



KANSAS

ANIMAL HEALTH NEWSLETTER

FOOT AND MOUTH DISEASE

---A SPECIAL EDITION---

MAY 2, 2011

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While preparing for our next newsletter I thought it would be interesting to put in a small overview on the Foot-and-Mouth (FMD) outbreak in South Korea with a timeline following the course of the disease. As you will see if you take the time to read this *Special FMD Edition Newsletter* it became more than a small piece, but *we may never be able to follow a Foreign Animal Disease occurrence like this in such detail from beginning to end with such clarity.*

The opportunity for us to share it with you was just too good to pass up, so I have used parts of news clips to put the story together since its beginning on Nov. 23, 2010. To me its value lies in the fact that it touches on so many points that we have discussed in our state which deal with being prepared and responding to outbreak concerns such as initial response, quarantine, euthanasia and burial as well as burial sites, personnel, cleaning and disinfecting, vaccination and its surrounding issues, politics, stress, and the works. It's all here for us to observe first hand. There are many lessons to be learned by observation, and this story provides us with much material to chew on. It continues to change as we go to press and there will be much more to learn as time goes by; but I'll stop with this much in hope that it brings out some issues that I felt needed to be shared.

We need input from all of our emergency preparedness partners as we make decisions going forward, and the best way we can achieve good input is by providing timely information. I hope you are as motivated about our need for preparedness after reading this letter as I was while putting it together.

Bill

FMD IN SOUTH KOREA----- HOW IT HAPPENED-----CAN WE LEARN?

Nov. 29, 2010: South Korea reports outbreak of Foot-and-Mouth Disease

November 29, 2010 – Seoul: The Ministry of Food, Agriculture, Forestry and Fisheries of South Korea confirms an outbreak of FMD at two pig farms in Andong, about 268 km southeast of Seoul.

The affected farms have a total of about 9,000 pigs, the ministry said, adding that suspected animals have been quarantined.

Some 23,000 heads of animals within a 3-km radius of the affected farms will be culled, with all farms within a 20-kilometer radius prohibited from selling or removing any of their livestock from the area. The country had been declared free of the disease on Sept. 27, 2010 by the World Organization for Animal Health, also known as the OIE. Its last case had been in April of 2010.

December 01, 2010 - One more case of Foot-and Mouth in Andong

Another case of FMD was confirmed at a farm 8 km (5 miles) away

The farm reported that **five cows were drooling and had fever and loss of appetite**, which led the farm to suspect FMD.

41 cows raised within 500 meters (about 1,600 feet) of the Seohu farm were slaughtered.

The entrance to Seohu township is being monitored.

December 2, 2010 - More FMD cases found; price of beef and pork falls.

A mass culling of more than 33,000 head of cloven-hoofed animals is taking place. About 15,000 animals had been disposed of as of yesterday.

Health officials are taking pre-emptive measures for FMD containment by having 20,000 pigs slaughtered there.

They said a veterinarian visited two hog farms in Boryeong for checkups on Nov. 26, just a day after paying a call at the epicenter farms in Andong.

Another hog farm in the region that the vet visited on Nov.20 has been put under migration control.

Two more suspected cases of FMD were reported at other cattle farms located 4 km and 3.5 km away from the farm where the first Foot-and-Mouth Disease case was found yesterday.

Health officials have closed 85 livestock markets nationwide to prevent the further spread of the disease, requiring that the trading be done via the Internet and phone calls.

December 3, 2010 - Government battles to head off Foot-and-Mouth Disease

Three more cattle farms found yesterday to have cases of FMD

The **government plans to allocate (for now) 14.6 billion won (\$12.7 million)** to compensate farmers for the slaughtering of thousands of livestock in an effort to eradicate the virus.

More than 53,000 animals are scheduled to be slaughtered, surpassing the scale of an outbreak in April and May, which led to the slaughter of 47,000 livestock.

More cases confirmed within 10 km (6 miles) of index case.

In addition, six other cattle farms 27 km away from the initial outbreak site yesterday reported FMD-like symptoms. If the farms are found to have FMD, **it would indicate that the government's 10-kilometer radius quarantine zone has collapsed.**

Health officials and local authorities are on high alert as FMD continues to infect more areas.

December 4, 2010 - Three more cases confirmed raising number of affected farms to 20.

December 6, 2010 - As more FMD cases occur, government takes more actions

Government increased its alert after suspicious cases were found 21 km (**13 miles**) from index case.

Farm 75 km (**47 mi**) from the epicenter also reported cattle had suspicious symptoms.

27 farms now confirmed positive; all cattle cases so far within 20 km of index (first) case.

The government said it will order farms close to the outbreaks to destroy their livestock and will give them financial aid.

The government also **stepped up quarantine services at airports and harbors as well as shutting down highways leading to the epicenter.**

Quarantine posts expanded from 167 to 250 and 300 officials have been sent to the posts on 24-hour assistance. Special teams formed for slaughtering infected cattle.

About 62,000 cattle have been slaughtered with 13,000 more cattle scheduled to be disposed.

December 7, 2010 - 88,000 livestock slaughtered as FMD spreads fast

FMD spreads as infected farms rise to 30 and with more than 88,000 animals slaughtered now.

All infected farms still in one province, but officials are beefing up quarantine measures.

Confirmed cases still limited to 29 km from the epicenter.

The Ministry **has set up 298 quarantine posts nationwide**, including 180 posts in Andong township and its outskirts.

As a precaution, the National Veterinary Research and Quarantine Service (NVRQS) has secured vaccine for 300,000 livestock, while requesting raw materials for 3 million more vaccines from a U.K. pharmaceutical company.

The government refrains from using the vaccine, because it would lose its FMD-free status from the World Organization for Animal Health (OIE) for at least a year.

December 9, 2010 - 120 thousand animals slaughtered amid FMD outbreak

31 farms confirmed so far with 399 targeted for burial.

119,915 animals buried to date.

Meanwhile "back at the ranch", H5N1 highly-pathogenic avian influenza was detected in serum from two wild ducks captured at the Mangyeong River in Iksan's Chunpo Township.

December 13, 2010 - S. Korea confirms additional FMD case

Cattle at a farm 334 km (208 mi) southeast of Seoul, found infected despite stepped-up quarantine efforts.

Since a Nov. 29 outbreak there have been 32 confirmed positive farms.

Total of 147,173 head of livestock destroyed from 628 farms in a bid to prevent spread.

December 15, 2010 - S Korea reports FMD cases outside of North Gyeongsang Province

Additional cases of FMD have been confirmed in a region outside of index Province.

The Ministry said pigs raised in farms located in Gyeonggi Province surrounding Seoul, were found to be infected with FMD. The affected farms each have 1,200 pigs.

The S. Korean government has raised the alert level for FMD from yellow, the second-lowest level, to orange amid fears over further spread of the disease.

December 17, 2010 - FMD spreading faster than expected

Livestock farms in northern Gyeonggi Province have been put on the highest alert for FMD.

Experts say it is just a matter of time for FMD to spread to the rest of the country, given that the virus becomes more infectious in cold weather.

Two more pig farms in other Provinces were confirmed to be infected with FMD, forcing the owners to cull a total of 24,000 pigs.

A total of 18,000 more pigs and cows at 23 farms within a 500-meter radius of the infected farms were slaughtered and buried.

December 18, 2010 - Food ministry mulls plan to block FMD from entry

"We are planning on installing sterilizers at international airports and blocking people who work in the livestock industry from entering the country if they don't have a document proving that they've gone through the sterilization process," a high-ranking official from the Ministry said on Thursday.

(Most cases of FMD are suspected of having been caused by viruses entering from overseas)

December 19, 2010 - S. Korea reports additional FMD case north of Seoul

Additional case of FMD confirmed at a cow farm north of Seoul.

The case north of Seoul, indicates distant spread of the disease from the index case which occurred 270 km (169 miles) southeast of Seoul at two pig farms on Nov. 29.

December 22, 2010 - Korea to vaccinate livestock to cope with FMD spread

The **decision to vaccinate** came as the latest outbreak has spread through three provinces since first confirmed on Nov. 29 forcing authorities to destroy more than 224,000 animals.

44 confirmed cases of FMD so far.

South Korea, which was hit by the disease in 2000, 2002 and two more times earlier this year, used vaccine only once, during the first outbreak after containment efforts failed.

As a rule, **countries consider vaccination as a last resort because they can lose their FMD-free status** that can affect consumer confidence and trade. Countries that have the disease cannot ship meat products from cloven-hoofed animals abroad and may be pressured to open their markets to other countries that have the disease.

Because of such concerns, most local livestock groups, such as the Korea Swine Association and the Hanwoo Association, are technically opposed to the move. Vaccinating animals will incur extra costs, with up to 700 million won (US \$ 605,000) needed to give shots to 100,000 animals, with some experts estimating 170 billion won may be needed to vaccinate the 13 million head of cattle and pigs and 2 million goats, sheep and deer raised in the country.

Six new cases of FMD - **two discovered in a Province previously not affected.**

December 22, 2010 - FMD eases in one area, no let-up in another

FMD is **now in five areas**

Now only 14 km from the boundary with Gangwon, which boasts the best Korean beef brands in the country.

Local Provincial Office in the process of banning foreign workers from FMD-infected countries from employment in the livestock industry because the workers are seen as a source of infection.

About 1,200 foreigners work for livestock farms in the region, excluding illegal immigrants.

Workers are mostly from China and Vietnam, where FMD cases have been reported.

December 25, 2010 - Government's meager preventative and response measures criticized as FMD outbreak spreads across country

With the **discovery of the disease at a pig breeding farm that supplies piglets to 21 farms nationwide** the FMD outbreak zone now more or less **encompasses the entire country.**

Now spread into areas where large-scale dairy and swine operations exist.

If there is final confirmation of an epidemiological relationship it will be a fatal blow for the domestic swine industry," said an official with the health authorities. "Something unimaginable has happened."

Upgrading the FMD disease alert to the highest level, "severe", appears inevitable.

December 26, 2010 - S. Korea to expand use of vaccines to stem FMD outbreaks

South Korea has decided to **expand the use of vaccines** to stem the FMD outbreaks that have spread across the country despite extensive quarantine efforts.

The vaccinations **will be carried out in the smallest possible area** and reflect the need to protect other regions from FMD--**only up to 10 km from an outbreak in most cases.**

Only cattle will receive vaccine since they are more susceptible to the virus than pigs.

December 27, 2010 - Cold weather makes disinfectants ineffective because they freeze up

The Grand National Party (GNP) is pushing for integration of inspections and a single government body to oversee the deadly Foot-and-Mouth Disease.

"Currently, quarantine operations are divided among three government offices, but they need to be integrated," said the local minister.

"The GNP will come up with measures to effectively contain the disease," he said. "And it will also encourage the public's consumption of beef and pork because an outbreak of FMD doesn't affect food safety."

Vaccination of cloven-hoofed animals to begin.

Officials are facing another obstacle: **disinfectants have been freezing in the recent cold spell and can't be sprayed to help prevent the spread of FMD.**

53 infections reported and more than 325,000 livestock have been ordered to be culled.

The Ministry estimates losses related to the disease at around 400 billion won (\$ 347 million).

Worsening situation is forcing local governments to cancel or suspend their long-prepared celebrations for the first sunrise of 2011, an annual event held by many communities in Korea.

December 28, 2010 - FMD prompts new rules for livestock industry

In a bid to curb the spread of livestock diseases within the country, the Ministry said yesterday that **it will adopt a license system for professionals in the livestock industry.**

"People who want to enter the livestock industry must first receive a government license."

"Those already in business should receive mandatory education about the overall industry, including disease prevention and waste treatment measures."

December 28, 2010 - S Korea's Foot-and-Mouth Disease spreads across five Provinces

FMD has spread across the country's five provinces so far, since first confirmed on Nov. 29.

471,094 livestock have been culled from 2,131 farms.

December 29, 2010 - S. Korea Raises Foot-And-Mouth Alert to Highest Level

South Korea **raised its alert for FMD to the highest level** on concern that outbreak may widen.

The country has culled 480,551 animals, including cattle and pigs.

172,348 quarantine personnel including public servants, soldiers and the police have been mobilized for the decontamination and culling process.

December 30, 2010 - Lee urges military aid to curb foot-and-mouth

South Korea's President Lee Myung Bak urged the military on Thursday to help more in the battle against the country's worst-ever outbreak of Foot-and-Mouth Disease, after half a million animals were culled.

"I know the military is already offering active support (in slaughtering the animals), but I want more cooperation from them."

January 3, 2011 - Pigs' burial raises concerns over water contamination

Residents of a village hit by FMD have seen their faucets start to deliver water mixed with blood since the beginning of the New Year.

Authorities said the slaughtered animals were buried in a 4-5 meter-deep hole covered by two-fold vinyl to keep anything from their bodies from leaking out.

More than 660,000 cows and pigs have been culled and buried since Nov. 29.

January 4, 2011 - FMD spreading through central part of S. Korea

83 confirmed cases --- culling of over 778,850 animals on 2,769 farms so far.

700,000 livestock slated to receive vaccine.

*S. Korean ministry **considers vaccinating pigs** against FMD.*

January 6, 2011- Massive cull planned as Foot-and-Mouth Disease spreads

Total confirmed cases to 99

Up to one million animals have been culled so far and one million more could be destroyed in several days as the outbreak of FMD spreads rapidly throughout the country.

Government receives criticism that it failed to take appropriate measures right after the first case of the highly contagious FMD was confirmed on Nov. 29.

Three additional cases of FMD detected despite extensive quarantine measures and the use of vaccines on cattle to stem further outbreaks.

Animals to be destroyed pushed to record high levels, with financial losses estimated to exceed the 1 trillion won mark (*\$ 888 million*).

Decision to **expand vaccinations as FMD has spread from cattle to other animals.** Up to 210,000 pigs will be inoculated in the coming days.

"Military has so far mobilized 68,000 soldiers and 770 pieces of military equipment."

January 6, 2011 - Lee calls for FMD solutions

President Lee instructed his government to come up with fundamental solutions to prevent another outbreak of FMD next year in addition to ongoing quarantine efforts.

The Agriculture Minister reported that the **government plans to procure vaccine for 6.5 million livestock by the end of this month.**

January 10, 2011 - FMD threatens to destroy domestic livestock industry

Nearly 10 percent of cows and pigs raised in Korea have been culled since November.

Number of **culled animals hits 1.28 million (of the country's total 13.2 million).**

Fears are rising that the domestic livestock industry will collapse.

"Farmers dare not raise livestock for a considerable amount of time."

More than 70 percent of livestock in one region has been buried.

Officials with the South Korean Government have announced that **people who have been left traumatized by the culling of animals will be provided therapy to overcome the shock.**

Treatment will be offered to people working with the Health Department, as well as to soldiers, farmers and police officials. All the above people had taken part in the culling of 90,000 cattle and above.

There had been reports that people, who were a part of the culling exercise had experienced insomnia, fear and a lack of appetite.

January 10, 2011 - All livestock in FMD areas to be vaccinated

The government yesterday intensified its response to the outbreak of FMD, **extending the use of vaccines to all animals in infected regions** in an effort to protect the last four virus-free provinces in the country.

2.17 million cows and 611,000 pigs will be vaccinated nationwide.

To prevent the highly contagious disease from spreading to uninfected regions, the government demanded that cities in neighboring virus-free areas vaccinate all of their livestock.

"We will finish vaccination for 194,600 cows and 69,400 pigs in our six cities within a week," said Governor Kim Wan-joo.

January 15, 2011 - Additional FMD case discovered in southeastern region

An additional case 285 km southeast of Seoul, brings the **total of confirmed outbreaks to 119.**

January 18, 2011 - (United Kingdom) FMD outbreak tests vaccine bank [UK]

(On 22nd December, the Korean government made the decision to vaccinate in order to control the spread of disease and reduce further slaughter.)

Two of Merial's International Foot-and-Mouth Disease antigen banks were called into action during the holiday period. Over 1 million doses were formulated, filled, quality checked and shipped from the U.K. to Zambia and South Korea between Dec 22nd and Dec 30th.

"Having a dedicated bank meant **Merial supplied 1.2 million doses to South Korea within six working days from orders being placed.**

January 18, 2011 - S. Korea culls 15% of pigs, cattle for Foot-and-Mouth

South Korea said to date it has **culled about 15 per cent of its combined pig and cattle population** to contain outbreaks of FMD.

It had also slaughtered three percent of its poultry population to prevent the spread of bird flu.

Asia's No. 4 economy confirmed 120 cases of FMD plus 26 cases of H5N1 avian influenza.

The ministry said **2.1 million animals, mostly pigs, and 3.6 million poultry, mostly chicken, had been killed and would be buried.**

The outbreaks have prompted all the livestock markets across the country to be closed for more than a month, while a small volume of meat has been traded online or by telephone.

The massive slaughter and market closures have helped wholesale and retail prices of pork jump by 43 per cent and nearly 10 per cent, respectively, from December average prices.

January 21, 2011 - Foot-and-mouth disease quarantine rules revised

Korea has revised its FMD quarantine rules to limit the culling of livestock, as the effects of vaccinations should better protect animals from the contagious virus, the government said yesterday.

"Under the new rules, **only infected animals and newborn calves that have not developed FMD antibodies are to be destroyed,**" Deputy Farm Minister Lee Sang-kil said. **"Those that show no symptoms will not be culled although they will be subject to detailed tests and barred from leaving the farm."**

Seoul ordered the vaccination of livestock on Dec. 25, after quarantine efforts were unable to stop the spread of the highly contagious animal disease.

Over 2.28 million cattle, pigs, goats and deer have been culled across the country, and all of the **remaining 13 million livestock are in the process of being inoculated.**

January 22, 2011 - FMD Detected at farm in "Hanwoo" cattle-raising Region

New case of FMD has been reported in an area known for raising Korean "Hanwoo" cattle.

FMD has no respect for "pedigree".

Cattle at the farm **had been vaccinated on Monday (5 days prior),** but the provincial and city government have decided to cull all 142 of them.

January 24, 2011 - FMD vaccine development to take time

President Lee Myung-bak called for the development of vaccines for Foot-and-Mouth Disease (FMD) Monday as a means to fight the highly contagious animal disease.

Disease has spread to most parts of the country with over 2 million animals having been culled despite nationwide quarantine operations, causing unprecedented financial damage.

"FMD virus can spread globally very quickly. Traditional quarantine efforts have limits and vaccination is the best solution, given the circumstances."

"We'll maintain the current quarantine efforts to tackle the epidemic, and the development of a vaccine will be a precautionary measure for a possible outbreak in the future," said an official from the National Veterinary Research & Quarantine Service (NVRQS). "It will be a long-term project that requires a lot of financial investment and manpower."

January 25, 2011 - Government admits faults in FMD countermeasures

Slack monitoring and belated quarantine measures were the main factors behind the nationwide spread of FMD, authorities said Tuesday, acknowledging for the first time that their initial mis-management of the otherwise controllable virus resulted in enormous damage to the country.

According to an interim report released by The National Veterinary Research and Quarantine Service, the pig farm in Andong, North Gyeongsang Province, reported a suspicious FMD case on Nov. 23. But the **authorities took lukewarm action,** because the result of a simple test kit was negative. Five days later, however, the result of a larger-scale test was positive.

The authorities hastily launched a quarantine operation, but the virus had already spread.

"Unlike foreign countries, Korean farms are gathered in small regions. So if animals on one farm are infected with a disease, the disease spreads quickly and the damage is huge."

January 26, 2011 - FMD still not abating, new bird flu culls ordered

Two more cases confirmed despite quarantine efforts and wholesale vaccination of livestock.

With the exception of some breeding sows that received vaccine more than two weeks ago, all 8,188 animals will be culled at the farms.

But no animals at nearby farms will be slaughtered in accordance with updated quarantine rules announced last week that reflect an ongoing nationwide vaccination effort that should be complete by the end of January.

The ministry, meanwhile, confirmed two new bird flu outbreaks.

All 201,000 chickens at the Sangju farm have been ordered culled along with 8,300 ducks at a farm in Icheon, Gyeonggi.

Feb 9, 2011 - Foot-and-mouth-hit S. Korea farms pour away milk

South Korean dairy farmers are **pouring away 200 tons of milk a day.**

A potential milk shortage is the latest problem posed by the outbreak, along with a shortage of space to bury all the 3.2 million livestock culled so far.

The agriculture ministry has **so far spent 1.9 trillion won (\$ 1.7 billion) on culling cattle, pigs, goats and deer, compensating farmers and launching a nationwide vaccination program.**

The milk supply has fallen by eight percent and dairies may face supply problems.

Approximately 36,000 milk cows have been culled.

Milk from cows within 500 meters (1,640 feet) of an outbreak must be poured out in case it is tainted.

Livestock has been buried at more than 4,000 sites in the densely populated nation.

February 11, 2011 – FMD in North Korea: Kim Jong Il's Dependence on Oxen Increases Foot-And-Mouth Risks

North Korea's dependence on animals to plow fields and haul harvests adds greater urgency to containing an outbreak of FMD before planting begins in the country, already dependent on food handouts.

"Oxen are so important in North Korea's agricultural industry that the government owns them all, while individuals can keep pigs," said Kwon Tae Jin, vice president of the Korea Rural Economic Research in Seoul.

"During the rice planting season you can see more oxen than tractors."

More than 10,000 draft oxen, milk cows and pigs have been infected with the disease, with thousands of them already dead, North Korea's state-run Korean Central News Agency reported.

February 21, 2011 - Vaccines could have stopped FMD - but government was preoccupied with maintaining vaccine-free status

To protect less than \$2 million worth of meat exports, the government has turned the country into a massive grave-yard of farm animals.

Since Foot-and-Mouth Disease broke out in November;

- more than 3.3 million cows and pigs have been slaughtered
- livestock farmers have suffered emotionally
- the country is stuck with a bill of trillions of won to compensate farmers for culled animals

Much of this could have been avoided if the government had chosen the more effective and **less costly solution of vaccination instead of killing cattle and pigs.**

But when vaccinations are used, the country loses its vaccine-free status, which makes its meat exports less desirable.

"Exports? What exports are we talking about?" asked ____ "We produce barely enough meat for domestic consumption. There is no beef available for export.

One professor of veterinary medicine commented, "Defending the FMD-free status without vaccination for exports is such a lame excuse. That's just to cover up the failure of having missed the timing for vaccination."

February 22, 2011 - Cleanup work begins at Gyeonggi (South Korea) FMD burial sites

Amid growing fears that the millions of animals buried will contaminate underground water sources, Provincial Government yesterday began extracting waste water from burial sites.

Roughly 3.3 million animals nationwide have been culled.

There are **about 4,130 burial sites nationwide**.

One province has hired a private company that specializes in extraction work to help in the cleanup effort.

The workers extracted about 2.5 tons of waste at a burial site in Namyangju, where 2,363 pigs were buried on January 17, after four pigs there were confirmed to have the highly contagious FMD.

A containment tank that collects bloody liquid waste from decaying animals via special pipes was buried along with the pigs. But the tank has nearly reached its storage limit.

Not all burial sites have underground tanks. In some regions, where officials hastily buried culled animals, no tanks were installed.

Workers lowered the acidity of the extracted water to less than pH 5. The liquid waste was then transported to a local sewage disposal facility.

February 24, 2011 - S. Korea completes vaccinations on cattle to contain FMD

South Korea has **completed a second round of vaccinations on cattle** amid growing optimism that the country's worst outbreak of FMD has finally been contained.

Nearly 90 percent of pigs have received vaccine.

No new cases of the disease have been confirmed among cows over the past 22 days.

The highly infectious animal disease has been expected to be contained by early March upon the completion of the second round of vaccinations.

The outbreak which started in November last year, has **led to the slaughter of more than 3.39 million animals, with losses estimated at over 2 trillion won (1.8 billion U.S. dollars).**

Prime Minister Kim Hwang-sik says that the government was to blame for the uncontrolled spread of Foot-and-Mouth Disease across the country, citing poor quarantine measures in the early stages.

He pointed out that when the first case of FMD was reported on Nov. 23 last year, local quarantine authorities failed to deal appropriately with the situation.

"There was a fundamental problem in the quarantine system with regard to livestock disease," Kim said. "The government feels fully responsibility for it."

March 8, 2011 - FMD cull rates in pigs to one third of total inventory

The recent FMD outbreak in South Korea has **caused one third of the country's pig herd to be destroyed**, delegates at the fifth APVS Congress were told.

In addition, 151,000 head of cattle had to be culled and so had relatively small amounts of deer and goats.

March 25, 2011 - With FMD over new precautions unveiled by government

Declaring that the nation's worst FMD outbreak was over, the government yesterday announced a new measure to tighten its oversight of the livestock industry, **requiring farmers to apply for permits to operate cattle and pig farms starting next year.**

Cost to the government 3 trillion won (\$ 2.7 billion).

"No more outbreaks were reported since Feb. 26.

The government has lowered the alert level for the disease.

Starting next year, only farmers who have proper facilities and who have completed education programs on epizootic preventive measures will be given permits to operate cattle and pig farms.

The permit system will be adopted for large-scale farmers, while small-scale farmers will need to register with their local authorities.

VIETNAM

January 5, 2011 - Foot-and-mouth disease spreads

HA NOI (VNS) - Fifteen provinces are reporting Foot-and-Mouth cases as of January 4, reported the Ministry of Agriculture and Rural Development's Department of Animal Health.

Meanwhile, the bird flu and blue ear epidemics have been quarantined, according to the department.

UNITED KINGDOM

February 17, 2011 - 'The worst thing was the deathly silence' - 10 years since Foot and Mouth ravaged Cumbria [UK] - Times & Star

It is not the reek of death or the piles of animal carcasses that stick in the memory, but “**the appalling silence.**”

On some farms not a lamb was left to bleat or cow to low.

A total of 1,343,141 animals were killed in Cumbria alone during the Foot and Mouth disease outbreak, which started in February 2001.

The area's major livestock mart, Mitchells at Cockermouth, was closed down.

April 12, 2011 -- *S. Korea lowers foot-and-mouth alert level*

South Korea downgraded its FMD alert level one notch on Tuesday as **no new outbreaks of the animal disease have been reported in 45 days.**

The ministry has lowered the alert level from "orange" to "yellow," effectively **ending most restrictions on the movement and sale of livestock in the country.** Seoul dropped the alert level from the highest level of "red" to "orange" on March 24.

The downgrade to yellow, the second-lowest level, is a sign that **the highly contagious disease that swept through the country has been contained.**

The first FMD case was confirmed on Nov. 29 with the last one reported on Feb. 26. Over that period, Seoul culled more than 3.47 million cows, pigs and other animals, resulting in losses of 3 trillion won (US \$2.6 billion).

"The livestock quarantine consultation committee decided on the alert downgrade Monday after reviewing all data," the ministry said. **"A nationwide vaccination program forced the government to delay lifting restrictions."**

The ministry, however, said that *670 animal quarantine experts will continue to decontaminate livestock farms once every week and keep close watch to see if any animals become sick.*

P.S

April 17, 2011 -- *Seoul confirms fresh foot-and-mouth outbreak*

The government confirmed a new case of FMD at a pig farm -- the first since last month when the authorities declared a nationwide outbreak over.

"Such occasional outbreaks will be reported more even though we have completed vaccinations nationwide," said an official from the animal quarantine department at the Ministry for Food, Agriculture, Forestry and Fisheries.

"The possibility is slim that additional outbreaks will spread nationwide as before."

