

A PROPHETIC LOOK AT WORLD AFFAIRS

MILLENNIUM

ALERT!

NOVEMBER 2005

H5N1

THE BIRD FLU



“And there will be plagues in various places.” (*Y’shua the Messiah - Luke 21:11*)

H5N1

THE AVIAN FLU VIRUS

BY DON STANTON



IS A GLOBAL PANDEMIC INEVITABLE ?

THE WORLD is in the grip of panic over a potential flu pandemic - not the usual type of human flu, but a more powerful strain - one that may develop from a bird flu virus named H5N1.

The potential flu strain, which I will call the **human-avian flu**, may not yet be in existence.

Avian means ‘to do with birds’; and we’re talking about a bird flu virus that teams up with a human flu virus to produce a hybrid – a mixed virus that is able to attack human cells, and at the same time, pose as a brand new virus. Its “human genes” would enable it to spread quickly from person to person, but its “bird genes” would trick the human immune system so that it does not know how to respond to it.

Normally a person gets over a flu attack after a few stressful days because his immune system knows how to tackle a virus that it has already had some contact with. The new human-avian virus though, will appear to be entirely new to the human system, and it will be able to go straight to work, destroying the victim’s lungs and respiratory system.

The run-up to the human-avian virus is already at work. It’s the H5N1 - a bird flu virus that first transferred from sick poultry to humans in Hong Kong, in 1997.

Before that attack, no-one thought that bird viruses would threaten people directly. But in Hong Kong H5N1 infected 18 people and killed 6. The attack was halted only after the territory destroyed all of its 1.5 million chickens.

The H5N1 virus is believed to have originated in Guangdong, south China, a province adjacent to HK that teems with hundreds of millions of chickens, ducks, and geese. Researchers believe wild-bird droppings carrying flu viruses must have fallen into this massive “poultry farm,” and after exchanging their genes, the virulent H5N1 strain gradually evolved. As HK imports a lot of poultry from Guangdong, it wasn’t long before the territory suffered a bird flu outbreak.

ASIA MOST VULNERABLE

ASIAN countries have been the most vulnerable to bird flu because of their large domestic poultry populations. And it's not only chickens. Ducks are a very real problem! Unlike chickens which keel over very soon, infected ducks often seem healthy and are able to waddle around, swim, and spread the virus in their droppings.

While ordinary human flu is mostly spread through sneezing, the bird virus is excreted in the faeces of chickens, ducks and birds.

In 2003 Hong Kong had another outbreak in which 2 people were infected. But by the end of the year, H5N1 was infecting and killing birds across Asia. S Korea and Japan had minor outbreaks, but Thailand and Vietnam bore the brunt of the disease.

During the winter of 2003-4, the virus broke out in most of Vietnam's 64 provinces. To fight it, the country slaughtered tens of millions of chickens. The plague declined for some time, but broke out again with a vengeance in late 2004. Vietnam partly compensated farmers for their chicken disaster.

Thailand compensated farmers for the flocks culled there, and since then, it has enlisted about a million village volunteers to watch for any unusual number of chickens dying.

In 2005 the bird flu spread to Cambodia, Mongolia and Siberia. China also; it had more than 55 outbreaks - in Xinjiang, Qinghai, Tibet, Inner Mongolia, Liaoning and Hunan. Indonesia had some outbreaks in 2004, but in 2005 at least seven people have died.

With an increase of the virus expected during the northern hemisphere winter, governments in Asia are struggling to contain the bird flu epidemic, and to prevent it becoming a human pandemic.

In October, European officials were compelled to deal with outbreaks in Romania and Turkey; and the UN's Food and Agriculture Agency warned that as a result of the European outbreaks, the disease could now be expected to reach the Middle East and Africa.

QINGHAI – A SHOCKING DISCOVERY

Qinghai Nature Reserve Bird Island in west China is the spring-summer habitat and breeding grounds of about 200 species of migratory birds. Last May, a ranger on the Reserve found a bar-headed geese shivering from avian flu. It died very quickly. Then over the next six weeks, thousands of birds, particularly geese perished in the same way.

This was alarming to researchers because wild birds were thought to be immune to H5N1. Migratory birds have now created a dangerous equation; while sick birds are not able to fly far, they can carry the infection to other countries before they die.

On Nov 11 a report revealed that the Middle East had seen its first definite case of H5N1. Authorities in **Kuwait** confirmed that a **migratory flamingo** found on a beach died of the lethal strain. And, they say, another bird, suspected of having the virus, had the milder H5N2 strain.

Migratory birds are now suspected of being the carriers of the H5N1 virus to Mongolia, Tibet and Siberia; so this means wild birds may spread the virus to Europe, Canada, and even to the US via Alaska.

By the time we go to press (25.11.05), there have been at least 130 reported human infections and 69 deaths from H5N1. Almost all cases have been through contact with infected birds. So far the mortality rate is running at about 50% of the people infected. (In the SARS epidemic it was 10%.)

Although the number of cases so far is small, avian flu is already endemic in most of the poultry flocks in the affected regions. Many thousands of birds and other poultry have died due to the virus, and already **150 million birds** have been wiped out. And clearly, the H5N1 and other bird flu strains are still very active.

It is not unusual for chickens to get flu. Avian flu viruses, in fact, are more numerous than human strains. And bird viruses are usually not very good at transmitting from animal to man, but H5N1 **is** passing to humans! **So far**, though, it seems that it has **not** passed from **person to person**.

There have been a few suspected person-to-person cases in Hong Kong and Vietnam; so far none have been confirmed. But the whole world is on alert for the first verified case of human-to-human transmission.

COUNTRIES THAT HAVE SUFFERED OUTBREAKS OF BIRD FLU

The H5N1 influenza virus is known to have infected **130 people** in Asia since the latest outbreak began in late 2003. **Human deaths**, shown in brackets: **total 71**

Vietnam: (42)

Indonesia: (8)

Cambodia: (4)

Thailand: (13)

China: (4)

Mongolia

Laos

Cambodia

Russia

Kazakhstan

Hong Kong

Romania

Netherlands

Turkey

Croatia

Ukraine

ALARMING PREDICTIONS

MANY research scientists and health experts are con-vinced that a pandemic is coming. But when, no-one can predict. It may be 2006, or it may be 5 years away.

The World Health Organisation general director, Dr Lee Jongwook, said earlier this year; "The most serious known health threat the world is facing is avian flu."

A senior research fellow of the Institute of Southeast Asia Studies in Singapore said bird flu was a major threat to mankind. "A pandemic triggered by H5N1 could become a fearsome insurgency against human health, with the potential to be **far more lethal than terrorism**."

Michael T Osterholm, the head of the Center for Infectious Disease Research at the Minnesota University says pessimistically, "We have as much chance of stopping a pandemic as we would of putting a curtain around Minnesota and keeping out winter."

Leading virologist at Hong Kong University, Guan Yi says, "If a pandemic occurs, no matter how developed the world is, it would suddenly shut down. And **I know it is coming.**"

WORLD HAS SLIM CHANCE OF STOPPING FLU PANDEMIC

SEPT 20. "The initial outbreak of a potential bird flu pandemic may affect only a few people, but the world will have just weeks to contain the deadly virus before it spreads and kills millions.

"Chances of containment are limited because the potentially catastrophic infection may not be detected until it has already spread to several countries, like the SARS virus in 2003.

"Avian flu vaccines developed in advance will have little impact on the pandemic virus. It will take scientists four to six months to develop a vaccine that protects against the pandemic virus, by which time thousands could have died. There is little likelihood a vaccine will even reach the country where the pandemic starts."

That is the scenario outlined by Dr Hitoshi Oshitani, the man who was on the frontline in the battle against SARS and now leads the fight against avian flu in Asia. "SARS in retrospect was an easy virus to contain," he said.

"The pandemic (*flu*) virus is much more difficult, maybe impossible, to contain once it starts," he said at a WHO conference in Noumea, capital of the French Pacific territory of New Caledonia, in Sept. "The geographic spread is historically unprecedented."

Oshitani said nobody knew when a pandemic would occur; it could be within weeks or years, but all the conditions are in place, save one - a *human-avian* virus that transmits from human to human.

The contagious H5N1 virus which has killed 69 people in five Asian countries since it was first detected in 2003, he said, might not be the one to trigger the pandemic. Instead a genetically different strain could develop that passes between humans.

Dr Oshitani said the winter months of December to February will see an acceleration in cases, and the more the human cases, the greater the risk that the virus will mutate (*into the human-avian strain*).

W.H.O: "PANDEMIC IS INEVITABLE"

HEALTH experts at the first major international co-ordination meeting on bird flu and human flu, in Geneva in Nov, agreed that a global flu outbreak capable of killing millions of people is **a certainty**.

What is also certain, say scientists, is that the virus will come from bird flu. But what is unknown is whether the H5N1 strain that has ravaged poultry stocks in parts of Asia and spread through Eastern Europe will be the culprit.

It is the leading candidate, however, and authorities are trying to stamp out poultry outbreaks as rapidly as possible to reduce opportunities for the virus to mutate into a form that can pass easily between people and spread worldwide. Currently, the virus is hard for people to catch, but most deaths have been linked to human handling of infected poultry.

PANDEMIC MAY KILL UP TO 150 MILLION

SEPT 29. Asian leaders met with Secretary-General Kofi Annan during the Sept UN Summit and asked for UN assistance in co-ordinating the response to the bird flu epidemic.

Annan asked Dr David Nabarro to take leave from his post as WHO's executive director for sustainable development and health environments, to lead a global drive to counter a human flu pandemic.

As the UN system's co-ordinator for avian and human influenza, Dr. Nabarro has called on governments to take immediate steps to address the influenza threat, which, he warned, could come at anytime and could claim millions of lives.

With the almost certainty of another influenza pandemic soon, and with experts saying there is a high likelihood of the H5N1 virus mutating, Dr Nabarro said it would be "extremely wrong" to ignore the serious possibility of a global outbreak. "The avian flu epidemic has to be controlled if we are to prevent a human influenza pandemic."

The 1918 influenza pandemic killed between 40 million and 100 million people. There were subsequent pandemics in 1957 and 1968 which had much lower death rates, but nevertheless caused great disruption.

"In a new pandemic," Dr Nabarro said, "the range of deaths could be anything between 5 and 150 million. The work we're doing over the next few months on prevention and preparedness will make the difference between, for example, whether the next pandemic leads us in the direction of 150 million or in the direction of 5 million," he said. - Source: AP / Yahoo News

THE ECONOMIC CATASTROPHE

EVEN if H5N1 does not trigger a human flu pandemic, a bird flu pandemic could wreck havoc on the world. Even a weak pandemic could trigger the kind of quarantines and travel restrictions that could bring the global economy to a standstill. Many airlines and insurance companies could collapse.

Economic losses due to bird flu cost an estimated \$10 billion in 2004 alone.

The Geneva meeting on bird flu and human flu in Nov, urged countries around the world to draw up plans for handling an **inevitable new pandemic**, which the World Bank estimated could result in more than **\$800 billion** in lost gross domestic product over a single year.

While experts agree there will certainly be another flu epidemic, it is unknown when or how bad that global epidemic will be - or whether the H5N1 bird flu strain will be its origin.

THE COST OF FIGHTING THE BIRD FLU

THE COST of containing the disease is enormous! After the meeting in Geneva in Nov, health experts unveiled a **\$1 billion** plan to fight bird flu, with assist-ance from the World Bank. Chicken feed!!

Nov 17. US efforts stalled when Republicans in the US House of Representatives refused to approve fund-ing for President Bush's \$7.1 billion plan. After days of intensive talks between the House and Senate, negotiators dropped a plan for \$8 billion in funds that Democrats pushed through the Senate last month.

Conservative Republicans in the House insisted that an emergency US effort to stockpile vaccines and anti-viral drugs that could be effective against the deadly flu, would have to be paid for by cutting other government programs.

Republican leaders in the House said that instead of attaching the bird flu money to a health and labor spending bill moving through Congress, they would try separate legislation later this year or early next year.

Indonesia, which has suffered eight confirmed human fatalities, has rejected a \$10 million international loan, saying it wants grant money instead.

CHINA ON WAR FOOTING

CHINA has suffered at least 60 outbreaks of bird flu during the last two years; in Qinghai, Xinjiang, Tibet, Inner Mongolia, Liaoning, Anhui and Hunan.

In Oct, Beijing announced a fresh outbreak of H5N1 bird flu, saying 2,600 birds have died from the disease in Inner Mongolia. And in the North-Eastern Liaoning province where a 12-year-old girl died from H5N1, more than 10 million birds were culled and 320 million birds vaccinated. Other outbreaks of bird flu have been reported in Anhui and Hunan in central China.

MILITARY MOBILISED TO FIGHT BIRD FLU

NOV 7. China has mobilised its armed forces and allocated emergency funds and vaccines to fight bird flu as a mass cull of poultry and birds continued following the new outbreak in the country's northeast.

The cull was being carried out in Heishan county of Liaoning province, where the H5N1 outbreak has killed nearly 9,000 chickens in six villages.

The outbreak in Liaoning is China's fourth in just over two weeks, with migratory birds being the most likely culprits for it. The agriculture ministry said, "All the poultry in the region must be slaughtered by midnight on Sunday."

As with standard practice, the cull targeted all birds within a radius of three kilometers (two miles) of the farms where the outbreak occurred. As of Sunday morning, more than one million poultry have been slaughtered according to officials who said, "More than 3,000 people are carrying out the cull. The next step is to bury the slaughtered poultry."

The China News Service said the Ministry of Agriculture has sent an emergency batch of 60 million vaccines to treat healthy poultry near the affected area, to ensure the industry will not be destroyed.

The Liaoning provincial government has meanwhile allocated 85 million yuan (\$US 10.5 million dollars) to compensate farmers and prevent the disease spreading.

Officials said they will launch a province-wide surveillance, not missing one village, one family, or one fowl, and vaccinating 100 percent of the poultry, not counting on sheer luck, not leaving any short-comings, and not leaving any hidden dangers.

The local government has also sent 100 medical workers to the villages to offer free medical checks and vaccinations for farmers.

Meanwhile Hunan province was banning farmers from mixing animals in farms or herding animals in the wilderness. And authorities in Beijing threatened to fine or jail anyone who refuses to comply with the order that all animals including pets must be vaccinated.

OUT OF CONTROL IN LIAONING

NOV 11. The Chinese government says the spread of the deadly H5N1 bird flu in the NE province of Liaoning is not under control, and has warned of a potential disaster there.

There have been three fresh outbreaks in the province in 24 hours, and a new suspected human infection.

The outbreaks are being blamed on migratory birds, but the head of the UN's Food and Agriculture Organization in Beijing said it was possible that they were due to village-to-village spread of the virus.

There have been six outbreaks in the past month in China and the government has responded with mass culls of poultry. The most recent outbreaks, which killed about 1100 chickens, prompted the authorities to cull 670,000 poultry in the areas affected, and to place 116 people in quarantine.

A Chinese agriculture minister has warned that the country faces a disaster due to the use of **sub-standard and counterfeit poultry vaccines**. These can mask symptoms of the virus, making control difficult, and can even introduce the virus.

CHINA CONFIRMS FIRST HUMAN BIRD-FLU CASES

NOV 16. Until now China has never admitted to any human infections or deaths due to H5N1, even though there have been 11 outbreaks in poultry over the past month, and more than 60 outbreaks in the last two years.

Now the world's most populous nation has reported its first human cases of H5N1 in mainland China; a poultry worker who died in Anhui province, and a 9-year-old boy, who fell ill in Hunan province. The boy recovered but his 12-year-old sister, who died, has been recorded as a suspected case.

A WHO spokesperson said it would not be surprising if more human bird flu cases are confirmed in China. "There are a lot of chickens infected and there's a lot of contact between humans and chickens in China."

CHINA'S INCREASED TRANSPARENCY

CHINA gave open coverage to its first human cases of bird flu. Newspapers carried pictures of distraught relatives of the victims, a contrast to two years ago when China tried to cover up outbreaks of SARS - the epidemic whose cost was estimated to be \$40 billion in the Asia-Pacific region alone.

SARS spread as far afield as Toronto, carried by airline passengers. It sickened at least 8,000 people globally, and killed 800 before it was contained. "In 2003, we defeated SARS. That will inspire us to victory over bird flu," said Chinese Premier Wen Jiabao.

WHO spokeswoman Maria Cheng said, "China has been a model of how we hope countries will react to a situation like this in the future. They had a very uncertain situation but went ahead with increased transparency. That is exactly the kind of mentality we need if we are going to detect a pandemic in the early stages."

CHINA TO VACCINATE 14 BILLION FOWLS

THE Chinese government has announced plans to vaccinate all the country's **14 billion domestic fowls**. Health workers armed with vaccine and disinfectant are racing to inoculate the billions of chickens and other poultry, but how long that would take is not clear. The poultry may require repeated injections and booster shots.

UN coordinator for bird and human flu, Dr David Nabarro, says such vaccination programs are "the right thing to do." The virus is so entrenched in China's birds that simply slaughtering them will not work," he said. "The best plan is to vaccinate and then slaughter when there are outbreaks."

PREPARING FOR A POSSIBLE PANDEMIC

THE bird-to-human transmission can be relatively controlled by isolating and eliminating diseased flocks, but the widely held practice of keeping backyard poultry in SE Asian countries, make thorough culls almost impossible.

Dr Hitoshi Oshitani, the WHO's Asian communicable diseases expert in Asia says: "Basically, we haven't prepared for a pandemic. You need resources to be able to respond, and I don't think any country in the world is well prepared."

In Sept a British study warned that the country lacked enough critical-care beds to cope with an influenza pandemic. In fact, all the hospitals in the world would not be able to handle all the cases of a major pandemic.

Health experts at the Nov. international co-ordination meeting on bird flu and human flu, in Geneva, urged countries around the world who have not done so, to draw up plans for handling the pandemic they say is **inevitable**.

WHO, for the last 10 years has been urging nations to draw up pandemic flu plans. But many did not begin to act until the bird flu outbreak in Asia became an apparent threat.

WHO officials say the nations need to implement their plans, rehearsing and testing them to see if they actually work. The plans need to contain commitments to activities such as improving early detection of disease, increasing the ability of hospitals to cope with an influx of patients, and the intention to stockpile drugs, pre-order vaccines and quarantine communities.

6 months ago, fewer than 40 countries had any strategy, but now at least 120 countries have planned responses, says an official at the Geneva conference. "The level of preparedness already and the meeting to forge a global strategy are unprecedented. It's the first time the international community has come together **before** we've had the disaster. It's always **after** the tsunami, **after** SARS, **after** AIDS!"

Richer countries are moving quickly to prepare. Governments are stockpiling anti-viral drugs that they believe are able to limit the effects of H5N1 if taken early enough.

By far the most sought-after is **Tamiflu** made by the Swiss company Roche. UK has ordered enough for 15 million people (25% of the population). France has done likewise. But Roche is hard-pressed to keep up with the demand.



The World Health Organization has warned people against panic-buying stocks of *Tamiflu* in a hope that it will protect them from bird flu. WHO stressed that the drug could reduce the effect of the illness but it was **not a vaccine to prevent it**.

The US, with a population of nearly 300 million people, has anti-virals for only 2 to 3 million. But the government is pinning its hopes on a vaccine which is currently being tested. It hopes the vaccine will be ready before it is needed, so that at the first sign of a pandemic, it can be mass produced in the millions of doses.

In Sept, French drug maker Sanofi-Aventis won a \$100 million contract to supply the United States with a vaccine against H5N1. The United States also awarded a \$2.8 million contract to Britain's GlaxoSmithKline for 84,300 courses of an anti-viral.

The purchases are part of a US plan to buy vaccine for 20 million people and anti-virals for another 20 million. A latest report says it will take three years for the US to vaccinate its population.

Vietnam, which has suffered the most number of fatalities, has announced that it is to begin part-production of *Tamiflu*, after agreeing to a licence with Roche. It is also planning a bird flu hospital near its border with Cambodia.

Several developing countries - Morocco, Kenya, Indonesia, India and Thailand - said they were worried about getting drugs and human vaccines because they lack pharmaceutical manufacturing or money to buy products in huge quantities.

PHARMACEUTICAL GROUPS "POORLY PREPARED"

PHARMACEUTICAL groups met in Geneva in Nov, to develop a co-ordinated vaccine strategy for the in-dustry. "If something happens tomorrow, we are very poorly prepared," said Dr. Bram Palache, medical director of Belgian pharmaceuticals and chemicals giant Solvay Pharmaceuticals. "There is no doubt about that. We don't have the means to really (*and*) properly do the interventions which will be needed."

"Money will be needed to prepare the world," experts said. Sublime statement!!

"The potential cost of this thing is in the **multi-billions**," said Dr. David Nabarro, the UN co-ordinator for bird and human flu. "We are asking for what would be a quite small fraction of that. This is not a begging bowl. This is an investment in the future of the world, an investment in the future of society."

What a great opportunity for the pharmaceuticals "to make a penny"!

Analysts say that if a pandemic emerges, the likely losers would include airlines, hotels, insurers and luxury goods makers, while potential winners include drug makers, hospital chains and home entertainment companies. And Sauerkraut-makers!

A report just to hand says that Sauerkraut could prove to be a secret weapon against the bird flu. The traditional German dish, which is made from chopped cabbage that is fermented, contains bacteria that may combat the potentially fatal disease.

Korean scientists claim that lactobacillus, the lactic acid bacteria created during the fermenting process, is the active ingredient that could combat bird flu.

They say their findings follow a study in which *kimchi* - a spicy cabbage dish popular in South Korea and similar to sauerkraut - was fed to 13 chickens infected with bird flu. Just one week later, 11 of the birds showed signs of recovery from the virus.

Hmm!! Well, sales of sauerkraut have soared in the US and Britain as a result of the research!

Apart from being a possible cure for bird flu, sauerkraut is said to be effective in detoxifying and in fighting cancer. It is also rich in iron and vitamin C.

THE MUTATING KILLER VIRUS

H5N1 is no ordinary flu! It is very virulent and has an ability to mutate quickly, which is why experts fear a H5N1 mutation could trigger a horrific pandemic.

One researcher said, “H5N1 is probably the worst influenza virus, in terms of being highly pathogenic (causing disease), that I’ve ever seen or worked with.”

This virus is so lethal that chickens and mammals can die within hours of being exposed to it. And although at present it remains comparatively hard for humans to catch, the virus is deadly for people who come into direct contact with infected birds or who eat uncooked poultry. 50% of infections are fatal.

Experts are warning that H5N1 is very likely to mutate into a **human-avian** strain with the ability to jump easily from person to person, like ordinary flu does.

In fact, each person who catches H5N1 becomes a potential mixing pot – a laboratory that could produce a mutation that is communicable to other humans. It may be a minor mutation in a string of mutations that leads to the feared microscopic monster.

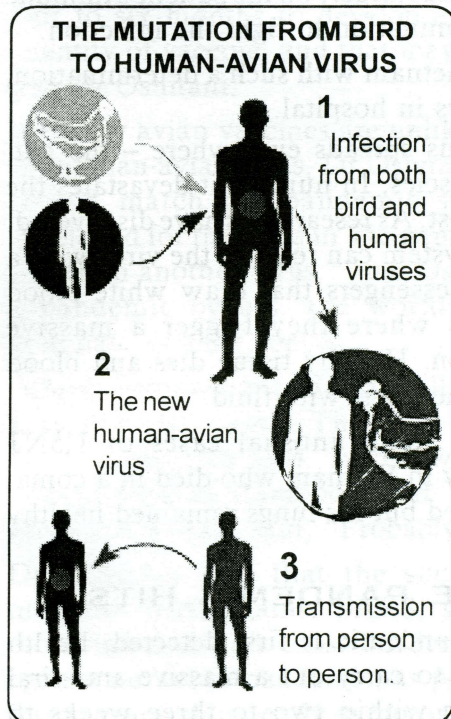
Most mutations do not survive, but this one, being the result of a very potent gene-swap, would become a power-packed, insidious enemy that sets off the global pandemic that kills multitudes.

Researchers in Vietnam say the H5N1 avian flu virus **has mutated allowing it to replicate more easily inside humans and other mammals**. Scientists at the Ho Chi Minh Pasteur Institute who have been studying the genetic make up of H5N1 samples taken from people and poultry, said the virus has undergone several mutations. - www.pasteur-hcm.org.vn.

“There has been a mutation allowing the virus to replicate effectively in mammal tissue and become highly virulent, (dangerous and quick)” the institute said on its website.

Experts are tracking all strains of avian flu, which have swept through poultry populations in large swaths of Asia since 2003.

A team of virologists and researchers at Hong Kong University headed by Guan Yi, have traced the origin



of the current, more dangerous strain of H5N1 to a goose in Guangdong, in southern China. They have taken tens of thousands of samples from birds in China, and have sequenced over **250 different strains of H5N1**.

Another concern: in Nov, Taiwan said that it had found another highly pathogenic (disease causing) strain of avian flu, **H7N3**, in droppings left by a migratory bird, and it is carrying out tests to see if the virus has spread to nearby poultry farms. Like H5N1, the H7N3 strain can infect humans, said an official at the Council of Agriculture.

HOW BIRD FLU AFFECTS VICTIMS

YES, H5N1 is very deadly. Roughly half of those who have contracted the disease have died, **despite the use of artificial respirators and anti-viral drugs.**

The virus ravages the lungs of healthy young patients in a matter of days. X-rays of patients show the lungs covered with clouds which indicate infection. This rapidly deteriorates as the lungs become totally obscured. Survival depends largely on the patient's immune system and his determination to fight the infection.

One young man in Vietnam with such a determination, survived after 82 days in hospital. In a chicken the virus spreads everywhere – the gut, lungs, brain, and muscles. In humans it devastates the lungs first and foremost. As researchers have discovered, a person's immune system can react to the virus with a flood of chemical messengers that draw white blood cells into the lungs where they trigger a massive inflammatory reaction. Healthy tissue dies and blood vessels leak, filling the lungs with fluid.

There are evidently some unusual cases of H5N1 though, such as a boy in Vietnam who died in a coma; his **brain** was inflamed but his lungs remained healthy until the end.

WHEN THE PANDEMIC HITS

SEPT 20. When a pandemic is first detected, health authorities will need to carry out a massive anti-viral inoculation campaign within two to three weeks to have any chance of containment, says Dr Hitoshi Oshitani, the WHO's Asian communicable diseases expert in Asia. "Theoretically it is possible to contain the virus if we have early signs of a pandemic detected at the source," he said.

Scientists estimate that between 300,000 and one million people will immediately need anti-virals, but there are limited stocks available. WHO will receive one million doses by the end of 2005 and a further two million by mid-2006.

Even when an avian flu vaccine is fully developed, production limitations will mean there will not be enough vaccine. "Right now we have a time frame of four to six months to develop and produce a certain quantity of vaccine, and that may not be fast enough," said Dr Oshitani.

But early avian vaccines are unlikely to protect against the human-avian virus, Dr Oshitani says. "The vaccine should match the pandemic strain. So a vaccine developed for the virus in Vietnam now may not protect you from another virus." And Oshitani fears that once a pandemic occurs, the world's rich nations may dominate vaccine supply.

"The distribution of a vaccine will be a major issue when a pandemic starts. There is no mechanism for distribution," he said. Asked whether poorer Asian nations such as Cambodia and Vietnam would get a vaccine, Oshitani said, "Probably not."

Dr Oshitani said that the successful containment measures used against SARS, such as quarantining those infected and cross-border checks, would fail against an avian pandemic, as people spreading bird flu may not show early symptoms. "The pandemic is likely to be like the seasonal influenza, which is much more infectious than the SARS virus," he said.

TREATING AN OUTBREAK OF AVIAN FLU

PATIENTS need respirators – equipment that enables the person to breathe. Antibiotics are used to tackle secondary diseases, particularly bacterial or fungal illnesses that can trigger pneumonia.

All poultry in the area needs to be destroyed. People in direct danger need to be treated with anti-viral drugs which may help to reduce the effects of the infection.

If a human-avian, person-to-person, virus develops, authorities will first vaccinate or give anti-viral drugs to health workers and people who are considered more at risk, such as all contacts of an infected person.

Strict quarantine will be imposed on outbreak areas, and there will be screening of all people who have been anywhere near the infected area. Governments will seek to vaccinate as many as possible.

If officials are able to respond effectively within a couple of weeks of an outbreak, and if the virus spreads slowly at first, there is a chance of the epi-demic being contained.

A new vaccine to target the human-avian strain that emerges will be engineered, but this may take weeks, and mass production of the vaccine will take much longer. Only a few companies are capable of mass-production, and they produce some 300 million doses each year.

US CONSIDERS MILITARY ROLE TO FIGHT FLU

OCT 4. President Bush, increasingly concerned about a possible avian flu pandemic, said that any part of the country where the virus breaks out could likely be quarantined, and that he is considering using the military to enforce it. "The best way to deal with a pandemic," he said, "is to isolate it and keep it isolated in the region in which it begins."

Bush has argued that the armed forces have the ability to quickly mobilize the equipment, manpower and communications capabilities needed in times of crisis. But such a shift could require a change in law, and some in Congress and the states worry it would increase the power of the federal government at the expense of local control.

Bush made clear that the potential for an outbreak of avian flu is much on his mind, and it had him talking with "as many (world) leaders as I could find" as well as reading a book on the 1918 Spanish flu pandemic that killed 40 million or more, and consulting staff and experts. "I have thought through the scenarios of what an avian flu outbreak could mean," he said.

He acknowledged that a quarantine - an idea sure to alarm many in the public - is no small thing for the government to undertake, and enforcing it would be tricky. But he urged Congress to give him the ability to use the military, if needed. "I think the president ought to have all ... assets on the table to be able to deal with something this significant," he said.

The President has been urging world leaders to improve reporting on outbreaks of the virus, and to explore how to speed up the production of a spray, now in limited supply, that "can maybe help arrest the spread of the disease." "One of the issues is how do we encourage the manufacturing capacity of the country, and maybe the world, to be prepared to deal with the outbreak of a pandemic?" he said.

AUSTRALIA'S CONCERN

LAST February, Australia's Health Minister, Tony Abbott, received a report on the possible impact of an avian flu pandemic. The forecast for Australia: 13,000 deaths, 58,000 hospitalizations, and 2.6 million people seeking medical help in the first three months of an outbreak. This forecast is based on the possibility of the H5N1 mutating to human-avian strain.

The threat has been taken very seriously, because these are the days when no-one can say, "Oh nothing will happen." And besides, Australia's close neighbour, Indonesia, is fighting to contain an outbreak of the avian flu, and the experts are warning that a pandemic is inevitable - it's only a matter of time. And the expected new flu could be 25 times more deadly than the normal flu. Moreover, it is a virus to which no one is yet immune; and simply there is no effective treatment for it available. The country is not ready for it.

Since February, Australia has been in overdrive to protect the country from such a disaster.

The country has a stockpile of some 4 million doses of anti-virals which would be woefully inadequate. But the government has commissioned a bio-pharmaceutical company to urgently test a prototype vaccine based on H5N1.

THE SPANISH FLU

IN 1918, the final year of World War I, the Spanish Flu influenza spread in two waves. The first outbreak in March was not much more dangerous than the flu outbreaks of previous years.

The War was being fought largely in trenches and in an unsanitary environment; the soldiers faced degrading health conditions and were constantly exposed to airborne diseases. Soldiers were weakened in health and were not only very susceptible to catching the new, more virulent strain of flu, but also extremely susceptible to dying of it.

The virus mutated into a new, more virulent strain that swept across the world later in the year, ultimately killing somewhere between 40 million and 100 million people. This dreadful toll was three, four or five times more than the 14 million who died in the war.

Records say the sick took to their beds with fever, piercing headaches and joint pain. Many were young adults, the group that normally shrugs off the flu. About 5% of the victims died, often in just 2 or 3 days, their faces turning ghastly purple – they could not breathe, and they simply suffocated to death.

Over half of the US war dead in World War I - some 65,000 men - were the result not of combat but of the flu pandemic.

The movement of military personnel was a leading cause for the infection in civilian populations around the world over.

Normally a person gets over a flu attack after a few days because his immune system knows how to respond to a virus that has been around for a while.

Although this year's virus won't be exactly like it was last year, there are enough similarities in it to enable the immune system to recognise it and attack it.

Normally viruses of the animal world do not attack, and grow in, human cells. But if two or more types of viruses happen to meet, and swap their genes, they can reproduce offspring viruses with new qualities.

Sometimes an avian flu virus and a human flu virus will meet in a common host such as **a pig**. When they mix their genes they create a hybrid virus that can infect human cells while still carrying bird-virus genes that would make it radically new to the immune system of the people who catch it.

And this hybrid critter can be extremely dangerous.

ORIGIN OF SPANISH FLU DISCOVERED

RESEARCHERS now believe the Spanish flu virus did not derive from a human virus, but it was a pure animal virus that crossed over to people without the help of genes from a previous human strain.

Body tissues taken from the remains of people who died in 1918, have been genetically blueprinted, and they have revealed that the Spanish flu virus had come from an unknown animal or bird strain. That's why the victims had virtually no immunity to the new virus.

And now, it seems, H5N1 is seeking to do the same thing. It is already taking tentative steps by infecting humans, although it has evidently not yet succeeded in developing all the mechanisms that will enable it to make a massive onslaught on the human race.

It just needs to take onboard a few "human virus" genes, and before you can blink, it will reproduce itself a million fold. All it will take is just one such terrorist virus with the right mechanism strapped around its waist, to wreck havoc on masses of people.

Viruses have such an uncanny ability to reproduce themselves and to change their appearance rapidly, “world without end”!

And man is caught on the defensive, in the virus-web!

DANGERS OF ANTIBIOTIC ABUSE

THERE is a very real fear today about the world’s meat trade, and the dangers posed by the widespread use of antibiotics in animals.

An article in *The Sunday Times* (Aust.) on 20 Nov 05, quotes a Perth-based microbiologist, Calvin London, who maintains “widespread use of antibiotics in the livestock industry is creating superbugs that could exacerbate a potential bird-flu pandemic.”

Antibiotics are fed to poultry to fatten them but this sustained practice can weaken the birds’ immune system, rendering them susceptible to antibiotic-resistant bacteria, and rendering weaker birds more susceptible to bird flu.

“Frontline antibiotics are used to fight extremely virulent strains of bacteria that are resistant to other forms of antibiotics,” Dr London says. “By using sub-therapeutic, low levels of antibiotics on a continual basis, we are producing weaker animals.”

“Conversely, the worldwide use of antibiotics to boost meat production was creating stronger, ever-resistant strains of bacteria responsible for life-threatening infections.”

Dr London says the danger of the H5N1 bird flu virus that has killed dozens in Asia is its ability to mutate quickly. “Bird flu is a particular type of virus that is very closely related to influenza.” And, “influenza, as a virus, mutates with regular monotony – it’s a survival mechanism. The real danger is when it actually mutates and becomes directly transferable from birds to humans, and humans to humans. It (H5N1) is very virulent and is related to one of the very early viruses, the Spanish flu, that killed 55 million in 1918.”

“While antibiotic abuse is a global problem, the US is the worst offender, with up to 70% of all antibiotics – 900,000 tonnes – used on livestock. In Australia, 50% of all antibiotics goes into meat. The EU has banned all antibiotic use in its meat industry from next year.

“Because of the need to create these centres of intensively-reared animals, it acts like an intensive care ward of a hospital – you have a captive population, infection is rife, and they’re all exposed.

“Our theory is that if you can provide an alternative that makes those animals healthier, they become more resistant to infection. That then reserves any use of antibiotics for strictly therapeutic purposes ... which helps to reduce resistant bacteria.”

Dr London is managing director of Stirling Products which is developing an alternative to antibiotics in the meat industry. - Cortlan Bennett / *The Sunday Times*/ 20.22.05.

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CRITICAL ASSESSMENTS

THERE are more than a few critics out there who claim the Bird Flu threat is bogus, or at least highly exaggerated.

One writer believes the Bird Flu panic is to do with world planners' goals of bringing the world population back to a manageable level. It seems from that writer's evaluation the world is going to be decimated through vaccines, not through the renegade virus. I don't think he is right, but if he is, the situation is going to be far, far worse than a pandemic!

“CALM DOWN !” BUT WATCH OUT !

AN ASSESSMENT of the Bird Flu alarm has been given by *Stratfor*, an intelligence service. “Calm down!” it says. “We are not on the brink of a cataclysmic outbreak.”

Stratfor analyses the H5N1 “ruckus,” and says; “Much like the Y2K bug that commanded public attention in 1999, *now* bird flu is all you hear about!”

The report points out that since Dec 03, the H5N1 bird flu virus has been responsible for the documented infection of 125 people, and they have all been infected by repeated close contact with fowl, or via the ingestion of insufficiently cooked chicken products. And although there have been 69 deaths, there has not been a single confirmed case of human-to-human transmission.

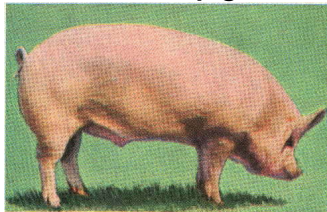
Stratfor says there are a great many people and institutions in this world that have a vested interest in feeding the bird flu scare. Worst case scenarios, like comparing the threat to the 1918 Spanish Flu, are used to scare targeted benefactors into funding academic research, medical development or contingency studies.

The report does concur, however, that more research **is** needed because current medical technology lacks the ability to cure, or even to reliably vaccinate a population against highly mutable viral infections; and the best available medicines can only treat symptoms or slow a virus' reproduction rate.

Stratfor says a bird flu pandemic among the human population is broadly in the same category as a meteor strike. Of course, it says, a pandemic **will happen sooner or later**, and when it does, **watch out!** But, it says, “there is absolutely no particular reason to fear a global flu pandemic **this** flu season.”

“Sooner or later a domesticated animal disease will cross over into the human population because most common human diseases have such origins. But there is no scientifically plausible reason to expect such a crossover to be imminent.”

A great danger however, as *Stratfor* warns, is **the pig**; it is the most likely candidate for



H5N1's leap into a species of animal that bears similarities to human immunology and yet lives in quarters close enough to encourage viral spread.

“And once the virus mutates into a form that is pig-pig transferable, a human pandemic is only one short mutation away. Put another way, a bird flu pandemic among birds is manageable. A bird flu pandemic among pigs is not, and is nearly **guaranteed to become a human pandemic.**”

Regarding the comparisons to the 1918 Spanish flu, *Stratfor's* assessment is that **1918 was not exactly a "typical" year.**

While the US is involved in a war in 2005, that is not anything close to trench warfare; and the total percentage of the US population involved in Iraq and Afghanistan - .005% - is middling compared to the 2.0% involvement in World War I.

And besides, there is no reason to expect the next pandemic virus will share the same features as the 1918 plague.

So *Stratfor's* assessment says Yes and No!

One major factor I believe *Stratfor* has **not** keyed into its assessment is the fact of **modern air transport**. Tens of thousands of people are flying every day across borders, and many thousands more go by land transport. This is now a much greater movement of people than troops in World War I. Modern transport gives speedy wings to any plague today.

Stratfor points out that health and nutrition levels have radically changed in the past 87 years and that American health is not in such bad shape today. And the healthier a person is, going into a sickness, the better his or her chances are of emerging from it.

True, but the analysis does not key in the health conditions in many Asian countries where malnutrition means national health is far from robust.

Stratfor says modern antibiotics will pull some of the strength out of any new pandemic, and that the majority of those who perish, die not from the primary attack of the flu but from secondary infections - typically bacteria or fungal - that trigger **pneumonia**.

Penicillin - the first commercialized antibiotic - was not discovered until 1929, 11 years too late to help when panic gripped the world in 1918. So today, with antibiotics readily available, the death toll from a pandemic would be much lower than in 1918.

We would hope so, but the world's population today is double to what it was 1918. And a pandemic is not measured only by its death toll. The pandemic is the number of people infected, and also the impact it has on the world economic.

Another question we can ask is, "Would there be enough stocks of antibiotics available, and would they remain effective during a pandemic?"



WHAT DOES THE BIBLE SAY?

The apostle Paul prophesied that ...

“In the last days **perilous times** will come; for men will be lovers of self, *and* lovers of money.” (2 Timothy 3:1-2)

The comments of Dr Calvin London on page 27/28 illustrate the truth about **the love of money** in our commercial world, and especially in our lines of food production.

Just this month a whole crop of GM (genetically-modified) food had to be destroyed because of serious problems with it.

There is also a big concern in Australia because of imported food and whether it is healthy. But our own abuse of antibiotics may bring ultimate disaster upon ourselves.

Why do we do it – abusing our food chains? The love of money! And you know the Scripture that says:

“Those who want to get rich fall into temptation and a trap, and many foolish and harmful desires, which plunge men into ruin and destruction. For **the love of money is a root of all kinds of evil**, and some, by hankering for it, have wandered away from the faith and pierced themselves with many griefs.” (1 Timothy 6:9-10)

Y’shua the Messiah, Jesus Christ, warned that ...

“Nation will rise against nation, and kingdom against kingdom, and there will be mighty and violent earthquakes in various places, and **plagues** and famines and there will be ... despair among nations, with perplexity at the roaring and tossing of the sea. Men’s hearts will faint from terror, being apprehensive of what is coming upon the world ...” (Luke 21:10-11, 25-26)

Well, my dear reader, we are seeing the terrorist wars; we have seen the tsunami, the hurricanes, the earthquakes, and we are seeing the plagues which include pestilences, malignant, conta-gious or infectious diseases, and deadly, devastating epidemics.”

The Bird Flu is already an epidemic. But the feared human pandemic has not yet started, and God-willing, it may not take place.

But to those who say the threat is all “hogwash,” “bally-hoo,” or “*tamasha*,” don’t forget the millions who perished in the Spanish Flu, and the 2 million people who died in the 1957 Asian flu, and about 1 million who died in the 1968 Hong Kong outbreak.

And don’t forget that the normal annual flu itself is a killer. Even in the USA, 30 to 60 million people catch it each year, and some 36,000 – mostly the elderly - die from it. And last year, the flu affected many millions all across Europe as well as in the US.

And don’t forget the **2003 SARS epidemic** of fear, and how airlines were reeling, and how Toronto’s health-care was crippled, and how 13 million people in Beijing were in virtual quarantine. And its \$40 billion+ cost.

Yes, true, the world survived all these plagues! And many of us may survive a human-avian pandemic!

But why should I say, “God-willing it may not take place”? Why should I not say that like the Tsunami, like Katrina, like the Kashmir earthquake, the AIDS plague, and the Locust

plague in Africa last year, the Bird Flu epidemic is a warning from the Almighty, of judgment to come?

God warned Solomon and Israel that He does send calamity for a reason – so that His people would repent and pray for their land.

“**If I shut up** the heavens and there is no rain, or **if I command** the locust to devour the land, or **if I send** pestilence among My people, and My people who are called by My Name **humble themselves and pray**, and **seek My Face and turn from their wicked ways**, then I will hear from heaven, will forgive their sin and heal their land’.” (2 Chronicles 7:13-14)

And God warned Israel of the judgment that was coming on the nation.

“Hear O earth! Look! I am bringing disaster on this people, the fruit of their schemes, because they have not listened to My words. And as for My teaching, they have rejected it also.” (Jeremiah 6:19)

“Thus says YHWH of Hosts, the God of Israel, ‘Look! I am about to bring on this city and all its towns the entire calamity that I have declared against it, because they have stiffened their necks so as not to hear My words’.” (Jeremiah 19:15)

God is still the Ruler of the universe, and He is still involved in the affairs of mankind. Oh, my dear reader, if He should withdraw His protective hand, this world wouldn't stand a chance.

And there is a time coming when the Holy Spirit of Almighty God **will** withdraw His restraining hand:

“For the mystery of iniquity and lawlessness is already at work; but **He who now restrains will do so until He is taken out of the way**. And then the lawless one will be revealed whom the Lord will slay with the breath of His mouth and bring to an end by the glory of His coming; that is, the one whose coming is in accord with the activity of Satan, with great power and with all kinds of signs and counterfeit miracles, and with all the deception of wickedness among those who are perishing, because they would not receive the love of the truth which could have saved them.

“And for this reason, God will send upon them a powerful delusion so that they will believe what is false, in order that they all may be condemned who did not believe the truth, but took pleasure in wickedness.” (2 Thessalonians 2:7-12)

Today the Holy Spirit of God is restraining in the world. The day He is taken out of the way and ceases to restrain is the **Day of the Rapture** – the day the Messiah catches up His people to meet Him in the air and takes them to the Father's House. And then the world will be handed over to the delusion of the Antichrist; and to the seven years of disasters.

Now look at this prophecy concerning the horrific disasters of the Great Tribulation:

“And when He opened the fourth seal, I heard the voice of the fourth living creature saying, ‘Come and see.’ I looked and saw a pale, ashen horse; and he who sat on it had the name ‘Death’; and Hades (*the realm of the dead*) was following close behind him. And authority was given to them over **a fourth of the earth**, to kill with **sword**, with **famine**, with **plague and pestilence**, and by the **wild beasts** of the earth.” (Revelation 6:7-8)

This is the pale, the 4th horse, who follows the red horse (world war), and the black horse (famine). The sword represents world war, and it is followed by famine, plague and pestilence.

I'm thinking of the Spanish Flu that followed World War 1! And I do believe one of the reasons for World War 3 will be to eliminate "excessive population" throughout the world. But I don't think it will necessarily need man-made biological weapons to reduce the world to the desired level of the "new world order planners." Renegade viruses may do the job!

A human-avian pandemic may well be one of the plagues alluded to in Revelation 6:8.

Yes, I am inclined to believe the alarmists who are saying, "It may be 2006, or it may be 5 years away, but it will happen sooner or later." But more important, I do believe what Y'shua the Messiah said:

"There **will** be **plagues** and despair among nations ... Men's hearts will faint from terror, being apprehensive of what is coming upon the world." (Luke 21:11, 26)

WHAT HOPE IS THERE?

Yes the future looks very gloomy no matter which way you look at the world. Is there any hope?

The Lord Jesus, Y'shua Messiah, says to His people:

"**Peace** I leave with you; **My peace** I give to you. I do not give to you as the world gives. Do not let your heart be troubled, neither let it be afraid." (John 14:27)

"**I am with you always**, even to the end of the age." (Matthew 28:20)

"**Let not your heart be troubled**; believe in God, believe also in Me. In My Father's House are many dwelling places; if it were not so, I would have told you, for I am going *there* to prepare a place for you. And if I go and prepare a place for you, **I will come again and receive you to Myself**, so that you also may be where I am." (John 14:1-3)

If you know the Messiah as your Master and Saviour you can have full confidence that you are in His hands; and you know that He has a purpose for your life in these anxious times.

If you do **not** know the Messiah as your Master and Saviour, then I have no good news for you, except:

"Whoever believes in Him (*Y'shua the Messiah*) will not be disappointed. For there is no distinction between Jew and Greek; for the same Master, the *Master* of all, is rich *in mercy, grace, love and blessing* to all who call upon Him, for **WHOEVER WILL CALL UPON THE NAME OF Y'shua (Jesus) the LORD WILL BE SAVED.**" (Romans 10:11-13)

Dear reader, in times like these you need an Anchor; you need a Saviour to give you peace, and to keep you safe in the storm. You need a Saviour who can forgive your sins; who can save you from the wrath that's coming; and who is able to make you a new person. You

need a Saviour who can deliver you from a lost eternity, and who can provide you with an eternal home.

The Lord Jesus is the Saviour you need! All others will fail you!

Jesus is God's **Anointed One** (that's what 'Messiah' means). He is the 'Lamb of God' who paid the penalty of your sin; He is the One who will take away your sin; He is the One who offers you the gift of eternal life. He is the only One who can save you from a lost eternity!

The Bible says:

"For when we were still weak, the Messiah at the right time died for the ungodly. Now very rarely will someone die *even* for a righteous man, though possibly for a good man someone might even have the courage to die. But God demonstrates His own love for us, in that while we were still sinners, **the Messiah died for us.**" (Romans 5:6-8)

"For what I received I passed on to you as of first importance, that **the Messiah died for our sins**, according to the Scriptures, and that He was buried, and that He was raised on the third day according to the Scriptures." (1 Corinthians 15:3-4)

"And there is **salvation in no one else**; for there is no other name under heaven that has been given among men, by which we must be saved." (Acts 4:12)

"What must I do to be saved?" "**Believe in the Master, Y'shua the Messiah** (*that is, put your trust in Him*), and **you will be saved.**" (Acts 16:30-31)

"For God did not send the Son into the world to judge *and condemn* the world; but so that the world might be saved through Him. **He who believes in Him is not condemned**; he who does not believe has been condemned already, because he has not believed in the Name of the only begotten Son of God." (John 3:17-18)

My dear reader, there is a day when each one of us must leave this world. It could be today, next month, or a few years away. But that day will definitely come. It may be through accident, it may be through flu, it may be through cancer, heart attack, or old age. It may come suddenly, or it may come slowly. But when you stand before God the question will be; Do you know Jesus as your Saviour? If not, He must be your judge?

Don't wait until you are at the Great White Throne to receive Y'shua the Messiah as your Saviour. It will be too late then!

It's the judgment time!

"I tell you, **now** is 'the well-accepted time;' **now** is '**The Day of Salvation**'." (2 Corinthians 6:2)

To receive Jesus as your personal Saviour, it takes a simple act of faith:

"For **by grace** you have been saved, **through faith** - and this is not of yourselves, **it is the gift of God** - not *as a result* of works, lest anyone should boast." (Ephesians 2:8-9)

You can express your faith in the Lord Jesus by praying to Him. The words of this prayer may be a help for you to do that. Why don't you settle the matter of your salvation today?

DECISION PRAYER

Almighty God, I come to You, just as I am, a guilty sinner. I come to ask for Your mercy, Your grace, and for forgiveness of all my sins.

Lord Jesus, I believe You paid the penalty of my sins when You died for me at Calvary, and that You rose from the dead. I believe You are the Messiah, and I now receive You as my personal Saviour. Master, save me this very day, I pray.

Thank You, Lord Jesus, for Your love and salvation and for receiving me. Thank You, Heavenly Father, for answering my prayer. Thank You for making me Your child. Thank You. Amen.

Signed date

Please keep this prayer with you as a reminder of your spiritual birthday. And I will be very happy to hear from you if you write to me at one of our MRC addresses on the inside front cover. We will pray for you and send you a booklet to help you on The Way. - Don Stanton