3 weeks, and it will not go away." The sputum will have to be analyzed to determine if it is tuberculosis. And it will always be treated.

## ARGENTINA

### INCIDENCE OF CHAGAS AND OTHER DISEASES

Buenos Aires CLARIN in Spanish 23 Oct 77 p 5

[Text] Half of the Argentine population can expect to contract Chagas disease. The area affected by Chagas disease includes 19 provinces covering a 2.3 million square kilometer area out of the total of 2.9 million which make up the nation. Excluded from this terrifying area are parts of Chubut and Santa Cruz Province, although present trends show a dangerous spread of this endemia. It was found that in the nation's capital 5 percent of all blood donors had Chagas disease. This is explained by the migration from the interior to the urban areas with people settling in and around the capital. In addition, vinchucas (the insect which spreads the disease and carries tryatoma infestans) have been found in the capital in trunks and other belongings of travelers from the Argentine provinces.

It is a fact that at present 3 million people have the disease. Of these 500,000 are suffering from cardiac disease or will die suddenly from a heart attack, which are complications of the disease. If the scientific outlook does not change, Chagas will become the number one disease of the 21st century in Latin America. By the year 2000 it is estimated that 50 million people will have Chagas disease. Today there are 35 million people with Chagas of which 3 million live in Argentina.

Haulm disease--a hemorrhagic fever which began attacking migrant workers harvesting wheat and corn--has also shown a dangerous increase. Today it is not only found in the northern Buenos Aires area but it has spread to rural areas in Cordoba and Santa Fe.

Tuberculosis, responsible for many deaths at the beginning of the century, has returned with renewed virulence aided by malnutrition and poor living conditions. Tuberculosis is responsible for 20 deaths per 100,000 inhabitants and it is most prevalent in northeastern Argentina. Jujuy has the highest number of people with tuberculosis (3 percent) and the nation's capital has the lowest (0.29 percent).

In addition to communicable diseases (smallpox, diphtheria, measles, whooping cough, poliomyelitis) which have been controlled by immunization (although seminar participants complain that some people still refuse to get inoculated either because of ignorance or indifference), the so-called zoonosis or diseases originating in animals are also being combated. The latter include rabies (1.25 million injections were given last year), hydatidiosis and brucellosis which are common in rural areas.

#### SEVERE OUTBREAK OF CHAGAS DISEASE

Buenos Aires LA PRENSA in Spanish 4 Nov 77 p 8

[Text] Mendoza (NA)--Dr David Becker, an epidemiologist with the National Bureau of Health Advancement and Protection, said that 70 percent of the country is affected by Chagas disease. His remarks were made during the Second National Zoonanthroponosis Symposium being held in this city. He added that the vinchuca is present in the affected area and pointed out that "wherever the insect is present the disease exists."

He added that the number of people infected by the insect now stands at 2.5 million of which 15 percent have the disease in a clinically clear and developmental form. The majority of these clinical cases have developed into the so-called Chagas chronic cardiopathy. In other words there are over 400,000 people that have the actual disease.

#### Increased Funds

He then spoke of the efforts which have been made by the national government for some time now to combat the scourge and he added that "this year funds have been increased significantly and this has permitted planning and initiation in all 19 provinces affected by the endemia, i.e., starting this year all the provinces will take an active part in the national program to combat Chagas disease."

Also present at the opening of the symposium were Col (Ret) Juan Francisco Bejarano, national director of the Bureau of Health Advancement and Protection; Capt Adolfo J. Maillie, under secretary for sanitary medicine; Juan Bautista Ursomagso, public health under secretary for the province, and other officials. The scientific meeting will end today.

Buenos Aires LA PRENSA in Spanish 13 Nov 77 p 1

[Text] Cordoba--The interventor of the National Chagas Institute, Col Carlos Romanella, stated that the national government has ordered a state of emergency to be announced throughout the country in view of the uncontrolled spread of this endemic disease.

In the course of remarks delivered at the provincial secretariat of public health, the official said that this measure was adopted after categorical evidence had been obtained from statistics attesting to what he called the real situation confronting the nation as a result of the Chagas endemic. He added that its features have assumed the nature of a very serious national problem, because of its social, human and economic consequences.

He claimed that only forceful solutions can be applied in such circumstances, and that there would be nothing more appropriate than to conduct an intense, aggressive, timely and continuous campaign in all parts of the nation.

The campaign would include the provinces which currently come under the National Chagas Service, with the incorporation of those in which an increase in the endemic has been noted.

Some 3,000 individuals will be involved in controlling the disease over a period of 5 years; and thereafter the battle will continue until it has been eradicated. It is scheduled to begin on 1 January 1978, and will include the spraying of reinfested dwellings and dubious areas, health education plans, research, a battle against the vector, and an evaluation and improvement of housing.

Buenos Aires LA PRENSA in Spanish 24 Nov 77 p 9

[Text] A press conference was held in the Secretariat of Public Health at the behest of the interventor of the National Chagas Service, Col Carlos N. Romanella, at which the head of the secretariat, Rear Adm Dr Manuel Iran Campo, officiated.

Rear Admiral Iran Campo cited the importance of educating the populace, and making the latter aware of what it should do; because the problem cannot be solved merely by taking technical action against the disease.

He said that it was a problem germane to all of South America. Then Colonel Romanella, who illustrated his remarks with slides and graphics, discussed the historical background of Chagas disease, describing the mechanism whereby the disease is transmitted and the way in which infection occurs.

He said that an operation would be carried out involving over 3,000 agents and 400 vehicles to plan the action and oversee the progress of a campaign to be held throughout the entire country, without overlooking what is occurring in the neighboring countries which are affected by the same situation.

He added that the overall objective is to control the endemic within a period of 5 years, and subsequently to continue the battle until it has been eradicated.

He later remarked: "We are at the starting point, looking forward to eventual success, with the conviction that we shall achieve it. For this purpose, proper conditions do not suffice; but rather, there must be an effort on the part of all those who will be the beneficiaries of it. You realize that no one is immune from contracting Chagas disease; and therefore, concurrently with an intensive battle waged with all weapons, there must be suitable health education and dynamic, altruistic research."

#### INCREASE IN MUMPS CASES REPORTED

Buenos Aires CLARIN in Spanish 17 Nov 77 p 27

[Text] Statistics and epidemiological charts have shown a sizable increase in cases of mumps reported in the federal capital and Greater Buenos Aires.

So much so that the respective secretariats of social welfare in various sections of Greater Buenos Aires have undertaken emergency inoculation plans for school-age children. In order to learn more details about the problem, CLARIN held an interview yesterday with Dr Felix O. Olivieri, chief of the health promotion and protection department which is subordinate to the municipality of the City of Buenos Aires.

The official explained that his department has established a system of epidemiological vigilance, which consists of receiving, every 7 days, information from all municipal hospitals on cases of communicable diseases that have been reported during that period of time.

Dr Olivieri explained: "As a rule, the cases of parotitis urliana, commonly known as mumps, range between 10 and 15 per week in the federal capital and Greater Buenos Aires. However, starting in the first week of June 1977, an increase in the number of cases was noted. For example, there were weeks when we had 23 cases, and there were as many as 32 cases during 1 week. Last August the highest number was reported: 38 cases in a week; but since that time the rates have stayed slightly lower."

Dr Olivieri stressed the fact that nearly all the cases (with a very few exceptions) had a benign course, adding that the complications usually occur in young adults, sometimes resulting from pancreatitis or, what is worse, orchitis urliana.

## CASES OF DIPHTHERIA REPORTED IN SANTA FE

Buenos Aires LA PRENSA in Spanish 4 Dec 77 p 9

[Text] Santa Fe--The Ministry of Social Welfare has reported the discovery of a focus of diphtheria 8 kilometers from Villa Ocampo, in General Obligado Department, located in the northern part of this province, in the so-called Campo Bello Settlement.

A 3-year-old girl and another 7 years of age, neither of whom had been inoculated, died as victims of that disease.

Subsequently, a 5-year-old boy who had not been inoculated and who was a resident of Ocampo Norte contracted diphtheria; followed by another 12-year-old boy, and two girls aged 3 and 8 years, all residents of Villa Ocampo. A few days later, a 12-year-old boy from the island area and a 6-year-old girl, neither of whom had been inoculated, were likewise admitted to the hospital in Villa Ocampo.

Another suspected case of diphtheria was discovered in the northern part of this province which (if confirmed) would bring the total number of children of various ages who have contracted this disease to nine.

The new presumable victim of diphtheria is an 8-year-old girl whose parents live in San Antonio de Obligado, about 13 kilometers from Villa Ocampo, and who had not received any inoculation either.

The provincial health authorities have taken extreme measures aimed at controlling the outbreak, through massive inoculation of the population and isolation and treatment for the victims.

## BRAZIL

### COMMUNICABLE DISEASES CITED AS RIO'S MAJOR HEALTH PROBLEM

Rio de Janeiro JORNAL DO BRASIL in Portuguese 10 Nov 77 p 8

[Excerpt] Communicable diseases still constitute the most serious public health problem in Rio, surpassed only by cardiac ailments, cerebrovascular diseases, accidents in general and cancer, Municipal Health Secretary Felipe Cardoso asserted yesterday, adding that hepatitis remains at the endemic level for lack of basic sanitation.

The second major problem faced by the Health Secretariat is a lack of personnel, which will be alleviated next year by the hiring of half of the 2,300 employees required for the school health and veterinary medicine sections and the assistant nurses for the hospital system.

## Percentages

The major public health problems of the municipio of Rio de Janeiro were highlighted by the director of the General Public Health Department of the municipal Health Secretariat, Eloadir Pereira da Rocha, during the First Medical Session sponsored by the secretariat at the Gloria Hotel.

In the view of the secretariat, mumps and German measles are out of control for lack of available vaccines, while tuberculosis shows an index of 10 percent among the school population whereas it should be only 1 percent.

Explaining the difficulties being faced, the director of the General Public Health Department reminded that the municipio of Rio occupies only 3.1 percent of the area of the state, but contains 47 percent of its total population. In addition 16 percent of its inhabitants live in slums. Mr Eloadir Pereira da Rocha said that it is necessary to increase over the short and the long term the outlay of funds for sanitation and preventive medicine, with a consequent reduction in expenditures for treatments.

The allocation for the department in 1978 will be 230 million cruzeiros, 23 percent of the total budget of the secretariat. The director of the department reminded that although 85 percent of the budget is intended to pay the personnel, there is still a lack of human resources, and the secretariat has to increase the amount of personnel, currently numbering 11,000 employees, by 20 percent.

## MENINGITIS INCIDENCE

Brasilia CORREIO BRASILIENSE in Portuguese 12 Nov 77 p 8

[Text] Goiania--The Health Organization of the State of Goias (OSEGO) acknowledged yesterday that the incidence of meningitis is well above normal, but it does not view the increase as an outbreak of the disease. Trying to calm the population by a press release, the OSEGO assured that there are "only 19 victims of the disease" confined in the tropical disease hospital in Goiania. Even so, most of the cases come from the interior.

Dr Alexander Salenkov, official in charge of the epidemiologic vigilance section of the Health Secretariat of Goias, returned yesterday from Porto Nacional, at the north of the state. He went to that city to verify the number of cases of meningitis in the area, in view of the alarming news reaching this capital at the start of the week. According to his report, the nine patients hospitalized there are already out of danger. Two of them are from Porto Nacional, and the rest are from neighboring municipios.

The OSEGO reported that "in addition to the large quantity of medicines, the representative of the agency arranged for the collection of samples from all the patients in Porto Nacional, which are being analyzed at the central laboratory in Goiania. Should the incidence reach the epidemiologic level, Goiania will be immediately notified."

The note also adds: "There is vaccine against meningitis, but it can be released only by the minister of health after confirming an epidemic of meningococcic meningitis. There is no vaccine against the other types of meningitis. The population must be informed that there can be vaccination only in the case of meningococcic meningitis."

The OSEGO has no vaccine supply available for the disease.

Rio de Janeiro O GLOBO in Portuguese 13 Nov 77 p 13

[Text] Sao Joaquim da Barra--Despite the occurrence of 15 cases of meningitis in a period of 1 month at Sao Joaquim da Barra, 60 kilometers from Ribeirao Preto, the sanitary district of that city denies the existence of an epidemic outbreak. The doctor in charge, Cesario Fernandes Valerio, resorts to bulletins to explain that not all the cases are of meningococcic meningitis (communicable).

Some 11 persons, all of them suffering from still undetermined types of meningitis, are confined in the Sao Joaquim Charity Hospital. Because of the lack of space, three patients were sent to the hospitals of Ribeirao Preto last Friday.

The technical assistant of the Regional Health Division, Waldomiro Jorge Ramos, said that only after the Adolfo Lutz Institute of Ribeirao Preto completes all the tests will it be possible to determine whether there is an outbreak of meningitis.

#### TEACHERS TESTED FOR GERMAN MEASLES IN CAMPAIGN

Sao Paulo FOLHA DE SAO PAULO in Portuguese 13 Nov 77 p 26

[Text] Because of the incidence of German measles among students at the primary and nursery school levels in the prefecture, the Department of School Aid, of the Municipal Secretariat of Education, has intensified its vaccination program against German measles.

As part of this program, to October of this year 5,262 pregnant teachers in the municipal education system were tested for the disease. This is a preventive measure, the major goal of which is to protect pregnant teachers and women functionaries from bearing malformed children as the result of possible contagion.

## Health Measures

Guided by health educators, the teachers were instructed on the importance of the German Measles Vaccination Program, and it was recommended that all teachers of child-bearing age take the susceptibility test.

This year, 5,262 teachers have been tested, 4,625 of whom were proved to be immune. The other 637 who took the test were susceptible to the disease, and 239 of them have been vaccinated and are protected. The other 398 teachers and functionaries will be vaccinated shortly.

## EFFECTIVE CHAGAS VACCINE SOUGHT

Sao Paulo FOLHA DE SAO PAULO in Portuguese 27 Nov 77 p 26

[Text] Brasilia--CEME (Center for Medicines), researchers of the University of Brasilia [UNB] and chemist Luiz Gonzaga Fernandes are engaged in research to find a substance which can be used to produce a vaccine against Chagas disease. The information comes from CEME, which will sign an agreement with the UNB the beginning of next year to carry out the studies.

At present the Ministry of Health is also studying the possibility of using German technology, through the Roerst and the multinational Bhering laboratories, to produce anti-Chagas vaccine in Brazil on a scale sufficient for exportation.

The CEME program will resume the experiments of chemist Luiz Gonzaga, who discovered the immunological substance TG-SER. It will be tested first on dogs and rats, and then on monkeys.

Luiz Gonzaga Fernandes, recently with CEME, said he was very pleased, and that he had announced the discovery of his medicine over 19 years ago. Sao Paulo industrialist Wagno Pereira Gomes has testified that the synthesis achieved by Luiz Gonzaga cured his parents of Chagas disease.

According to its discoverer, immunological TG-SER is effective in the treatment of disease caused by the Trypanosoma Cruzi, and it works through specific elements that move to the nests [sic] of the disease agent, eliminating the cells and affected musculature. After 16 days the nests are eliminated, which facilitates the action of the lymphocytes.

## OVER 100 MALARIA CASES REPORTED IN BAHIA FROM JANUARY TO SEPTEMBER

Rio de Janeiro O GLOBO in Portuguese 28 Nov 77 p 6

[Text] Salvador (GLOBO)--In the period from January to September of this year, 71 cases of malaria were reported in Salvador, and 46 in Feira de Santana, according to data from the Statistical Sector of the Superintendency of Public Health Campaigns (SUCAM). For Oswaldo Alvares de Jesus, SUCAM's regional delegate, these figures are not cause for alarm because it has been established that most of the cases originated in Amazonia, where the carrier mosquito is still very prevalent.

Nevertheless, SUCAM is developing campaigns in Salvador, principally in the districts of Otapoa, Boca do Rio, Pernambues, Sao Caetano and Pituba. But according to Oswaldo de Jesus, the results are poor because the city does not provide basic sanitation. A campaign has been underway since last month to collect blood samples from possible disease carriers. The samples will be sent to laboratories for analysis.

The campaign against the malaria carrying mosquito--Plasmodium--is being conducted with the use of the insecticide DDT in lakes, streams and gullies; the mosquitoes' "natural habitat." Contagion occurs most frequently through blood transfusions. The first symptoms are high fever, headache, chills and perspiration.

## EAST GERMANY

### MEDICAL PERSONNEL SHORTAGES IN HOSPITALS, INSTITUTIONS

Bonn IWE-TAGESDIENST in German No 218, 14 Nov 77 pp 1-2

[Text] The manpower situation in certain areas of the GDR public health system is causing alarm. Prof Dr Ludwig Mecklinger, GDR minister for health, has told Radio GDR that the situation in the nursing as well as the surgical-operative sections of hospitals is "very tense." Furthermore, nursing personnel fail to show up at "not a few" nursing and rest homes. In order to ease the situation, the minister called for stepped-up indoctrination in public health, with the goal of obtaining participants for those areas "where, for the time being, the situation is particularly tense." For example, nurses and other medically trained personnel in the ambulatory clinic area are to be brought back for duty in the hospitals. In addition, volunteer Red Cross workers should be used primarily to perform nursing work in the hospitals, especially on weekends. There are already many good examples of this. Moreover, Mecklinger announced "stimulating measures" to obtain more manpower for the hospitals and to reduce the manpower shortage there.

## PLANS FOR IMPROVED MEDICAL CARE DESCRIBED

East Berlin PRESSE-INFORMATIONEN in German No 139, 24 Nov 77 p 2

[Article by Prof Dr Ludwig Mecklinger, minister for health]

[Text] By 1980, more than twice the investments of the previous five-year plan will be available to the GDR in the sector of health and social welfare services. Thereby for example, 7,000 hospital beds will be renewed or modernized with the necessary and diagnostic and therapeutic facilities as well as supplies. Ambulatory medical care is to be expanded by about 2,500 physician and dentist jobs. About 30,000 new jobs are to be created in rest and nursing homes.

The focal point of these investments consists of the construction and additional building of the Charite hospital in [East] Berlin and the agreed-upon new buildings and reconstruction of large hospitals. A considerable number of them is already under construction; one group of them will be finished in the current five-year plan. The Halle-Kroellwitz hospital is already open and will be fully ready in early 1978 to provide care with 777 beds and its extensive diagnostics and therapeutic capacities. In Suhl, the construction work at the bezirk hospital has progressed to such an extent that the first wards are already available this year. In Neubrandenburg, the new hospital buildings will essentially be completed by 1979; and new facilities for patient care will be operational within the current five-year plan in the hospitals at Berlin-Koepenick, Cottbus, Frankfurt/Oder, Jena, Karl-Marx-Stadt, Leipzig and Schwerin.

Moreover, the investment program envisions numerous new construction projects and reconstruction of health facilities, such as polyclinics in Berlin, Leipzig, Teltow, and Schwerin; sanatoriums in Bad Muskau, Bad Elster, Oberwiesenthal, and Heiligendamm; rest and nursing homes in Berlin, Frankfurt/Oder, Cottbus, Erfurt and Suhl; as well as facilities for children in all bezirks. This is being done--with the exception of sanatoriums--primarily within the scope of comprehensive housing construction projects.

The opening of new outpatient clinics and polyclinics also facilitates continued concentration on the ambulatory sector. This results in better preconditions for high quality work. The office hours can be scheduled, to a greater extent than heretofore, from 0700 to 1900 hours, which makes things easier for the patients. For the citizens of a large number of kreises, rapid qualified physicians' care in cases of acute illnesses and accidents will be improved with the expansion of first-aid medical stations.

With the investments, reconstruction and preservation measures envisioned for 1976-1980, care and working conditions will be improved in numerous

ways. This manifests itself, among other things, in the conversion of existing sick wards into private rooms, in the modernization of offices, lounges, social activities areas, and hygienic facilities and in the installation of ventilating and exhaust systems as well as of passenger and freight elevators.

#### Planned Rebuilding of Existing Facilities

The large-scale investment measures do not preclude the possibility that the health and social service system will be based predominantly on existing facilities. For this reason, their planned reconstruction and modernization must be spread out consistently over a prolonged period of time. In this effort, greater attention is to be paid to those facilities in which employees of the health and social service system assume special physical and psychological burdens in the service of preserving the life and health of the citizens.

The Karl-Marx-Stadt bezirk has successfully followed the course set by the eighth and ninth SED congresses toward reconstruction and modernization of existing health and social service facilities. Many initiatives have been developed through the joint efforts of people's representations and their organs, the mass organizations, the enterprises and the citizens actively participating in the GDR's National Front. At the focal point of this matter are the plan tasks, which for years have been fulfilled or overfulfilled in the kreises, cities and communities of the Karl-Marx-Stadt bezirk. Thus collectives of the Wilhelm Pieck RAW [GDR Railway Repair Yard] of the VVB [Association of State Enterprises] for Textile Machine Construction, of the VEB for Knitting Machine Building and of other enterprises, craftsmen and citizens of Karl-Marx-Stadt--all have contributed to the reconstruction of health facilities which now satisfy modern requirements.

There are also such examples of numerous local and enterprise initiatives in other bezirks. Thus, in the GDR National Front "Pitch In" competition, as of 30 September 1977, 27,000 rooms in the health and social service system were restored or renovated. During the past 2 years in the Erfurt bezirk, 265 contracts have been concluded with health and social service facilities in the "Pitch In" competition; thus additional assets of M23.8 million have been created. This course proved especially useful and successful in the deepening of trustful relations between the health and social services system and the populace.

#### Progress Through Teamwork

By means of an investment policy geared to rapid effectiveness for the public and through numerous initiatives toward systematic reconstruction and preservation, it has been possible to achieve many noticeable improvements for patients and employees alike and to reduce occasional

differences in the standards of medical care and social services existing among kreises and installations. At the root of these advances is a strong commitment of the deputies, the heads of staffs of the state organs, the continuous guidance of the kreis, city and community councils, as well as the distinct imprint of socialist teamwork in this field. In this effort, moreover, among other things, the commitment to projects under the responsibility of the local councils has proved successful. The results have accommodated concrete and calculable measures in the annual economic plans and in the programs for conducting the competition "Pitch in and make our cities and communities more beautiful."

The decisions of local people's representations, councils and community associations form the foundation for the development and expansion of long-term relations among enterprises, cooperatives, artisans' and work collectives of the health and social service system, among other things, in the form of communal contracts and sponsorship agreements between enterprises and particularly stationary facilities.

#### VACCINE PRODUCTS, RESEARCH OF DRESDEN SERUM PLANT DISCUSSED

East Berlin TRIBUNE in German 29 Nov 77 p 4

[Interview with Manfred Kluge, chief engineer, director, Sachsen Serum Plant, Dresden, by Jutta Wolf]

[Text] Because of the particularly favorable climatic situation this fall the time for the antigrippe vaccination was extended. Thus, the laggards still have the opportunity to get the protective shot from the vaccination pistol. We asked chief engineer Manfred Kluge, director of the Sachsen Serum Work, Dresden:

[Question] Why does it remain necessary to have oneself vaccinated against virus grippe?

[Answer] Grippe does not equal grippe. Experts have found that about 240 different causative agents are responsible for infections of the respiratory and tracheal tract. For the common cold the saying goes: "It comes for 3 days, stays for 3 days and goes for 3 days." Things are different for the virus grippe; its clinical course is a good deal more complicated. Particularly dreaded are the secondary afflictions such as bronchitic problems, pneumonias and circulatory diseases. Therefore vaccination is especially important for older people and workers who are more likely to be exposed to infection through their activity, such as for instance in trade, in education and in communication and health services, and specifically against the virus A-Victoria 3/75 which at present is internationally active. For this our plant has made enough vaccine available.

[Question] Has the director also protected himself against Victoria?

[Answer] Naturally; in our plant that is a matter of course.

[Question] In which direction is research proceeding in the field of protective inoculation?

[Answer] The tendency is to free the vaccine further of foreign matter in order to enhance its compatibility. Also, in the future a single annual inoculation should be sufficient. At present a method of express virus diagnosis is being experimentally introduced. Through developments in collaboration with the Berlin Institute for Applied Biology in the Medical Microbiological Institute of the Friedrich-Schiller University in Jena, the influenza virus can now be identified in the serum of patients more rapidly than before.

[Question] As is known, your plant does not produce only the influenza adsorbate inoculation material. What else is being produced?

[Answer] Other virological vaccines against measles and infantile paralysis. So far as bacteriological vaccines go our plant ships tetanus adsorbate and typhus vaccines as well as immuno-biochemical diagnostic agents and allergenes. We also continue to produce old established preparations such as Cholocysmon and Euflat.

[Question] Recently a report attracted attention among experts: Argentina expressed preference for the GDR measles vaccine over competitive preparations. To what is that due?

[Answer] First of all, to the superior quality of our vaccines. A few words about the method of selection. In capitalist countries so-called tenders are being published. These are public invitations for imports which state the current national requirements, inclusive of commercial aspects. In response, firms can submit their offers. The decision fell on our product on the basis of better vaccine quality. Of decisive influence also undoubtedly was the success of the mandatory measles vaccination in the GDR, because this childhood disease has been nearly completely eradicated in our country. In 1967 we still had 41,000 cases, in 1975 a bare 1,000.

[Question] This vaccine is also furnished to Angola?

[Answer] Obviously the complete satisfaction of our own needs comes first. However, we did export measles vaccines to the CSSR, Cuba and Angola. In addition the pharmaceutical industry and the health service of the GDR have been supplying the African state with medical products for some time. On the basis of an inquiry from Angola we have been sending 350,000 doses for the youngest Angolese. Surely this will increase in the future.

[Question] Your plant has accepted these additional export orders. How have you been able to fulfill the plan just the same?

[Answer] We had to improvise a great deal, because new machines were not available. Thus technological methods were changed and also several innovations were introduced. The refrigeration center Dresden helped out with refrigeration capacity, because the vaccine must be stored at  $-20^{\circ}\text{C}$ . Additional places for apprentice work were also created. After all, our plant has fulfilled its assignments for 190 months and no one would like to allow such a series to be broken. Our work found much appreciation. In September of this year the Sachsen Serum Plant was designated as "Plant of Socialist Work."

[Question] What news may be expected from the plant in 1978?

[Answer] First of all we shall put into production a new express test for the demonstration of antibodies against tetanus. Our well known preparation Euflat, which was mentioned already, will reach the pharmacies in a new, improved composition. Of interest for veterinarians will be a new vaccine against horse grippe. There are also several diagnostic developments which are either new or represent improvements. We continue to work on preparations for future introduction of a vaccine against mumps.

#### EGYPT

##### DENGUE FEVER OUTBREAK

Cairo AL-AHRAM in Arabic 5 Nov 77 p 1

[Text] Dr Ibrahim Badran, minister of health, announced that one case of dengue fever was discovered in the village of Kirdasah in the governorate of Jizah. Precautionary measures will be taken in all the districts of the governorate and helicopters will spray the villages. He added that work groups and equipment of preventive medicine in the ministry were able to restrict the fever to the limited cases which appeared in Bilbays in the governorate of al-Sharqiyah. At the people's assembly which was organized by the Egyptian party at Shubramint in Jizah, the minister announced that a clean-up campaign was under way in the governorate. It was also decided to set up health clinics in rural villages with a minimum population of 9,000. The minister implored citizens and local authorities of cities, suburbs and villages to report immediately any cases suspected to be dengue fever. High temperature and severe continuous headaches are symptoms of the disease. A clean-up expedition was organized to spray drainage canals with insecticides in order to exterminate gnats and mosquitoes. This will be achieved with the use of equipment and workers offered by several companies.

Cairo AL-AHRAM in Arabic 6 Nov 77 p 6

[Text] The epidemic caused by dengue fever has been controlled by the intense efforts of the Ministry of Health and local equipment. At this time, only a few cases occur. Dr Ahmad Muhammad al-'Aqqad, deputy of the ministry for preventive medicine, revealed that the virus of the disease has been identified. He describes it as a group of viruses found in cattle and are carried to humans by way of mosquitoes. The symptoms of the disease are a sudden high fever for a period of 2 to 4 days, accompanied by body tremors, with severe pains in the muscles and joints, followed by a temperature drop. Dr al-'Aqqad added that the fever is a harmless type and is treated by aspirin and complete rest.

Cairo AL-JUMHURIYAH in Arabic 8 Nov 77 p 8

[Excerpts] This is not the first time that helicopters have flown over the village of Bilbays to spray insecticides. But it is the first time that Malathion, an insecticide against the cotton worm, is being sprayed in order to kill the giant mosquito which caused the death of at least 100 citizens from a mysterious disease. Dr Ibrahim Badran, minister of health, said that the strange disease which appeared suddenly in the village of Basatin al-Isma'iliyah in the governorate of Sharqiyah, resembles dengue fever which is carried by mosquitoes. The disease appeared in this village 3 weeks ago and spread to six other villages. A few cases also appeared in Bilbays. The AL-JUMHURIYAH newspaper made a follow-up on this disease with health authorities. The director of the health department refused to give a statement but mentioned that there was an increase in the number of deaths caused by the disease. In the health department at Bilbays, the situation was as follows: the director is absent and no one else is in charge. A group of employees said that what happened was just "some fever" which ended and everything was all right. The physicians at the Bilbays hospital refused to make any statement. Here I found no alternative but to direct myself to the village where the disease originated.

The village of Basatin al-Isma'iliyah is located at a distance of 12 km from the city of Bilbays on the Cairo highway and is followed by 19 farms.

#### Influenza Treatment

On the way I found out that the disease originated at the farm of Muhammad 'Omar Murad, widely known by the name of al-Qittah al-Saghirah. There I met Ahmad 'Abd-al-'Aziz Salamah, director of the youth department in the district of Bilbays, who showed me a report which he sent to the director of the health department in Bilbays, describing the symptoms of the disease which has appeared as an epidemic among the inhabitants of the farm since 1 October. The symptoms are very high temperature, unconsciousness, stomach pains and diarrhea followed by anal bleeding and

death. An average of one to two deaths occurred daily. A health inspector and a physician from the clinic of the village of Basatin came to examine some of the patients and to check the medical prescriptions. They found them all to need influenza treatment and decided that there was no cause for alarm.

When Ahmad 'Abd-al-'Aziz complained to the health inspector about the large quantity of mosquitoes and requested that motors spray and disinfect the piles of fertilizer, he was told that spraying was limited to the city and a budget to spray the villages was not included in the plan. A week passed and the entire farm caught the disease which also spread to neighboring villages. The average number of deaths rose to five cases daily in a single village.

#### The Size of a Wasp

There are several possibilities for the spread of the disease in a very short time. Muhammad 'Abd-al-'Aziz who lives in the farm of al-Qittah al-Saghirah said that the area is surrounded by four drains that carry the sewage of Cairo. They are the drain of Shuliyah, another one at Basatin al-Isma'iliyah, a third drain near the Isma'iliyah Canal and a fourth drain facing the village in addition to several other branch drains located in the area. All these drains have abundant grass which makes them a fertile site for mosquitoes. He describes the mosquito by saying that it is the size of a wasp. The mosquitoes drive the inhabitants from their homes until midnight at which time they can return and are able to fall asleep from exhaustion. Various kinds of insecticides were tried but none produced any results in combating the mosquitoes.

#### Sheep Contagion

'Ali 'Abd-al-'Azim Abu al-'Ula, who is a surveyor at the agriculture society, says that some sheep were struck with a strange disease with symptoms of very high temperature followed by the animals' dizziness and their fall to ground. The owner of these sheep sold them at discount prices to neighboring butchers who in turn distributed them to the village inhabitants. Dr Mustafa Nawwar, professor of animal production at the faculty of agriculture at Zaqaziq University, mentions that those symptoms are a result of "Microtoxin" poison produced by fungi which are strongly poisonous to both humans and animals. The resulting illness is called "Microtoxinosis."

#### Occurrence in Russia

He adds that in 1940, a disease broke out in Russia, as a result of corn grains left in barns during the winter time because of a lack of working hands during World War II. A type of fungus, the fusarim, grew on the grains. This led to some cases of poisoning. The symptoms were Atrophia

cutis, chapping of the lips and fingers and nasal tissues. Ten percent of the Soviet population caught the disease and 40 percent of those afflicted by it died.

A third possibility is the presence of a 6-acre garbage dump in that area where rats are abundant. It is known that rats are good carriers of disease. Muhammad Kamal Shuwaykh, president of a local council, comments on the disease and is supported by three other villages: Tall Rawzan, Biri 'Amara and al-Salam. All three villages were struck by the disease. He says that he recently noticed an increase in the average of deaths among the inhabitants of these villages, which reached an average of 10 cases daily. Before, it was not more than 1 case a week or 10 days. He adds that the disease is dangerous because it causes death if the patient has not been treated in 4 hours. AL-JUMHURIYAH newspaper received the names of 28 victims from the village of Basatin al-Isma'iliyah alone.

#### Why Wasn't the Village Isolated?

As Ahmad 'Abd-al-'Aziz Salamah, who lives in al-Qittah al-Saghirah, said that in spite of the danger of the situation and the dozens of daily victims, the efforts made by the health administration are limited to only certain people. He also added that the administration has not thought of taking the simplest measure, which is to isolate the village, or even to set up an operation room at the health clinic in order to treat the patients and prevent them from going to other areas. Instead it left the uneducated farmers to face the disease alone. As most of the people of the area believe that the physicians in Bilbays are very advanced in the medical field, or perhaps because it is the nearest town to them, all the cases were transferred to the health offices in Bilbays on motorcycles, because that is the only means of transportation there. The patient sat behind the driver and two of his relatives sat behind him. This created good business for the motorcycle drivers. One of them, Bayyumi Muhammad Salim, from the village of al-Salam, which was struck by the disease, told me that he was transporting 40 cases a day.

The physicians at Bilbays diagnosed the disease as influenza, and when the cases increased they doubled the price of check-ups. One doctor raised the price from 50 piasters to 1 pound. But in spite of that, long lines remained waiting before his office. The disease was transferred to Bilbays by motorcycles. It is not unusual to find that most of the motorcycle drivers caught the disease. 'Abd-al-'Aziz Sulayman, secretary of the society of agriculture at Basatin, said that the town has announced that it is a time of mourning. Every day there is more than one funeral procession in the streets. As for Dr Muhammad al-Hadi 'Issa, director of the fevers hospital at Zaqaqiq, he says that Dr Sayyid al-Dar', director of the health department, has not yet made any comments. When will he make them?

Cairo AL-AHRAM in Arabic 10 Nov 77 p 8

[Excerpt] Several cases of dengue fever have appeared in Shibin al-Qanatir, Kafr Shibin and Kafr al-Dayr in the governorate of Qalyubiyah. Those afflicted by the disease were taken to the fevers hospital where some died. Muhammad Ahmad al-Minyawi, governor of Qalyubiyah, the director of safety and the director of health, all went to the areas where the disease struck and supervised the fight against the mosquitoes which carry the disease. Swamps were sprayed with insecticides. Tawfiq Zaghlul, a member of the People's Assembly, presented a request to the minister of health for information on taking antifever measures.

Cairo AL-AKHBAR in Arabic 11 Nov 77 p 9

[Text] Dengue fever has spread to some villages in the district of Abu Hammad. Fifty cases appeared in the villages of 'Arid, al-Jins, Jazirat Abu Ghillah and al-Tahirah. The victims were taken to hospitals for treatment. No deaths have occurred as yet. The houses and drains that surround these villages have been sprayed with insecticides. The inhabitants have been immunized with the necessary antidotes.

#### GUINEA-BISSAU

##### POLIOMYELITIS VACCINATION CAMPAIGN

Bissau NO PINTCHA in Portuguese 22 Oct 77 p 2

[Excerpts] The massive vaccination campaign against poliomyelitis in honor of the Third Party Congress will begin on 4 November.

The people of our land will see the beginning of a new era on this date. According to the plan of the workers of the Commissariat of State for Health and Social Affairs, and with the help of the militants of the PAIGC [African Independence Party of Portuguese Guinea and Cape Verde] and its mass organizations and the cooperation of our people in particular, this campaign should constitute one of the major events of the struggle of our people against the terrible and backward legacy which we received from colonialism.

All of us must campaign--not a campaign for a few, but a campaign for everyone which will serve the real interests of our people.

"The children are the blossoms of our struggle and the main reason for our combat" of yesterday and of today, hence protecting them constitutes not only a patriotic act, but also an imperative of national reconstruction.

GUYANA

UNIDENTIFIED INFLUENZA-LIKE VIRUS

Georgetown GUYANA CHRONICLE in English 1 Nov 77 p 1

[Text] Doctors are advising Guyanese suffering from fever, headaches, pains in the joints and muscles, to take complete rest, use aspirin and drink as much liquid as possible. This advice was given yesterday as hundreds of people, particularly in the Berbice areas, have been rushing to the public hospitals seeking remedies for these ailments.

And officers of the Mosquito Control Department in Georgetown were in Berbice yesterday spraying drains and trenches with the aim of killing mosquitoes believed to be the carriers of virus that causes this illness.

According to a source, the illness was described by Consultant Specialist of the New Amsterdam Hospital Dr Habed Niamatali, as Dengue, a virus transmitted by mosquitoes that cause yellow fever.

Georgetown GUYANA CHRONICLE in English 20 Nov 77 p 7

[Text] During recent weeks, many persons have been complaining of an influenza-illness.

Steps have been taken by the Ministry of Health to obtain laboratory diagnosis of that illness.

The illness consists of fever, joint pains and muscle pains which are very much like the symptoms of the ordinary influenza.

However, some patients have been complaining of feeling worse than others in terms of pain and discomfort, and some have even complained of chest colds and severe weakness.

According to an official report from the Ministry of Health, the medical experts are at present collecting specimens of blood and sputum, and also throat swabs. These have been sent to the Caribbean Epidemiology Centre in Trinidad--formerly called the Trinidad Virus Laboratory--for viral examinations in order to determine the cause of the peculiar illness. The results are expected shortly in Guyana.

It has been noticed, too, that there has been an increase in the mosquito population in Georgetown and its environs. This upsurge in the population is mainly due to stagnant drains in some parts of Central Georgetown, and the suburbs.

These stagnant drains are due to little or no rainfall at all. The Municipal Public Health Service, concerned as it is with the situation, has stepped up its antimosquito operations in Lacytown, Campbellville, Kitty, Prashad Nagar and in the South Ruimveldt areas.

This campaign will continue indefinitely in all the areas until the mosquito population has been brought down to a tolerable level.

## INDIA

### EFFECTIVENESS OF TUBERCULOSIS CONTROL PROGRAM

Madras THE HINDU in English 24 Nov 77 p 8

[Article by Dr T. Rama Prasad]

[Text] The 32nd National Conference on Tuberculosis and Chest Diseases is being held in Trivandrum from Nov. 23 to 27.

Several conflicting views and reports have been published during the last few years on the level of control of tuberculosis in India. While optimistic statements on the working of the National Tuberculosis Programme (NTP) lead to complacency, expressions indicating dismal failure of the programme puzzled the public.

According to the figures given at the IX conference of the eastern region of the International Union Against Tuberculosis held in 1974, the estimated number of tuberculous patients discharging tubercle bacilli into the environment (infective) was about three million in all the countries of the South-East Asia region and about 1.8 million in India at any one point of time. The lowest prevalence was in Sri Lanka (240 per 100,000 population) and the highest in Indonesia, Maldives and Mongolia (600 per 100,000). A national sample survey conducted by the Indian Council of Medical Research during the period 1955 to 1958 estimated that there were in India about five to six million persons having tuberculosis out of which about 1.5 million were infective.

The Tuberculosis Association of India in its 38th annual report (1976) mentioned: "With about nine million persons having tuberculosis and about three million of them being infective, the melancholy spectre of this disease reduces the working capacity of a very large segment of the community, and tuberculosis, moreover, is said to take a toll of about a million lives every year in our country thus depriving the nation of millions of man-days which should be available for productive activity." These figures naturally lead to the question: "Is tuberculosis on the increase in our country in spite of the prestigious National Tuberculosis Programme (NTP)?"

The answer seems to be simple and obvious. But there are numerous factors making precise assessment difficult. The epidemiological estimations made subsequent to first national survey are based on the findings of limited studies. The Tuberculosis Association of India and several experts deem it necessary that a second national survey is mandatory to assess the progress made and to make necessary basic changes in the programme.

But certain epidemiologists feel that periodic tuberculosis surveys, which are prohibitively costly, cannot measure correctly the impact of TB programmes on the problem and that within a decade or two, changes in planning inputs cannot logically lead to basic changes in a properly planned programme. It is also pointed out that if a second survey indicates an increase in the TB problem it does not mean that the programme has failed, for there is what is called a natural epidemiological trend on the basis of secular curve of the epidemic.

In the absence of universally acceptable data, impressions on the efficiency of the programme would naturally be at variance. Certain experts feel that there are clear indications of decline in TB incidence. The prevalence tends to be lower in the younger than in the older age groups when the TB epidemic is on the decline. The longitudinal studies conducted in our country so far testify that the prevalence is noticed to be more in older age groups. At the New Delhi TB Centre it has been observed that TB meningitis is rare nowadays among the contacts of the patients, and that severity of symptoms in TB of lung and lymph glands is less. Mortality, incidence, and prevalence rates are found to be decreasing in certain studies. These are some of the plus points for the programme.

But what is the other side of the coin? An internationally renowned Indian expert stated in 1976: "Have we made any dent on the TB problem? Unfortunately not.... This means that the existing control programme has been extremely unsatisfactory. The reasons are obvious. First and foremost is the failure in providing adequate diagnostic and treatment service to the bulk of the country's population who live in the villages. It was a mistake to have depended on the meagre general health services at the peripheral level to deliver the goods which they are reluctant to carry. Secondly, there is lack of supervision at all levels." The expert committee of the Indian Council of Medical Research on the working of the programme confirmed the impression of the Tuberculosis Association that the programme was not functioning satisfactorily.

Amidst the unpalatable adversities, we are blessed with a few natural favourable factors. Virulence of the Indian strain of the TB germ is low. Infectiousness of the strain is not as high as was thought to be. Interval between the time of initial infection and onset of disease is long. Nonspecific allergy which is believed to offer protection against TB is widely prevalent in India. A favourable trend in the constitutional factor of the people is also supposed to have occurred.

The most important unfavourable factor on the part of the public is that they come to seek medical advice at a late stage and they do not take regular and adequate treatment as advised. A study by the students of the Delhi School of Social Work revealed that the main causes of the default were that the patient did not think it necessary to take drugs for long or it was difficult for him to attend the clinic for regular drug collection.

The science of treatment of tuberculosis has made such tremendous strides during the past two decades that if the public on their part act according to the mandates of preventive and curative principles (like seeking medical opinion early, observing cough hygiene, proper collection and disposal of sputum, getting BCG vaccination, taking regular and adequate treatment, etc.) the dreaded scourge can be banished from the country even without an expansive and expensive TB programme. This is not an overstatement, but perhaps a highly hypothetical one. Several studies have pointed out that the public, even the educated class, are apathetic, careless, and unadhering to medical advice for various reasons.

It is for this reason that the role of voluntary organisations is of paramount importance. The Tuberculosis Association of India has been doing good work within its scope and means.

A tuberculosis programme rests on the tripod of funds, public consciousness, and dedicated workers. All the three legs are weak and rickety in our set-up. Nothing would be less costly and more effective than dedicated work to bridge the yawning gap of operational hold-ups and unfavourable attitudes between the programmer and the consumer.

## INDONESIA

### CHOLERA OUTBREAK

Hong Kong AFP in English 1536 GMT 2 Dec 77 BK

[Text] Jakarta, Dec. 2 (AFP)--Eight people died and 20 others were rushed to a local hospital following a cholera outbreak that hit the Kuningan and Rancaekek districts in West Java late this week. Local health officials said that unhealthy environment was the main reason for the spread of the fatal disease. A massive vaccination campaign to prevent the spread of the disease had been carried out in the area.

## IRAN

### CHOLERA SITUATION OF PILGRIMS STUDIED

Teheran ETTELA'AT in Persian 13 Oct 77 p 36

[Excerpt] It was announced today that a delegation representing the Waqf Authority and the Ministry of Health had gone to Saudi Arabia to study the health conditions of the Hajj with regard to the possible outbreak of cholera and that their recommendations would be acted upon next week relating to the departure of Iranian pilgrims for Mecca.

This delegation is to study conditions in the cities and the pilgrims' living areas, and will hold discussions with the Saudi Waqf and health authorities. They will return early next week to Iran where the conclusions of their study relating to the departure of the pilgrims will be taken up.

It has been said that in case of an outbreak of cholera in Saudi Arabia, because of the number of pilgrims from all over the world (over 1 million), the likelihood of an epidemic is great. If the delegation's report foresees a danger to Iranian pilgrims, the responsible authorities will take the necessary actions. At present a group of Hajj leaders has gone to Saudi Arabia to rent a house, and another group is awaiting the return of the delegation and the results of their report.

### OFFICIAL REPORTS ON CONDITION OF HOSPITALS, PERSONNEL

Teheran ETTELA'AT in Persian 16 Oct 77 p 28

[Text] Dr Shaykh al-Islam Zadeh, minister of health and welfare, said in his report to the Imperial Commission:

--A Ministry of Health and Welfare representative has reported that most problems associated with the Justice Hospital are caused by aging buildings. Most Ministry of Health hospitals are afflicted with these same problems. At the same time, newly constructed and equipped hospitals are underutilized. We must make better use of the hospitals which are available, and we must make a continuing effort to repair the old buildings and remedy their problems.

--Regarding the visit, a woman doctor, about whom questions had been asked in the hospital, was removed immediately after the inspection, when matters were still in an uncertain state. Afterward the Medical Committee of the hospital and two other doctors, who had worked in the system during the entire Joghrafiya period, were removed and the additional funds which had been paid to them were restored.

--To remove the duality of the system, the physician working in the Justice Hospital was transferred to another place.

#### Evaluation of the Shahidi Hospital, Sari

In the meeting referred to earlier, a group was given a mandate to evaluate the hospitals in every province, and the inspections were begun. On the date of the inspection a questionnaire was sent to the hospital, and a date fixed for the evaluation. The inspection has been accomplished and the assistant governor general of the governorate was sent to the hospital pending determination of the deadline. If steps are not taken to remedy the defects discovered, the hospital will not be permitted to continue operations.

Meanwhile, I should point out that--based on the evaluations already completed of the country's hospitals: public, private and university--unfortunately only a very small number measure up to the highest international standards. To improve the standards of care in the nation's hospitals and bring them up to the highest international levels will require trained, specialized manpower--doctors, head nurses and staff assistants such as medical records clerks and accountants--which is in extremely short supply.

The limited training facilities available, compared with the need, means it will not be possible to reach a high international level quickly. Obviously, when the country has only one-tenth the needed number of nurses, the nurse situation will not be optimal at most hospitals. When even medical records clerks, who have a postgraduate degree, are not trained within the country, the records situation will not be satisfactory, especially when most of our doctors are not accustomed to filling out complete records. Based on the evaluation, the country's hospitals were found to have basic defects and problems in comparison with international standards of hospital construction. These problems will be avoided in the future by the construction of large new hospitals built to the highest international standards. Thus the need for repairs will also be avoided.

Certainly it must be admitted that part of the hospitals' problems stem from weak direction and the responsible officials' lack of attention. This situation is to be remedied by means of education and supervision.

#### Shehyad Hospital

The evaluation of this hospital found it to be defective by Ministry of Health and Welfare standards, and, consequently, it was designated a third-class hospital. Steps will be taken in this and most other private hospitals to remedy these defects to the greatest possible extent, using the controls in existence and especially the guidance of the Imperial Commission of Inquiry.

## Treasury Hospital

Most hospitals providing insured medical care for insured workers have been established in southern cities and workers' centers. Thus medical personnel, most of whom live in the northern cities, will have difficulties with commuting. Obviously, these medical services cannot be transferred to the northern cities for the convenience of the staff. With regard to the Ministry of Health's new policy of removing barriers among different parts of the country, a method has been set up to equalize the geographical distribution of doctors.

Regarding illnesses which require a stay of 15 or more days at Treasury Hospital, patients will be sent home who have pneumonia, pleural secretions of the outer lungs and doubtful shadows on the inner lining of the lungs, once they have been diagnosed by a physician. Similarly, difficult-to-cure cases and patients admitted because of their own complaints will be urged to check out of the hospital sooner.

## Plans on Schedule

Fortunately, the inspection revealed that the projects were progressing as scheduled. Indeed, one needed project is ahead of schedule. In the interview which was held with those who were insured they expressed their satisfaction, which is the best possible guarantee that those responsible will exert their best efforts. With the Shahanshah's guidance as inspiration, they are working to gain his majesty's satisfaction and that of the insured.

## INFLUENZA AND GRIPPE REPORTED

Teheran ETELA'AT in Persian 5 Nov 77 p 4

[Excerpt] Because of the change in weather, influenza and also gripe have become prevalent in Teheran and the districts.

## IRAN-UK JOINT LEPROSY DRIVE

Teheran TEHRAN JOURNAL in English 10 Nov 77 p 3

[Text] A joint research program aimed at developing an anti-leprosy serum is to be undertaken by the medical faculties of the Tehran and London universities.

Professor John Stanford has arrived here from London University to make preliminary arrangements for the program.

Previous research into the disease by various institutions throughout the world has so far failed to find any effective counter to the disease due to a lack of funds, laboratories and expertise.

But officials from the National Society for Fighting Leprosy have stressed that the new joint program will make a sustained effort to produce an anti-leprosy serum.

One official told reporters yesterday that with the expertise provided by Prof. Stanford and moral as well as material support from Iran, problems associated with long-term research might well be overcome.

## LAOS

### HOUA PHAN INOCULATIONS

Vientiane BULLETIN QUOTIDIEN in French 6 Sep 77 p 2

[Text] In late August, the mobile unit from the department of public health of Houa Phan Province, inoculated Houa Siang inhabitants against diarrhea and influenza. The mobile unit operated in the district of Sam Neua as well as in other places. It has also popularized prophylactic methods, particularly those aimed against paludism. This unit is continuing its work.

## MALAYSIA

### NEW CHOLERA CASES IN SABAH, SARAWAK

Kuala Belait BORNEO BULLETIN in English 1 Oct 77 p 28

[Text] Kuching--Hopes that Sarawak's cholera epidemic may be on the decline have been dealt a bad blow with the death of another victim from the disease.

Three-year-old Johari bin Libau, from Rumah Germung, Sungai Apong, near Sibul, became the seventh fatality from the outbreak which started in late April.

He died half an hour after being admitted to Sibul's Lau King Howe Hospital.

And with this, the total number of cholera cases reached 176. There were 10 new cases for the week up to the start of this week, a sharp rise on the previous week when there were only three new cases and there were thoughts that the epidemic might at last be on the wane.

Of the new incidents, four were in the Sibiu District, two in Mukah, two in Matu Daro, one in Binatang and the other in Dalat.

But on the encouraging side, the Medical Department has declared that Kuching, Kapit, Bintulu--where the disease started--Miri, Kanowit and Song are no longer cholera-infected areas.

As well, the disease has not spread to any new areas.

In its immunisation campaign, the department has now vaccinated 305,000 people.

In Sabah, two new cases were confirmed in Kota Kinabalu on Monday, pushing the total to eight since the first was detected on September 8.

One of the two came from the Kampung Air area of town, the other from Kampung Darau, in Menggatal, eight miles away.

Other known infected areas are Beaufort and Penampang, and medical authorities are now enforcing control measures.

On a recent visit to open a new 50 bed hospital in Tambunan, Tan Sri Lee Siok Yew, the federal Minister of Health, called on government agencies and the people to hold dialogues on environmental sanitation to prevent cholera outbreaks.

## MEXICO

### EFFECTIVE NEW ANTICANCER DRUG ANNOUNCED

Mexico City EL SOL DE MEXICO in Spanish 4 Nov 77 p 14-A

[Text] The Chemistry Institute of the UNAM [National Autonomous University of Mexico] reported that it had established the "surprising anti-carcinogenic properties" of Helenalina, a substance obtained from the plant colloquially known as chapuz, which grows only in the Federal District and the states of central Mexico.

In laryngeal and nasopharyngeal cultures, it has been demonstrated that Helenalina has the property of inhibiting the growth of carcinogenic cells, according to Dr Alfonso Romo de Vivar, a researcher at that institute.

He said that the plant, whose scientific name is helenium mexicanum, has properties that "will make possible the cure of heretofore dangerous diseases."

A specialist in natural substances explained that many lactones--the group to which Helenalina belongs--retard the growth of [carcinogenic] cells, but this one is the most active in that a reduction of 50 percent is achieved with a dose of only 0.083 micrograms.

Interest in these substances arose from the chemical changes that they cause and their possible anthelmintic effects (against intestinal worms), so Helenalina began to be studied--and now with more reason than ever with the discovery of its "surprising anticarcinogenic properties."

"The studies to define the biological activities of these substances is continuing in our university," said the researcher after explaining that the chapuz is a very bitter tasting plant whose flavor, if ingested by cows, is transmitted to their milk; it also has the properties of an insecticide.

#### PEOPLE'S REPUBLIC OF CHINA

##### NEW MEDICINE TO CURE STAPHYLOCOCCUS

Peking NCNA Domestic Service in Chinese 0213 GMT 30 Oct 77 OW

[Text] Harbin, 30 Oct--Through cooperation with a certain unit of the Shenyang PLA units, the Heilungkiang Applied Microorganism Research Institute has succeeded in turning out a new medicine--staphylococcus virus--to cure the infection with staphylococcus. Through over 560 clinical tests, the effectiveness rate of the new medicine has reached 83.6 percent.

##### INTEGRATION OF CHINESE, WESTERN MEDICINE

Hofei Anhwei Provincial Service in Mandarin 1100 GMT 12 Nov 77 HK

[Summary] "In order to stimulate further the integration of Chinese and Western medicine in Anhwei and mobilize the socialist activism of the old Chinese medical doctors, the United Front Work Department of the Anhwei Provincial CCP Committee recently held a forum of Chinese medical doctors of the Hofei area. Present at the forum were experienced old Chinese medical doctors, middle-aged young Chinese medical doctors, representatives of doctors who practice Western medicine but are studying medicine and 'barefoot' doctors, totaling 50 people. Comrade Wan Li, first secretary of the Anhwei Provincial CCP Committee, Comrade Chao Shou-i, secretary of the Anhwei Provincial CCP Committee, and responsible persons of provincial and municipal circles concerned attended the forum."

The participants put forward many suggestions and demands on how to develop the integration of Chinese and Western medicine in Anhwei.

"At the conclusion of the forum, Comrade Wan Li delivered a speech. He explained the significance of the integration of Chinese and Western medicine. He demanded that public health departments strengthen leadership over the integration of Chinese and Western medicine and seriously study the suggestions and demands of the participants. They must adopt effective measures, solve various practical problems as quickly as possible and do a good job in firmly grasping the integration of Chinese and Western medicine with specific achievements. He encouraged the participants to unite and cooperate, allow different schools of thought to contend, enliven the scholastic atmosphere and make their own contributions to the integration of Chinese and Western medicine."

## SENEGAL

### INCIDENCE OF LEPROSY

Dakar LE SOLEIL in French 26 Oct 77 pp 8-9

[Article by Saliou Filo]

[Text] On the road to Gossas, a cream-colored wall, a sober, austere looking building, long concrete benches. In the offices, stark, modest and strict furniture, some cabinets and spread out papers: this is the Center for Major Endemic Diseases of Kaolack. Since its installation in the region, this mission has unleashed a merciless war against several diseases, among them leprosy, syphilis, trypanosomiasis, yaws, yellow fever.

In that fight against diseases, the physicians can boast of a most commendable score card. The following eloquent figures prove it: in 1976 out of 1,192,195 inhabitants, the Sine-Saloum region registered 9,429 lepers, i.e., a rate of 0.99 percent. Toward the end of 1976 the region accounted for only 4,095 lepers, i.e., 0.33 percent of the population, a spectacular decrease. To learn more about that center, we have met with MM. Maguette Sene, regional controller of Major Endemic Diseases, Tidiane Ba, specialist, and Aliou Diba, head nurse.

All three answered with precision the questions we asked on the subject of their team. As to the internal organization and the goals of Major Endemic Diseases, they stated that they lead an annex of which the headquarters are situated at Mbour (special section No 11). The service aims to eradicate endemic diseases on the one hand, and to protect against infectious diseases, mostly in children, on the other.

The special section located at Mbour covers two regions: those of Sine-Saloum and of Thies. Apart from the subsections installed in chief towns of the regions, motorized circuits (vehicles, bicycles) have been created in each "department" through which itinerant agents deal with treatments and the systematic tracking down of the cases. There is also a prevention team (it is better to prevent than to heal) as well as prospection teams based at Mbour whose goal is to proceed to periodic vaccinations.

While talking to us of the tracking and the follow-up on the evolution of the diseases, the team of Major Endemic Diseases declared that it has been proved that, for the Sine-Saloum region, the first disease which must be attacked by our center is leprosy, because the region holds the highest record for it. After they are rounded up the tracking teams subject the patients to a biweekly treatment. After 6 months the patient undergoes a clinical and bacteriological control in order to evaluate the results obtained after each semester of treatment.

For certain forms of disease, after 3 years of uninterrupted treatment, the patient is declared cured. Nonetheless, periodical visits check on him in order to counteract any eventual relapse. It is important to know that the leper, once "immersed" in the cure, is no longer contagious. Leprosy, despite its repugnant aspects, is medicable like all other diseases. In addition, the poor mental condition of the lepers often lengthens their illness.

Kaolack can no longer be content with an annex of the Major Endemic Diseases. The lack of adequate infrastructures also hurts the practitioners. To fight these endemic diseases better, it would be a good thing if the appropriate centers would have the necessary equipment handy. This lack of material increases the range of difficulties facing the agents of Major Endemic Diseases. The agent often encounters a patient with a very low mental condition and he will have to care for the morale side before attacking the physical one. Some patients let go, thinking it is all over with them. The worst is to keep the patients in one place, because they generally move about a lot.

M. Sene's testimony on these problems demonstrates it forcibly: "Notwithstanding the shortage of infrastructures, we are confronted by morale problems. The leper is usually traumatized by his case: this is why we have to make him recover mentally before we can attack the malady itself." He also talked of other problems, no less important, that is the primitive material and the withholding of food formerly distributed to the patients.

The building, he said, was lent to us by a benefactor; besides, it is not functional because it is poorly equipped. The lack of a laboratory affects us very much and sometimes leads us to follow the wrong tracks. Clinical examination is not always precise and so you can see that we are often capable of gross mistakes. There are cases where symptoms

similar to those of leprosy can be observed in a patient, which turn out to be only those of dermatosis. In that case the bacteriological test alone informs us on the disease.

In connection with the withholding of food, M. Sene pointed out that the practice should be renewed, because it permitted laying hands on 92 percent of the lepers of the region. With the suppression of this assistance nearly 50 percent of the diseased do not come forward any more. M. Sene said in conclusion: "To help the lepers is to help ourselves, do not forget, no disease spares any class of society. We are all concerned and threatened."

Responsible persons and international organizations cannot remain unresponsive to this appeal (because it truly is an appeal). One must recognize that lepers are human beings, ill people we have a duty to help restore to the Senegalese community.

#### TURKEY

##### RESPIRATORY TRACT INFECTION

Istanbul MILLIYET in Turkish 8 Dec 77 p 12

[Excerpts] Six children in the Taslik village area of Diyarbakir have died from what is referred to as "lower respiratory tract infection." Measures have been taken by the Health Directorate to prevent the spread of this infectious disease. Authorities reported that many of the children who contracted the disease have been put under observation. The disease is characterized by fever, diarrhea, coughing and a swelling of the throat.

#### UGANDA

##### PRESENCE INDICATED OF RATS, LICE, FLEAS

Kampala VOICE OF UGANDA in English 19 Nov 77 p 4

[Article by S. K. Aruo]

[Excerpts] ...Even such things as insecticides and rodenticides are quite necessary. In fact, talking about rodenticides and insecticides I made a few observations.

One day I went into a certain suburb in Kampala. I found two women comparing their fingers and toes. At first I thought they were admiring the beauty of their digits because they seemed to be enjoying the fun.

To my utter dismay the two women were actually showing each other the damage that had been caused by rats in the rooms they were renting.

One woman had her toes eaten so deep that they felt sore to touch. The other had both toes and fingers nibbled.

A man who lived nearby complained bitterly because rats had eaten his only pair of bedsheets and the only pair of socks in his possession.

Plaiting [braided] hair is a very popular and rewarding occupation in Uganda today. When it is clean plaited hair is very attractive.

However, unless plaiting is done regularly the hair tends to become dirty, shaggy and untidy. It can become not only unattractive but also a breeding ground for vermin.

I was one day attracted to watch an expert in plaiting at work. It was quite interesting to watch the nimble fingers pick the hair and twist it into a rope pattern. To my utter disappointment I saw the artist remove some black objects from the hair of the customer and crush them between her thumbs. This, of course, may be one of those unfortunate cases.

It is not uncommon to see some people scratch their heads and pick their hair continuously. I do not think they are doing it for fun or out of habit. They must have a problem. It could be vermin and it could be accumulated dandruff.

However, the point I would like to make here is that the prevalence of rats and lice indicates that something has gone wrong in our standards of cleanliness. It may also mean that while we are keen to maintain standards of cleanliness, facilities are either lacking or inadequate.

Wooden traps are selling competitively at Shauri Yako market because there are no suitable rodenticides. Some of the so-called rodenticides have been disappointing.

Instead of killing rats they actually make the rats fat and prolific. They must be serving as tonics instead of poisons.

There appears to be nothing to combat the head louse. Lorexane used to be a drug of choice. I wonder what is there now!

Diazinon appears to be controlling bedbugs satisfactorily. "Doom" seems to fight the flea well. The old benzyl benzoate seems to solve the scabies riddle. The safety pin and kerosene are combating the jigger satisfactorily.

## VIETNAM

### SUCCESS OF ANTIMALARIA WORK IN SOUTH

Hanoi Domestic Service in Vietnamese 1300 GMT 28 Nov 77 BK

[Excerpt] In Ben Tre City, between 22 and 25 November, the Ministry of Public Health held a conference to review antimalaria work in the southern provinces in 1977.

Since liberation, because of the consequences of war, very large numbers of people have been afflicted with diseases, especially malaria. Of the 16 million people in the southern provinces, more than 5 million live in malaria-infested regions. In 1976 alone there were 32 malaria epidemics affecting 20,500 persons, 100 of them fatally.

Antimalaria work in the south has been stepped up since early 1977. Over the past 10 months the Ho Chi Minh City branch of the Institute of Parasitology and Entomology has supplied the southern provinces with 153 tons of mosquito spray and a large number of microscopes for use in blood tests, and has distributed more than 20 million antimalaria tablets and nearly 2 million ampules of antimalaria serum.

Owing to satisfactory efforts in basic survey and antimalaria work, since early this year only six outbreaks of malaria have been reported in the southern provinces, a drop of more than 81 percent compared with last year. The number of malaria-afflicted persons has decreased by more than 89 percent to 2,631. The number of deaths caused by malaria has also sharply decreased. Most of the outbreaks of malaria have been promptly stamped out.

In Song Be Province, which is located in a malaria-infested region, efforts have been made since early this year to kill mosquitoes with insecticides and to distribute malaria prevention tablets to all local people. To date, no outbreak of malaria has been reported in the entire province. These successful antimalaria efforts have greatly heartened those Ho Chi Minh City natives who have come to Song Be to build new economic areas. These people can now confidently devote themselves to production work.

## ZAMBIA

### WESTERN PROVINCE LEPROSY

Lusaka TIMES OF ZAMBIA in English 28 Nov 77 p 1

[Text] Western Province is badly hit by leprosy which mostly attacks six-year-old children, a Kalabo leprosy officer, Mr Paul Giblett, said in Lusaka yesterday.

Mr Giblett, of Yuka Mission Hospital of the Seventh Day Adventist Church, said the disease was prevalent in the province because of its isolated position and in some areas it was extremely difficult to grow food and other areas were very remote.

He said given sufficient vehicles to go around villages and schools, the hospital could eradicate the disease in the province.

Mr Giblett said more units to control the disease were needed to ease problems faced by the hospital team which works hand in hand with Kalabo district hospital.

Many people did not realise the hardship the people in the province were suffering, but singled out Kalabo district governor, Mr Kangwanda Kamavu, for being very helpful in combating leprosy.

Despite the difficulties Yuka hospital, which started operation in 1945, was doing its best to help patients in the district, Mr Giblett said.

Confirmed

A villager from Kabilu village in Chief Mwenemundu's area near Liumba SDA mission station, who is also in Lusaka on a personal visit, confirmed the effectiveness of the hospital's work in its attempt to eradicate the disease in the area.

The villager, Mr Solomon Maliti, said he was attacked by leprosy in 1950 and was cured five years later.

He said there was a big lepers' village at Yuka hospital but there was now virtually no resident patient there because of effective treatment which cured the patients who had since returned to their villages.

Mr Maliti himself has had his fingers and toes dismembered by the disease which has partially defaced him.

He said since he was cured he had been running a big bar and was able to work in his garden and sold timber.

"I was in very bad shape but I was saved and I am back to normal now," he said.

Mr Giblett said during treatment Mr Maliti was also taught how to overcome his handicap. The hospital is now geared to intensifying its eradication programme depending on the availability of diesel for the four-wheel-drive Land-Rover to enable the team to go into dense areas.

Mr Giblett has just returned from Botswana where he collected a Land-Rover donated by Sydney Adventist Hospital and SDA churches in Australia under the Trans-Africa Leprosy Research and Rehabilitation Programme.

Mr Giblett thanked the Party and Government for the assistance given in enabling the Land-Rover to be delivered. He appealed to the public for more help in the team's efforts to eradicate leprosy in the province.

## II. ANIMAL DISEASES

### AUSTRALIA

#### BLUE TONGUE OUTBREAK

Canberra THE AUSTRALIAN in English 14 Nov 77 p 1

[Article by Alan Goodall]

[Text] Australia's \$70-million-a-year livestock exports are in danger after the confirmation of the country's first outbreak of blue tongue disease.

The disease, which does not affect humans, kills sheep and is carried by cattle.

Britain and New Zealand have already banned imports of Australian livestock and other countries are expected to follow suit.

At the same time importers are considering banning imports of Australian meat and dairy products, worth \$1500 million a year.

The army has been put on full alert following the disclosure yesterday that a suspected virus found near Darwin 2 1/2 years ago is, in fact, a strain of the blue tongue group not previously recorded.

The virus was found in insects netted at Beatrice Hill station, near Darwin, in March 1975.

Cattle have now been found near Katherine, 320 km south, carrying the virus and a flock of sheep near Darwin may also be infected.

If the Australian Agricultural Council, representing all States and the Commonwealth, orders a slaughter-out program 250,000 cattle will have to be killed.

The council is being kept informed of tests the CSIRO is making at Long Pocket laboratory in Brisbane.

If it orders a scorched earth policy in the Top End of the Northern Territory, 250,000 will have to be slaughtered.

The Consultative Committee on Animal Health, representing chief State and Federal veterinary officers, will meet next week to receive CSIRO reports on whether the virus will kill sheep.

The virus may already have been spread to sheep flocks in southern Australia by stinging midges.

If the strain is virulent it could decimate the country's 136 million sheep and threaten the \$1500 million annual wool export trade.

The head of the Commonwealth Bureau of Animal Health, Mr Bill Gee, yesterday called for a calm reappraisal of the situation.

"We don't know how virulent a strain we have in the Top End of the Northern Territory," he said. "We do know its presence is serious.

"Before any slaughter-out is ordered we have to know whether the virus can infect native fauna and how far it has spread."

The Minister for Primary Industry, Mr Sinclair, said urgent preventative action could be taken to halt the spread.

Cattle movement would halt in 80 km radius quarantine areas of every positive reaction to blood testing.

Livestock industry leaders yesterday called on the Government to find out why it has taken more than two years to confirm the blue tongue outbreak.

They criticised the lack of an exotic diseases research laboratory which could have tested the Beatrice Hill virus 2 1/2 years ago.

Confirmation reached Canberra late last week from the Onderstepoort blue tongue reference laboratory in South Africa.

Previous tests by the CSIRO and the World Health Organisation's virus unit at Yale University were inconclusive.

Yale confirmed on October 24 that the virus showed blue tongue characteristics. The Bureau of Animal Health then flew the virus to Onderstepoort.

Sheep owners are angry that a promised \$85 million high-security laboratory promised by the Federal Government has not been built.

Plans and specifications for a laboratory at Geelong, Victoria, are still under consideration.

Canberra THE WEEKEND AUSTRALIAN in English 26-27 Nov 77 p 5

[Article by Alan Goodall]

[Text] Virus Carried From Indonesia

The microscopic virus that has brought blue tongue disease to Australia probably blew in at least three years ago in an insect.

The biting insect would have come from Indonesia, where the disease is thought to lie dormant in cattle and buffaloes.

The closest confirmed area of blue tongue is India, where it weakens and kills sheep and goats.

South-East Asian cattle probably carry the virus in their blood. Cattle are carriers, but only sheep suffer harmful effects. Humans are unaffected.

The Middle East and Mediterranean areas are subject to periodic devastating attacks of blue tongue.

The U.S. has spent hundreds of millions of dollars trying unsuccessfully to eradicate blue tongue, which broke out in its south-western States 20 years ago.

Australian sheep breeders are being urged to watch for early symptoms--high fever, swelling of the animal's face and blue-colored mouth and tongue.

Australia's 136 million sheep, including the world's best merinos, would be particularly sensitive to an exotic disease. They have never been subject to blue tongue.

A virulent blue tongue--and the virus in northern Australia does not appear to be causing much distress in a sentinel flock near Darwin--could almost wipe out Australia's \$2000-million-a-year wool and mutton export trade.

The biggest search in Australia's farming history is under way to trace the spread of an exotic sheep disease, blue tongue.

Veterinarians in all States were put on full alert on Friday after reports of the disease virus in buffaloes in south-eastern Queensland.

This follows confirmation three weeks ago that a new strain of the virus, code-named CSIRO 19, had been discovered on Beatrice Hill, near Darwin.

More cattle properties in the Northern Territory's Top End are expected to go under quarantine soon as vets extend blood sampling in cattle and buffalo herds.

Domesticated and native animals can carry the disease which is spread by insect bite. Only sheep are known to suffer harmful effects. Humans are not affected.

Positive blood tests in the Mitchell River, Weipa, Coen and Innisfail areas of north Queensland have been conveyed to overseas countries.

The director of the Commonwealth Bureau of Animal Health, Mr Bill Gee, said yesterday: "Only one country has banned our meat so far and that's Northern Ireland.

"We are working through London to convince the Irish that all is well with our meat."

Hong Kong also seemed to be wary, he said, but he did not expect any more countries to ban Australian meat.

Mr Gee said the blue tongue findings had caused Hong Kong, Britain, New Zealand, Papua New Guinea and Canada to ban Australian livestock.

Stock exports are worth around \$60 million a year. Meat exports this year will approach \$1000 million.

Wool exports, worth \$1500 million, are so far unaffected. No reports of blue tongue have yet been made from sheep areas and wool does not carry the disease.

The Federal Government is prepared to send a top-level team of trade and veterinary officials overseas if major buyers start banning Australian agricultural products.

Overseas Trade Department experts are monitoring reactions in the main buying countries. So far, inquiries from Europe, the U.S. and Japan have been on a veterinary rather than a trade level.

The Department of Primary Industry has been able to satisfy these inquiries. But if major importers follow Fiji's action in banning Australian meat--a ban later lifted when Canberra explained the disease outbreak--an official delegation will have to be sent.

The Minister for Primary Industry, Mr Sinclair, said yesterday present evidence suggested the blue-tongue virus had been in northern Australia for 2 1/2 years and possibly much longer.

Speaking as chairman of the Australian Agricultural Council, Mr Sinclair said nearly 4000 serum-neutralisation tests so far completed showed the infection was mainly confined to the most northern parts of Australia.

He said it was still unproven that the virus would produce pathogenic results in sheep.

A sentinel sheep flock at Darwin had developed disease symptoms not unlike blue tongue. Work was continuing to confirm by virus isolation or positive blood tests if it was blue tongue.

Mr Sinclair said a special consultative committee had recommended against slaughter of livestock in the known infected areas because complete disinfection to get rid of insect vectors was impossible, the source of the virus was still unknown, and pathogenicity of the virus for livestock was unproven.

But, he said, slaughter of infected animals found outside northern Australia was being considered.

Slaughter-out is sure to raise farmers' protests. Australia has 32 million cattle and 136 million sheep producing food and fibre worth more than \$3000 million a year. Even isolated slaughter would be costly in lost production and Government compensation payments.

A slaughter-out order would become an election issue. Both Liberal-National Country Party and Labor politicians are supporting early construction of a disease-detection laboratory at Geelong, Victoria.

Such a laboratory, costing about \$100 million, could probably identify the blue-tongue virus within weeks.

Brisbane THE COURIER MAIL in English 29 Nov 77 p 8

[Text] Seoul (AAP-REUTER)--South Korea has banned the import of Australian cattle and sheep following reports that blue tongue is raging in Australia's Northern Territory, Agriculture and Fishery Ministry officials said yesterday.

Brisbane THE COURIER MAIL in English 29 Nov 77 p 8

[Text] Canberra--The Cattlemen's Union is suspicious about the circumstances of the announcement of the "so-called" blue tongue virus in the Northern Territory.

The union's national director (Mr. Barry Cassell) said yesterday it was known there had been general discussions about the presence of a strain of blue tongue in the Territory for two to three years.

The union hoped it was mere coincidence the identification came three weeks after it fought off attempts to curtail live cattle exports.

Perth THE WEST AUSTRALIAN in English 3 Dec 77 p 5

[Text] The ban placed on cattle, sheep and goats coming into WA from the Northern Territory because of blue-tongue has been extended to Queensland.

The Director of Agriculture, Mr E. N. Fitzpatrick, said yesterday that the bans would apply till the blue-tongue problem in Australia became much clearer.

Blood tests carried out on cattle from WA, particularly in the Kimberleys, had not shown any evidence of blue-tongue infection.

Further testing over a wide area was under way and steps had been taken to enable the blood tests to be carried out at the animal health laboratories in South Perth.

This would enable the survey to be greatly expanded.

#### BRAZIL

#### GOIAS SEEKS AGRICULTURE MINISTER'S AID IN COMBATING CATTLE DISEASE

Brasilia CORREIO BRAZILIENSE in Portuguese 23 Nov 77 p 7

[Text] The current outbreak of bovine rabies in the northeast has killed over 3,000 head of cattle and 300 horses in the past 2 weeks in the municipios of Dianopolis, Almas, Ponte Alta de Bom Jesus and Aurora do Norte. This was reported to Agriculture Minister Alysson Paulinelli in Brasilia by Antonio Augusto Azeredo Coutinho, the state secretary of agriculture. Coutinho has been in the nation's capital since Monday, seeking vaccines for the 400,000 head of cattle that constitute the region's herds. This is the poorest region in the state of Goias, and it receives the least assistance.

The agriculture secretary also asked Paulinelli for funds to the amount of 4.5 million cruzeiros in order to combat the outbreak, as the damage already amounts to over 6 million cruzeiros, and the thousands of hematophagous bats "desmodus rotundus" that inhabit the caves and caverns of the mountains in that area are continuing to attack the herds.

The veterinarians sent by the Goias government to the northeast of the state to overcome the outbreak are presently encountering numerous problems, ranging from the ranchers' poor understanding to the lack of holding frames to perform the vaccination.

The 50,000 doses of the vaccine that have already been received from the Ministry of Health must be prepared for each animal, which requires a lot of time. Moreover, the distances in the region are immense, and the bats' habitats are almost inaccessible.

According to Coutinho, without the decisive support of the Ministry of Agriculture, Goias will not be able to save the herd in the northeast of the state. As it is impossible to eliminate the bats, the only solution is vaccination, but the government of Goias does not have the vaccines and the farmers do not have the money to buy them privately. Moreover many farmers do not even have corrals in which to gather the cattle. All last week the agriculture secretary traveled over the rural area of the municipios of Dianopolis, Ponte Alta de Bom Jesus, Almas and Alvorada to observe the situation. He confirmed that the rabies outbreak has affected an area within an 800 kilometer radius, in very mountainous terrain where travel is made difficult by the rains which fall constantly.

#### IMMUNIZATION CAMPAIGN AGAINST BRUCELLOSIS IN PARANA

Sao Paulo FOLHA DE SAO PAULO in Portuguese 26 Nov 77 p 21

[Text] Parana is conducting an immunization campaign against brucellosis among its cattle herd, with 92,000 heifers vaccinated since the campaign opened 4 months ago. A team of veterinary doctors is traveling to all the ranches in the state to immunize the [milk] cows as quickly as possible.

Parana's Secretariat of Agriculture is directly responsible for the campaign against undulant fever [brucellosis], an incurable ailment which can be transmitted to man and which causes severe damage to livestock. Over 92,000 heifers ranging from 3 to 8 months were vaccinated in the first 4 months of the operation. Parana's cow herd is presently estimated at 6.2 million head. To reach all of them, the campaign against brucellosis is sending 72 veterinarians to cover the 2,455 cattle raising establishments in the state.

According to Agriculture Secretariat statistics, the disease attacks 10 percent of Parana's herd and is responsible for 45,000 abortions a year. Close to 240,000 cows in Parana are afflicted with brucellosis, causing an overall annual loss of 480 million cruzeiros. Aside from the fatalities, brucellosis is also responsible for a 20 percent drop in milk production and a 15 percent weight loss in the cattle.

The immunization is being conducted in 155 municipios in the north and northeast of the state, where 70 percent of Parana's herd is located, on 2,455 establishments.

The campaign is programmed to immunize 120,000 heifers this year, 371,000 in 1978 and 1.3 million in 1982.

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 23 Nov 77 p 28

[Text] Some 10 percent of the bovine herd (cows) of Parana, estimated at 2,404,000 head, are suffering from brucellosis--a very high index according to the state Agriculture Secretariat. The verification was made recently following an extensive survey of the cattle-raising areas. Because there is no way to eliminate the disease in the already afflicted animals, an extensive vaccination campaign was begun in order to bring brucellosis under control--an index of 1.4 to 1.5 percent--within 6 years.

#### CYPRUS

##### AREAS QUARANTINED BECAUSE OF NEWCASTLE DISEASE

Nicosia CYPRUS MAIL in English 26 Nov 77 p 1

[Text] The Veterinary Department of the Ministry of Agriculture has taken prompt and drastic action to prevent the spread of the "Newcastle disease" which has appeared in certain poultry farms in the Lymbia-Dhali-Potamia areas of Nicosia and at Akrotiri in the Limassol district.

The areas have been declared "contaminated" and placed under quarantine while intensive action is taken for the vaccination of the poultry and chemical spraying for the prevention of spread.

An official said that the cases are not many but the disease can spread quickly if no action is taken promptly, and the measures are mostly precautionary.

An official announcement said that the movement of all cattle and poultry from these areas is prohibited, except under the approval of the appropriate authorities.

Also the removal of any carcass, fodder, manure, or any cattle products from these areas is prohibited without a permit.

#### Diversions

Police have announced the following diversions of traffic and invited the public to comply with directives to assist the work of the veterinary officers.

The Dhali-Lymbia road from Perakhorio village is closed and those traveling from Nicosia to Larnaca will use the road via Mosphiloti and those traveling from Limassol to Larnaca will use the Kophinou road.

The Larnaca-Nicosia road will be closed from the traffic lights by Larnaca Fire Station, and those wishing to travel from Larnaca to Nicosia will do so via Mosphiloti.

The rural road between Alambra and Lymbia shall be closed to all traffic.

Traffic to and from the affected villages will be allowed, with entry and exits after being subject to decontamination in order to ensure that the vehicles do not become disease carriers.

It was in order to save extra hardship to road users that the diversion of traffic has been decided.

The situation is being closely watched and as soon as it is established that the area is clear of the disease the measures will be lifted, an official said.

## LAOS

### VIENTIANE CATTLE INOCULATIONS

Vientiane SIANG PASASON in Lao 17 Sep 77 pp 1, 4

[Text] In order to protect draft animals and promote increasing attention to animal husbandry, during July and August the Vientiane City and Provincial Veterinary Office inoculated and treated animals belonging to people in eight districts: Meuang [district] Kasi, Meuang Phon Hong; Meuang Sisattanak; Meuang Paksan, Meuang Hatsaifong, Meuang Nasaithong, Meuang Thoulakhom, and Meuang Saithani. Initial figures show that over 4,400 buffalo, over 2,400 head of cattle, and over 1,000 pigs were inoculated and over 400 diseased animals treated, including 170 buffalo, 38 head of cattle, and 233 pigs. This veterinary unit is actively continuing to inoculate the people's animals against disease.

## MALAYSIA

### IMPORTED HORSES BROUGHT IN EQUINE INFLUENZA

Kuala Lumpur NEW STRAITS TIMES in English 6 Oct 77 p 7

[Text] A virologist at the WHO centre at the University of Malaya has recommended that imported horses which are not vaccinated should be quarantined upon entering the country.

This follows investigations which indicate that a recent shipment of horses from overseas introduced the Equine 1 virus which caused the outbreak of influenza among horses in the country.

Associate Prof. Dr. Lam Sai Kit said today the authorities should consider the formulation of a clear policy on importing horses.

Malaysia imports horses from several countries where other, more serious types of viruses are present, he said.

To ward off the entry of even more harmful viruses, he recommended that the horses, if not vaccinated, be quarantined following importation.

#### Endemic

Dr. Lam also suggested that all imported horses should show a valid vaccination certificate against Equine 1 and 2 viruses--both of which can cause Equine influenza in horses.

With regards to Japanese encephalitis--another disease affecting horses and endemic in Malaysia--he suggested that imported horses be vaccinated against the disease prior to entering the country.

This would help prevent the loss of valuable race horses.

Dr. Lam said the virus which caused the recent influenza outbreak has been identified as a variant of Equine 1 influenza, and labelled Influenza A/quine/Malaysia/31/7-7.

It had some antigenic drift from the classic Equine 1 virus, first isolated in Prague, Czechoslovakia in 1956.

He added that the virus would not affect human beings under normal conditions.

Ten strains of the virus responsible for the outbreak were isolated at our centre, and some of them were sent to London for typing, said Dr. Lam.

## Progress

Dr. Lam, who collected more blood samples from 20 horses at the Selangor Turf Club stables this morning, said further studies on antibodies were in progress to determine the extent of the antigenic drift and find how protective the current vaccine is.

He said of the two types of viruses causing Equine influenza, Equine 1 and Equine 2, the latter had more severe effects.

However, the mortality rate, in the absence of complications, was nil and after infection, immunity to the homologous subtype of the virus was present and might persist for several years.

Dr. Lam said the outbreak last month was the first recorded outbreak of influenza in horses in the country and it followed the importation of 24 race horses.

Some of the horses were sent to Ipoh, Penang and Singapore as a result of which the disease disseminated to these centres.

"In Kuala Lumpur, two of the imported horses started coughing the day after arrival and within 10 days, 95 percent of the 429 horses gathered at the Selangor Turf Club for the K.L. racing fixtures were affected," he said.

## NIGERIA

### RABIES OUTBREAK REPORTED

Kaduna NEW NIGERIAN in English 1 Dec 77 p 22

[Text] An outbreak of rabies has been reported in Zaria and its environ in Kaduna State.

According to a statement from the committee responsible for a campaign to eliminate rabies, three persons had since died as a result of the disease at Ahmadu Bello University Teaching Hospital, Zaria.

The committee in the affected areas consists of doctors from Ahmadu Bello University Teaching Hospital, Zaria, Faculty of Veterinary Medicine, Ahmadu Bello University, Ministry of Health, Ministry of Animal and Forest Resources and representatives from the Nigeria Police and Zaria Local Government. The committee had worked out programmes which included mass vaccination campaign against rabies. The vaccination campaign had since been launched.

Elimination of stray dogs which was also part of the measures to wipe out rabies would start on December 7, this year, the statement said.

According to the statement, posters would be exhibited in appropriate places to show pet owners the various vaccination stations.

Pet owners would be given certificates after the vaccination and dog owners would be given a metal tag to fix around the dog's neck, the statement added.

The statement said the Nigeria Police had been directed to eliminate stray dogs by shooting them with effect from December 7, this year.

A one-week publicity campaign on the exercise ended last Tuesday.

Village heads from areas without veterinary facilities had been advised to report to the nearest veterinary clinic or livestock assistant in charge.

#### SOUTH-WEST AFRICA

##### RABIES OUTBREAK

Windhoek THE WINDHOEK ADVERTISER in English 22 Nov 77 p 1

[Text] Okahandja--Since there have been recent cases in Okahandja and in the district of people being bitten by rabid animals, the local veterinarian has decided that all dogs in the town must be injected against rabies.

Dogs can be injected today from 08 h 00 to 17 h 00 at the office of the veterinarian, and from 15 h 00 to 18 h 00 at the township near Von Bach Dam.

##### OUTBREAK OF EPHEMERAL FEVER REPORTED IN CATTLE

Windhoek THE WINDHOEK ADVERTISER in English 23 Nov 77 p 2

[Text] Windhoek--The following press statement was issued by Mr C. van N. Jonker, Deputy Director, Veterinary Services:

"During the past two weeks numerous outbreaks of Ephemeral fever (Three-day-stiffsickness) of cattle were reported from many districts of S.W.A.

"The disease symptoms are characteristic. Affected animals are reluctant to walk and move with a stiff gait and lie down frequently. One or

more limbs may be affected simultaneously. Muscle tremors as well as slight swelling of the joints may be observed. Other symptoms include a pronounced flow of saliva (usually due to paralysis of the oesophagus), lachrymation and fever.

"The most important symptoms are the dramatic loss in condition and sudden drop in milk production. Affected animals usually recover after three days of illness. Sometimes recovery may take longer and in severe cases animals may lie down for several weeks. In such cases complications like skinsores and pneumonia may occur. The disease is transmitted by insects (midges). A prophylactic vaccine against this disease is available from Onderstepoort at a cost of 10 cents per animal. Further information is available from all State Veterinarians."

#### TANZANIA

##### GEITA DISTRICT ANTIRABIES CAMPAIGN

Dar es Salaam UHURU in Swahili 17 Nov 77 p 4

[Text] The campaign to prevent rabies in Geita District has entered a new phase after increased stress has been placed on killing dogs on the borders of this district. These steps were taken after three people died and another 14 people collapsed as a result of being bitten by dogs. The assistant veterinary officer in this district, John Lumambi, said that 420 dogs have been killed on the borders of Geita and Biaharamula, Geita and Kahama [districts]. He stated that 540 dogs were killed last week. So far 70 dogs have received antirabies shots. Lumambi added that the campaign has been hindered by a shortage of bullets to kill dogs, of which up to last Saturday 50 remained to be killed.

#### UGANDA

##### EAST COAST FEVER CATTLE DISEASE OCCURS THROUGHOUT COUNTRY

Kampala VOICE OF UGANDA in English 20 Dec 77 p 4

[Article by S. K. Aruo]

[Excerpts] East coast fever (E.C.F.) is the name given to a very fatal disease of cattle caused by a small blood parasite. The disease is called east coast fever because it was first recognised by missionaries and explorers as a highly killing disease of cattle, along the east coast of Africa.

According to records the disease was quite well known to the inhabitants of this narrow coastal strip. It appeared not to have extended more than a few miles inland, because the cattle that were moved from about 60 miles inland to the coast died suddenly. The first explorers thought it was some kind of poisoning which was peculiar to the cattle since it did not kill goats, or human beings that ate the meat of dead cattle.

We are not certain when E.C.F. came into Uganda. Presumably it was introduced by missionaries or explorers since oxen were used to pull carts. The first reference to the disease in Uganda was that of Bruce and his colleagues in 1909. According to them the disease was called amakebe, a word that is familiar to the cattle keepers of this country.

As far as we know the disease occurs throughout the country. Outbreaks of the disease have been reported from Rukungiri, Kasese, Kyadondo, Iganga, Iriri, Aloi, Palabek, Adjumani, and many others. In the various areas the disease is known by different names.

The disease is transmitted by the bite of infected ticks. Some of the red types of ticks have been confirmed to transmit the disease. These ticks have been found throughout the country.

At present one of the problems about this disease is lack of proper chemical treatment. The various medicines that have been tried have been quite disappointing. However, in the cattle raising districts, particularly for native breeds of cattle, the treatment consists of either slicing the swollen lymph node with a knife and allowing much fluid to run out from it, or to apply a very hot iron over the swollen gland. After this treatment the animal may be left just like that or it may be given some sulphonamide tablets, usually sulphapyridine (MB 693). Most of the animals treated this way recover. The treatment appears cruel but it is quite effective.

#### IMPORTED CATTLE BRING JOHNE'S DISEASE

Kampala VOICE OF UGANDA in English 13 Dec 77 p 4

[Article in "S. K. Aruo's Column on Vet Science"]

[Excerpts] There are many diseases of livestock that are spread or have been spread by the movement of living animals. Among such diseases the least known to the people of Uganda is one called Johne's disease.

It is a chronic enteric or intestinal infection of cattle, goats and sheep, characterised by persistent profuse diarrhoea (scours), wasting weakness and eventually death of affected animal.

Johne's disease occurs in certain countries of Europe and in North America. It has, however, spread to all the countries where European breeds of cattle have been imported.

According to reliable reports the disease was not known in Ireland until some dairy heifers were imported from England. The same position applies to Kenya where the disease causes some losses especially in the highlands.

Our records show that Johne's disease was not known in Uganda until we started to import European types of cattle. Even then it was thought to be individual reactions to change of climate, or internal parasitism. Since it was first confirmed we have had sporadic cases here and there especially on dairy farms.

As most dairy cattle are imported as expectant (in-calf) heifers, the disease usually occurs some time after the animal has given birth. Most cases occur in animals more than two years old.

Though it probably affects animals of both sexes, most if not all cases reported in this country have been in dairy cows. Since very few goats and sheep have been imported into Uganda the disease has not been recognised in them.

Usually the affected animal has a very good appetite and eats quite well, and the body temperature remains normal. However, because of persistent scours (diarrhoea) the animal does not put on weight. Instead, it progressively loses condition until it eventually becomes nothing but a mere skeleton wrapped in skin.

The eyes are sunken and the animal is so weak that a mere push with one hand is enough to knock the animal down. All the flesh is wasted. There is usually nothing to salvage even if the animal is slaughtered. The disease usually lasts several weeks or months before the animal dies.

The disease occurs sporadically. In a large herd there may be one or two cases at a time, and sometimes none at all. This is because the disease spreads very slowly. The diarrhoea is brought about by the fact that the causal organism (germ) localises in the wall of the intestine where it causes chronic irritation and thickening of the intestine.

Because many people are not familiar with the disease most cases of Johne's disease escape recognition. To experienced persons it is quite easily diagnosed especially in advanced cases.

Johne's disease is one of those diseases that have defeated chemical scientists. No medicine has been found to be effective in its treatment because the germs that cause it live intimately with and multiply

within certain body cells, which most drugs cannot penetrate. Since the cases are so few and sporadic, it may not even be worth bothering about it. Once an infected animal is recognised or suspected it is best to slaughter it before the disease becomes advanced and has caused much wastage.

Again, because of its sporadic nature, it is not easy to control and eradicate. Even some of the tests that have been developed are not reliable enough to detect individual cases.

#### ANTIRINDERPEST VACCINATION SAID NEGLECTED LATELY

Kampala VOICE OF UGANDA in English 12 Nov 77 p 4

[Article by S. K. Aruo]

[Text] Anti-rinderpest vaccination campaigns that used to be carried out annually in this country do not seem to be there any more. If they are still there at all they must be on a very low scale which has not made any impact. These campaigns were designed to protect the cattle of this country against rinderpest or cattle plague, the most deadly and devastating disease of cattle. I understand the campaigns were stopped after the UNDP Joint Programme 15.

If it is true these vaccinations are no longer there or they are there on a very low scale, then there must be a substantial number of cattle that are susceptible to rinderpest. Then the livestock industry of this country is in danger. We do not know how successful JP 15 was in other countries, especially those with nomadic existence. It is doubtful if all their cattle were covered satisfactorily during JP 15. Since disease does not respect international boundaries we have reason to worry.

Should rinderpest re-appear in this country, the result can be very damaging. One mistake and we have had it. In view of the fact that smuggling is widely practised in this country, it is possible that some unscrupulous cattle trader, butcher or even livestock farmer may smuggle into the country animals in their early incubation period.

Rinderpest has never been known or heard of in this country since 1969. In all probability, Uganda was the first country in eastern Africa to eradicate the disease. This was brought about by the mutual cooperation between the livestock breeders, the administration and the field veterinary staff. Anti-rinderpest vaccinations were introduced as a matter of policy to maintain this state of freedom, particularly in districts which border with the countries where the disease still exists. The areas that are in great danger comprise Madi, Acholi, Lango, Teso, Karamoja and Sebei.

Vaccinations were also encouraged in other areas that were not in immediate danger.

The control of rinderpest by vaccination has been made easy by the recent discovery of a potent vaccine. This vaccine is manufactured at the former East African Veterinary Research Organization (EATRO), Muguga. This vaccine is used throughout the world. Uganda has been one of the greatest consumers of the vaccine.

With the breakdown of the East African Community, this country might meet some difficulties in obtaining sufficient quantities of the vaccine to meet our requirements. This is the time to plan ahead. It would probably be very expensive for us to think of setting up our own laboratory for the manufacture of the vaccine, because the equipment may be quite dear and difficult to obtain. The whole process needs very highly specialised manpower. It would probably take us many years to equip the laboratory adequately and to train the local personnel to do the job.

The authorities concerned should start thinking about this very seriously. The vaccine should be made available for those who want to vaccinate their cattle at any time. We do not want to be taken by surprise. Some of us who have seen what rinderpest does, are not willing to experience it again.

The EATRO product stores very well at very low temperatures. It can retain its potency and immunizing powers for many years if it is stored at minus twenty degrees Centigrade. Such refrigeration units can be easily installed in this country at very low costs. We suggest, therefore, that so that we are not taken unaware, we should start immediately to think of installing refrigeration units, and as much vaccine as possible should be purchased and stored in these units.

Preferably, these units should be installed in convenient places such as the Animal Health Research Centre, Entebbe, and the Faculty of Veterinary Medicine at Makerere University. These two centres have people who are experienced in handling and storing such delicate biological materials.

#### VIETNAM

##### INCREASED EMPHASIS ON LIVESTOCK INOCULATION URGED

Hanoi NONG NGHIEP in Vietnamese 5 Sep 77 p 6

[Article by Nguyen Ba Phu, acting director of the Water Department]

[Excerpts] During the past 6 months good results have been obtained in preventing and fighting livestock diseases. In the north, between 78

and 97 percent of the hogs have been inoculated against hog cholera and hog erysipelas. Many provinces have expanded the scale of anthrax, scabies and pasteurellosis inoculations for water buffaloes and cattle. In the old epidemic areas the inoculation rate is between 85 and 95 percent. A high percentage of breeding ducks have also been inoculated.

Because of good inoculations combined with epidemic control and closer control of slaughtering, livestock disease in the north has been stabilized. Hog cholera occurs only sporadically within the sphere of a farm or a hamlet. Erysipelas has clearly declined. Cattle anthrax has been controlled in the delta and piedmont regions and a high ratio of the livestock in the old epidemic areas in the mountain region have been inoculated. In the south, because base-level veterinary cadres have been positively trained and livestock inoculation has been promoted, epidemics have been restricted, although the inoculation rate is only a little more than 70 percent. Vaccine inoculation in the epidemic pockets has contributed to the rapid elimination of epidemics.

It is necessary to do a good job of preventive inoculation of livestock during the fall season in order to prevent epidemics during the coming spring season.

In the north, it is necessary actively to prevent hog cholera epidemics, to continue to control erysipelas, to maintain the results attained in eliminating cholera in water buffaloes and cattle, to promote the prevention and fighting of anthrax in the mountain region, and to have a plan to inoculate ducks against Newcastle disease and cholera.

In the south, all-out efforts must be made to restrict to a minimum the epidemic pockets and the number of animals dying because of epidemics, especially cattle cholera and pasteurellosis in cattle and hogs.

In order to fulfill those requirements, fall season inoculations must attain a high ratio, be on schedule, meet technical standards, and limit the waste of vaccine. Inoculations must be concentrated in a certain period of time: for example, the northern provinces must inoculate hogs in August and September and inoculate water buffaloes and cattle in September and October. Because the rainy season in the south often arrives late and lasts to the end of October, the inoculation period may be 1 or 2 months earlier or later than in the north. The briefer the inoculation period the better--inoculations should not be done the year around. Efforts must be made to assure a 100 percent inoculation rate in the areas with epidemics, 90 percent in the old epidemic areas and 80 percent in the threatened areas.

In addition to the two principal inoculation periods during the year, each locality should have a plan for supplementary and booster inoculations of livestock that have not yet been inoculated (pregnant livestock, pigs less than a month old, or recently purchased hogs).

Attention must be paid to inoculation at the markets where many hogs are bought and sold.

The provinces and districts must meticulously prepare the fall season inoculation campaigns, deploy inoculation forces in the villages and cooperatives, and prepare sufficient quantities of vaccine and the various kinds of essential materials.

#### STATISTICS ON ANTHRAX EPIDEMICS

Hanoi KHOA HOC VA KY THUAT NONG NGHIEP in Vietnamese No 9, Sep 77  
pp 663-664

[Excerpt] Following the reestablishment of peace in 1954 there were 15 pockets of anthrax in Bac Bo. By 1956-1957 the disease had spread, and there were 40 pockets covering many provinces. There were 34 pockets of the disease in 1957, 32 in 1958, 25 in 1959, 10 in 1960, 11 in 1961 and 14 in 1962. The areas with the highest incidence were Vinh Phu, Ha Nam Ninh, Ha Bac and Hai Hung provinces and the Tay Bac Zone. The years with the highest number of casualties to livestock and infection among humans were as follows: in 1956, 202 buffaloes and cows infected, with 131 dead; in 1957, 163 buffaloes, cows and horses, 56 pigs, cats and dogs, and 140 people infected; in 1959, 79 buffaloes, cows and horses, 30 pigs, cats and dogs, and 423 people infected. From 1963 to 1972 there was a sort of temporary respite. There were only five pockets of disease in the worst year. The highest number of animals infected in 1 year was 77 buffaloes, cows and horses and 30 pigs, cats and dogs (no humans).

The recent epidemic started in 1973 in the northern mountain provinces of Son La, Lai Chau, Cao Lang, Hoang Lien Son, Ha Son Binh and Ha Tuyen. In 1973, there were 27 pockets of disease with 420 buffaloes, cows and horses, 409 pigs, cats and dogs, and 302 people infected; in 1974, 13 pockets with 160 buffaloes, cows and horses, 316 pigs, cats and dogs, and 39 people infected; in 1975, 15 pockets with 148 buffaloes, cows and horses, 149 pigs, cats and dogs, and 154 people infected; and in 1976, 17 pockets with 283 buffaloes, cows and horses, 154 pigs, cats and dogs, and 107 people infected. From 1973 to 1976 a total of 6 provinces, 18 districts and 57 villages were affected by the epidemic.

### III. PLANT DISEASES AND INSECT PESTS

#### LAOS

##### INSECTICIDES DISTRIBUTED

Vientiane BULLETIN QUOTIDIEN in French 8 Sep 77 p 6

[Text] Late last August, the agricultural service of [Meuang] Chom Phet district in the Luang Prabang province distributed insecticides to peasants in order to fight against the pests which have destroyed their crops. At present, a portion of the fields threatened by pests have been sprayed with phytosanitary products.

##### M. SONG KHON PEST CONTROL

Vientiane BULLETIN QUOTIDIEN in French 8 Sep 77 pp 5, 6

[Excerpt] The agricultural service of the Song Khon district in the Savanakheth Province sent trained personnel with insecticide sprayers to fight against the pests which have devastated plantations in [Taseng] Nakala and [Taseng] Senouan.

#### VIETNAM

##### ELIMINATION OF CROP PESTS

Hanoi NHAN DAN in Vietnamese 25 Oct 77 p 2

[Text] Recently, some of the 10th-month rice acreage in Nghe Tinh Province has been damaged by army worms and mice. The Nghe Tinh Agricultural Service and the districts mobilized tens of thousands of people

to utilize all methods to eliminate insects and mice and protect the 10th-month rice until it is harvested.

Many districts have sent labor forces from the villages not infested by insects or where the rice is not yet ripe to help the other villages rapidly harvest the ripe 10th-month rice which is being damaged by army worms. The cooperatives have organized insecticide spraying on rice paddies where the rice kernels have filled out and have organized labor forces to eliminate insects from paddies in which the rice is heading.

The districts with many rice-damaging mice, such as Nam Dan, Hung Nguyen, and Duc Tho, and many places in the piedmont and mountain regions, have concentrated laborers and students, dug up burrows and killed mice, and protected the rice. The cooperatives have divided their members into small groups to inspect each field in order to locate burrows and kill mice. As of 17 October Nghe Tinh Province had killed 22,600 mice.

Hanoi NHAN DAN in Vietnamese 25 Oct 77 p 2

[Excerpts] In September, the agricultural sector of Hau Giang Province supplied to the peasants 12,000 tons of fertilizer of various types and 250 tons of insecticides in order to fertilize the 10th-month crop and prevent and eliminate insects and diseases.

More than 10,000 hectares of 10th-month rice in Tay Ninh Province were sulphated, inundated, and damaged by insects and diseases. The localities concentrated their efforts on countering waterlogging, eliminating the sulphate, eliminating leafhoppers, and protecting the rice.

Every day, in Trang Bang and Go Dau districts thousands of peasants and students went to the fields to spread additional phosphate fertilizer and kitchen ashes on sulphated rice paddies. More than 900 agricultural middle school students went to the districts to guide the peasants in mixing and spraying insecticides on the spot. To date Chau Thanh, Go Dau, Trang Bang and Tan Bien districts have saved more than 10,000 hectares of rice infested with leafhoppers.

Ho Chi Minh City Domestic Service in Vietnamese 2345 GMT 25 Nov 77 BK

[Text] The peasants in Tien Giang Province have thus far saved 45,000 out of 51,000 hectares of rice from being destroyed by insects. The provincial agricultural service has set up a steering committee for insect control activities. With the help of hundreds of cadres from the Ministry of Agriculture, the steering committee has guided local peasants in eradicating insects harmful to rice plants by spraying diesel oil or kerosene on them or using lanterns to trap them. After

2 weeks, the hardest hit districts of Go Cong and Cho Gao have succeeded in saving 80 percent of their insect-ravaged rice acreage.

Ho Chi Minh City Domestic Service in Vietnamese 0500 GMT 26 Nov 77 BK

[Excerpt] Last week, along with cultivating the winter-spring crop, exterminating leafhoppers and combating drought to protect the rice were also intensively carried out in the southern provinces. Following many days of persevering and intensive work, Tien Giang Province as of 25 November had saved 40,000 out of 60,000 hectares ravaged by leafhoppers. Winged leafhoppers were all exterminated, and the spread of leafhoppers in the rice fields was checked. In Go Cong and Cho Gao districts where leafhoppers caused the heaviest ravage, the number of leafhoppers on the rice fields decreased approximately to one-third as compared with previously.

In Ben Tre Province in the past few days, as a result of an active extermination of leafhoppers, the number of leafhoppers which ravaged the rice decreased, winged leafhoppers were all exterminated on 2,500 hectares of rice fields in Ba Tri District, and there only remained fewer than 20 leafhoppers on (each hectare) of rice field, compared to 200 to 400 leafhoppers previously. The districts in fresh-water areas, such as Binh Di and Chau Thanh districts, took advantage of the recent high tide to go to the rice fields to use sticks to knock the leafhoppers into the water and to catch and use them as bait to trap rats.

In Cuu Long Province, Vung Liem, Cang Long and (Long Ho) districts actively combated diseases to save rice plants. Guided by the agricultural service, the peasants successfully used lime fertilizer and chemicals to eradicate diseases to save rice plants.

Ho Chi Minh City Domestic Service in Vietnamese 1200 GMT 18 Nov 77 BK

[Text] Brown, green and black leafhoppers are damaging the rice crops in Tien Giang, Ben Tre and Long An provinces and are likely to expand to other provinces. In Tien Giang, more than 40,000 hectares of early winter-spring, 10th-month and late summer-fall rice have been damaged by brown and black leafhoppers. In Ben Tre, some 60,000 hectares out of the total cultivated 90,000 hectares of rice have been damaged by leafhoppers. Some 30,000 hectares in Ba Tri, Giong Trom, Binh Dai and Chau Thanh districts, Ben Tre Province, have been heavily damaged. In Binh Yen, Vinh Thoi and Dinh Hoa villages, Binh Dai District there are about 700 leafhoppers per square meter of ricefield. Some 4,000 hectares out of 6,000 hectares of rice in these localities have been affected by leafhoppers. The provincial agriculture services in Tien Giang and Ben Tre provinces have sent many technical cadres to various districts to coordinate with the local peasants in eliminating leafhoppers.

Ho Chi Minh City Domestic Service in Vietnamese 0500 GMT 19 Nov 77 BK

[Excerpt] In the past week, intensive efforts were continued to prevent and control leafhoppers in order to protect rice. According to the Ministry of Agriculture and our reporters' findings, tens of thousands of hectares of rice, including the 10th-month, summer-fall and early winter-spring rice, have been threatened by leafhoppers. In Tien Giang Province, 40,000 hectares of rice have been affected, with Go Cong, Cho Gao and Chau Thanh districts being the hardest hit.

In Ben Tre Province, according to the local agricultural service, tens of thousands of hectares of rice in Ba Tri, Giong Trom, Binh Dai and Chau Thanh districts have been ravaged by leafhoppers. In Chau Thanh District in particular, 4,000 out of the cultivated 6,000 hectares have been stricken.

To cope with this situation, the localities concerned have urgently taken measures to exterminate leafhoppers in order to save rice. In Go Cong District, Tien Giang Province, efforts have been concentrated on saving more than 3,800 hectares which have been most seriously affected. The principal leafhopper-control methods used in the district are using sticks to pry them loose from rice plants and onto water sprayed with kerosene or fuel oil, and using lamps as traps. Thousands of peasants and students have taken to the fields to catch leafhoppers, saving 800 hectares of rice. In Binh Thanh and Thanh Tri villages in particular, on the night of 17 November, the local peasants used lamps to catch leafhoppers on hundreds of hectares. Meanwhile, on 17 and 18 November the Go Cong supply service worked around the clock to provide peasants with chemicals needed to save rice.

In Ben Tre Province, working intensively to save rice from leafhoppers, Chau Thanh District has managed to save 1,700 hectares of the 10th-month crop and Giong Trom District more than 2,300 hectares. In Binh Dai District, in order to prevent leafhoppers from spreading, peasants have cleaned up the fields, cut grass on ricefield embankments and burned the rice stalks in leafhopper-infested fields. They have also used ducks to catch leafhoppers in seriously affected fields.

Meanwhile, in Tan Phu District, Dong Nai Province, peasants have used ashes, bitter leaves, pepper, fuel oil and lamps to control leafhoppers, saving 8,000 hectares of the 10th-month rice. The district has also organized field inspection teams in order to promptly detect affected areas. Because of satisfactory control efforts, the once affected 10th-month rice in Binh Dai District has recovered and is vigorously growing.

In order urgently to exterminate leafhoppers and save rice, the Ministry of Agriculture recently sent a message to various provinces urging them to concentrate their manpower and means on this task. The ministry also

pointed out that they must organize inspections in order to detect leafhoppers promptly and make efforts to exterminate them at once. Those areas affected by leafhoppers must immediately launch prevention and control campaigns, and clean up the fields, using lamp traps, ducks, fuel oil, chemicals and tobacco to kill insects.

Hanoi Domestic Service in Vietnamese 2300 GMT 21 Nov 77 BK

[Excerpt] More than half of the 10th-month rice crop is now in boot. But rice-eating insects, especially brown leafhoppers, have appeared in many localities. Hardest hit are the Mekong River Delta provinces. According to initial reports, to date no less than 150,000 hectares of the 10th-month rice crop have been seriously ravaged by brown leafhoppers, with about 10,000 hectares completely destroyed.

Various localities are concentrating veterinary cadres and sprayers and insecticides on eliminating brown leafhoppers in all grassroots units. The Ministry of Agriculture has urgently sent ranking cadres of the Vegetation Protection Department [Cucj Baor Veej Thwcj Vaatj] and the Vegetation Protection Institute [Vieenj Baor Veej Thwcj Vaatj] in Hanoi, along with insecticides, to help the southern provinces exterminate the brown leafhoppers.

Ho Chi Minh City Domestic Service in Vietnamese 0530 GMT 21 Nov 77 BK

[Text] Peasants in some districts in Cuu Long Province have successfully eliminated a type of insect called "Doc Sung." The provincial agricultural service has sent cadres to the insect-infested areas to find out ways to control this pest. They have recommended many effective measures to the affected districts as well as to other districts to protect the 10th-month rice crop from this type of insect.

## ZAMBIA

### PHORACANTHA BEETLE INFESTATION

Lusaka TIMES OF ZAMBIA in English 22 Nov 77 p 1

[Text] More than 70,000 eucalyptus plans at Chati forest plantation in Ndola Rural are to be destroyed to eradicate an insect which is causing havoc to trees there.

The plants, which are four years old, are to be burnt as a way to wipe out the beetle and prevent it from spreading.

The beetle, known as "Phoracantha" believed to originate from Australia, is causing such great concern to the forestry department that officials have launched desperate measures to fell down all the affected trees within the next two weeks to avoid larva from maturing and affecting other plants costing thousands of Kwacha.

In the past few days, officials from Ndola and Kitwe have been visiting Chati supervising the felling of affected trees, although they are doubtful whether the exercise will be completed before heavy rains start.

One official summed up the desperate situation: "You don't know what this means. The truth is I feel like crying to see all those plants destroyed by the beetle because we are unable to control the scourge. This appears to be the worst outbreak since 1974."

Worse

The official said other countries like South Africa and Australia had worse outbreaks than Zambia and that the situation had not yet been treated as alarming but "it is a nuisance."

Another senior official said it was sad that such valuable plants could be destroyed without finding alternative use for them simply because the country did not have sufficient forestry industries which could utilise them.

Chati plantation has 400 hectares of land with a minimum of 350 plants per hectare. It is feared that about half of the plantation might be wiped out soon if the present measures to control the situation did not achieve the intended results.

Officials in the field said that because of the slow method of felling down the trees there was no hope of controlling the beetle in good time as it was likely to spread to other plants which were not yet affected.

A spokesman for the forestry department headquarters in Ndola said that efforts were being made to try and control the insect and that research officers were busy trying to find means of eradicating it.

CSO: 5400

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