

Experts hook source of fish abnormalities

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Ban on animal meal to be overturned

Meat and bone meal has been completely banned as animal feed since 2001, but with the end of the mad-cow crisis, it looks set to make a partial comeback.

In Switzerland and the rest of Europe, manufacturers are preparing for production again and the authorities are promising to enforce the strictest safety standards.

The feed will only be given to chickens and pigs, and they will not be chewing on fodder produced from their own species.

Meat and bone meal, made from leftover carcasses, have a bad reputation to overcome. In the 1990s, they were blamed for spreading bovine spongiform encephalopathy (BSE), otherwise known as mad-cow disease.

A fatal, neurodegenerative disease in cattle, it is also believed – but so far not proven – to have caused new variant Creutzfeldt-Jakob illness in humans who had eaten contaminated meat. The resulting panic had led to the wholesale slaughter of herds of cattle and a sizeable drop in beef sales.

But with the mad-cow alert officially over, commercial interests and environmental concerns have come to the fore again.

The problem is that when an animal is slaughtered, much of the carcass is always left over. For cattle or sheep, only about half of the animal is used, for pigs and chickens, just a third.

This means the average meat-eating Swiss leaves behind in his or her lifetime the equivalent of two tons of offal, fat, bones, skin, hair and feathers.

Before the ban on meat and bone meal, most of this was cut up, cooked, dried and ground into flour and reintroduced into the food supply. Today, much of this still happens, except the end product finishes in the ovens of cement makers.

This is because animal scraps contain too much water to burn without some form of pre-treatment, which is also energy-intensive.

Since the ban, meal has been often replaced by soya, which requires large amounts of water and pesticides, and is often linked to deforestation where it is produced. Prices have risen substantially over the past few months.

Presently, large quantities of vegetable protein are being imported to Switzerland at great cost while available products that could be used as feed for certain ruminants are being incinerated.

If bone and meat meal is authorised again in Switzerland, standards will be particularly strict. The FVO has already set out a series of conditions that it admits will make production difficult for feed manufacturers.

Any meal produced will not contain certain animal parts such as the brain and spinal cord – in other words that could harbour BSE infection sources – and production lines will have to be separated.

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Experts hook source of fish abnormalities

The deformities in whitefish from Lake Thun in the Bernese Oberland are most likely caused by the plankton they feed on, a five-year study has found.

Around 40 per cent of the fish show abnormalities in their reproductive organs, on a scale and in a variation that has not been seen anywhere else in the world. Nearly two-dozen studies were conducted to get to the bottom of what has been causing the deformities.



Lake Thun

The experts have been confronted with fish with subdivided organs, missing testicles or ovaries, reproductive parts protruding through the stomach, and in some cases androgynous samples. Of greater concern to the authorities was the extent the lake might have been contaminated, with possibly serious consequences for the population of the region.

More than 400,000 people around the capital, Bern, drink water from the lake or the bodies of water down-river from it.

It was first feared that chemicals leaking from thousands of tons of army munitions dumped in the lake between 1940 and 1963 could be causing the changes to the stocks of whitefish. The water was also tested for abnormally high concentrations of other substances, water temperature changes and disease. And the spawning grounds have been analysed for genetic alterations.

A controlled breeding programme returned the only positive result. Researchers fed plankton from the lake to some fish and fodder to others.

The fish receiving the plankton developed abnormalities to their reproductive organs on a scale similar to wild fish in the lake.

However, plankton consists of thousands of small plant and animal organisms and each species of the whitefish in the lake eats different animals in the plankton. Something happens to the plankton eaten by the whitefish and this is the reason for the deformations, but it is not known yet how this happens.

On a positive note, there has been no influence on the fertility of the fish and therefore there has been no change to the size of the population of whitefish, the most common variety in the lake, and it can still be eaten without fear of any harmful side effects.

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