

Companies defy Brazilian pesticide law

A NEW and tough pesticide law is being broken by multinational agrochemical companies including ICI, Shell, Dow Chemical, Bayer, Hoechst, and Ciba-Geigy in the Brazilian state of Rio Grande do Sul. The law could set a precedent for the rest of Brazil.

The companies refuse to give state officials data on the toxicity of their pesticides, as the law requires. Magda Renner of the Women's Democratic Action Group told *New Scientist* that: "Not one of them has complied with the law." The state has given the companies until 24 August to comply; after that each will be fined £350 a day.

The law, unanimously approved by the state legislature in April, bans all organochlorine pesticides and all those "not authorised in their country of origin" and requires farmers to obtain a prescription from an agronomist before using any other pesticide, even if it is already approved by the Federal Ministry of Agriculture.

But Brazil's pesticide industry association ANDEF, says that pesticide control is a federal, not a state, responsibility. The association, warning of high crop losses, unemployment, and falling food exports, has asked the Supreme Court to declare the law unconstitutional. A ruling is expected at the end of August.

ANDEF says the law breaches commercial confidentiality. Others say it reflects wide public concern about misuse of pesticides in Brazil, which is the world's fifth largest pesticide consumer. The government claims that its pesticide registration regulations are among the strictest in the world. The Ministry of Agriculture must examine all pesticides before they can be

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sold in Brazil. Nonetheless, according to leading environmentalist Jose Lutzenburger, Brazil has virtually no effective controls on how pesticides are applied. "I myself have seen DDT used in the fish market in Recife to kill flies on fish being sold for human consumption. This sort of thing is happening all over the place."

"Aldrin, dieldrin, heptachlor, paraquat, and lots of other substances that are banned or severely restricted elsewhere are freely available and uncontrolled in Brazil," said Roque Sevilla, Latin American coordinator of the Pesticides Action Network, which is campaigning for tighter controls on dangerous pesticides. Every week Brazil's Agriculture Department analyses samples of vegetables and fruits on sale at the main market in Sao Paulo. For the past three years, the department has kept the results secret. The last report, from 1979 data, showed that 10 per cent of the vegetables analysed and 13.5 per cent of the fruit, contained residues of banned pesticides.

The pesticide industry, according to one Brazilian observer, is determined to kill the Rio Grande do Sul law before the idea spreads any further. But other states have already expressed interest in adopting similar legislation. In May, congressmen from eight of Brazil's 22 states met in Porte Alegre, the capital of Rio Grande do Sul, to discuss the new law.

Another ominous event for industry was the decision earlier this year of the state of Sao Paulo to forbid the aerial spraying of cotton fields with the federally approved pesticide Gusathion. In Sao Paulo, farmers will now spray with malathion, which is 40 times less toxic. □

Smog hangs over Olympic athletes

ATHLETES at next year's Olympic games in Los Angeles will suffer from the city's infamous smog, according to Californian researchers who have established a link between ozone levels and poor athletic performance. Olympic officials in Los Angeles, however, are playing down the effect of smog.

The 23rd Olympiad will be held from 28 July to 12 August, the middle of the Los Angeles smog season. Photochemical smog contains ozone triggered by sunlight reacting with nitrogen oxides and hydrocarbons, and is prevalent from May to October.

Dr Thomas Heinsheiner, chairman of the South Coast Air Quality Management District, the agency responsible for pollution control, told *New Scientist* last week that the athletes most likely to be affected—those in endurance events—would not be competing at places or times when smog levels could be high. The Los Angeles Olympic Organising Committee has scheduled events for early morning or late afternoon to avoid smog.



Los Angeles smog, before and after

But research soon to be published from three separate Californian laboratories may give the committee cause to reconsider. The research is some of the first on athletes and ozone.

Scientists found that runners and cyclists had breathing difficulties at ozone levels of 0.2 parts per million (PPM), the level of a first stage smog alert in the Los Angeles air basin. Athletes at Olympic standard breathe more deeply than those tested and could be affected at lower ozone levels.

At the University of California at Santa Barbara, 10 cyclists suffered short breath after exposure to 0.2 PPM ozone for one hour at an average air intake. "The detrimental effect was more than we anticipated", Dr Steven Horvath from the university's Institute of Environmental Stress said. At the University of California at Davis, four distance runners reported that they could not have performed at their best following exposure to 0.2 PPM ozone. Four runners failed to complete tasks when exposed to 0.35 PPM. □

Pigs could fly



Pigs in the middle

EXPLOSION experts in Britain believe they have avoided a potential industrial disaster in factories that make pork scratchings. British pubs sell the scratchings—crispy pieces of pork "crackling"—reputedly to stimulate customers' thirst.

Making the scratchings involves cooling pieces of fat in liquid nitrogen to a temperature of -196°C, and breaking them up. When scientists from the Health and Safety Executive's Explosion Research Laboratory investigated the process, they discovered that air at this temperature contains 70 per cent oxygen, and could detonate an explosion in confined spaces.

The executive has advised the scratchings companies to shatter their pork under a slightly less explosive atmosphere. □

Meteor standby

TOMORROW'S glorious twelfth should be a glorious night for shooting stars, weather permitting. This Friday night and early Saturday morning, the Earth passes through the densest part of the swarm of dust grains which gives rise to the Perseid meteor shower each year.

Away from street lights, observers should see between 40 to 60 meteors per hour as they commit suicide in the Earth's upper atmosphere. This year, however, astronomers are wary of predicting a meteor storm. For the last two years, they have expected the number of meteors to soar with the return of a comet called Swift-Tuttle. The debris from the comet is thought to produce the stream, if it does not arrive, astronomers could have got their estimated 120 year period wrong—it was seen just once in 1862—or the comet may just have slipped by unnoticed.

Either way, the Perseids will be with us as usual between 8-13 August, and anyone with observations of bright or unusual meteors should send them to the Director of the Meteor Section, The British Astronomical Association, Burlington House, London W1V 0NL. □

AIDS circular

THE British government is preparing a leaflet indicating the circumstances where blood donations should be avoided to reduce the risk of transmitting acquired immuno-deficiency syndrome (AIDS). The department of health will send the leaflet to blood transfusion centres throughout Britain.

The leaflet will outline a number of questions that doctors and nurses can ask donors to see if they fall into any high risk groups, such as homosexuals, or whether they have recently visited certain parts of the US. AIDS breaks down the body's defence system, laying it open to attack from opportunistic infections such as Kaposi's sarcoma, a type of skin cancer.

There is no known cure for AIDS, and over 1500 Americans, many of them homosexuals, have suffered from it. Blood centres are worried that if the leaflet is too blunt, they could lose some of their donors who are perfectly healthy. □

Cyanide kills fish

BELGIAN scientists are trying to discover the source of cyanide that killed thousands of fish in the River Meuse last week. The river supplies 5 million people with drinking water. Most of the fish were found at Liege, in the heart of the steel producing region. □