

Rare greenhouse gas adds to climate concerns

Scientists are recommending that a rare but potent greenhouse gas should be included in future climate agreements after confirming that the gas is about four times more abundant than previously believed.

Nitrogen trifluoride (NF₃) is commonly used to etch microcircuits in plasma-screen televisions and other flat-panel displays. As a greenhouse gas, NF₃ is about 17,000 times more efficient at trapping heat than carbon dioxide, but very little was thought to escape into the atmosphere.

A team led by Ray Weiss of the Scripps Institution of Oceanography in La Jolla, California, confirmed that atmospheric concentrations have risen more than 20-fold during the past 30 years after analysing air samples from coastal stations in California and in Tasmania, Australia.

The scientists reported that in 2008 some 5,400 tonnes of NF₃ were present in the atmosphere (R. F. Weiss *et al. Geophys. Res. Lett.* doi:10.1029/2008GL035913; 2008).

For a longer version of this story, see <http://tinyurl.com/6a6gta>

Rice pathogen is added to list of bioterror agents

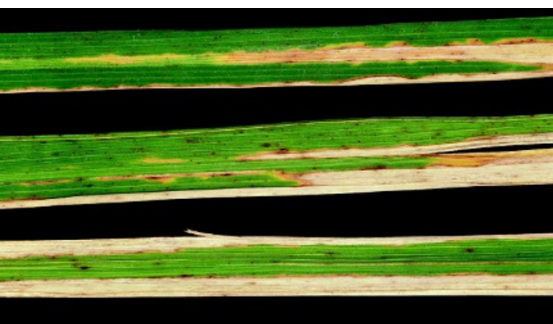
The US Department of Agriculture (USDA) this month added a rice pathogen to its national security watch list, despite objections from several prominent scientists.

USDA's Animal and Plant Health Inspection Service has listed the bacterium *Xanthomonas oryzae* pv. *oryzae*, which causes leaf blight, as a 'select agent' that could be used for bioterrorism.

Several researchers who work with the microbe argued against the listing, saying that it would have difficulty establishing itself in the United States, and that those labs working with it have perfect safety records dating back more than 20 years.

Researchers have until 17 November to notify the government if they possess the pathogen, and until 14 April 2009 to come into full compliance with the regulations.

"That's not a lot of notice," says Pamela



Blight in rice caused by *Xanthomonas oryzae*.

India makes history with launch of Moon mission

India's first lunar spacecraft is set to swing into orbit round the Moon on 8 November.

The Indian Space Research Organisation (ISRO) successfully launched Chandrayaan-1 (pictured) on 22 October from the Satish Dhawan Space Centre in Sriharikota, southern India.

The craft is carrying six foreign and five Indian scientific instruments designed to create a three-dimensional map of the Moon and study the lunar soil, among other things. The spacecraft will also search for frozen water and measure the abundance of helium-3.

The ISRO is now planning Chandrayaan-2, which would take a Russian-built rover to the Moon's surface by 2012. The agency also aims to send two Indians into space by 2015, in a mission that will cost roughly 120 billion rupees (US\$2.4 billion).



ISRO/AP

Ronald, a rice researcher at University of California, Davis, who opposed the listing. "All the labs are scrambling to find out what it means to their research programmes."

Fall in profits prompts major job cuts at Merck

Pharmaceutical giant Merck is to cut 7,200 jobs, or roughly 12% of its workforce. Around 40% of the cuts will be in the United States, many of them from management as Merck trims the number of senior and mid-level executives by 25%. The company, based in New Jersey, also plans to close basic-research sites in Tsukuba (Japan), Pomezia (Italy) and Seattle (Washington).

These cuts come on top of the axing of 10,400 positions announced in 2005, which Merck says was "substantially complete" as of last month.

Merck's third-quarter profits were down 28%, and spending on research and development (R&D) dropped by 19% compared with 2007, to \$1.2 billion. But the company says that R&D spending actually rose by 2% if expenses from restructuring efforts and the 2007 acquisition of NovaCardia are taken into account.

Swedish basic research receives funding boost

The Swedish government has announced a record investment in basic research, much of which will be directed to fields such as stem cells, climate modelling and nanotechnology.

Introduced on 23 October, the bill provides almost 15 billion Swedish krona

(US\$1.9 billion) for research and innovation between 2009 and 2012. Sweden currently spends 25 billion krona a year on research; that figure is expected to rise by 20% by 2012.

Most of the new funds will be distributed to universities through a merit-based system. Gunnar Öquist, head of the Royal Swedish Academy of Sciences in Stockholm, says that although the initiative would reverse years of declining research budgets, he worries that its narrow focus could stifle creativity.

The bill will now be taken up by the parliament, and is expected to pass early in 2009.

NASA clamps down on conference attendance

NASA has put a moratorium on participation in conferences in an effort to comply with an authorization bill recently enacted by Congress.

Signed into law by President Bush on 15 October, the act limits conference spending to US\$5 million in the 2009 fiscal year. That figure represents more than a two-thirds reduction from conference spending in 2008.

The moratorium, announced earlier this month, covers sponsorship of conferences, as well as travel and admission fees. It applies to NASA staff and some contractors, such as employees at the Jet Propulsion Laboratory in Pasadena, California. Scientists receiving NASA grants or sponsorship have not been affected so far.

Correction

The News Feature 'What lies beneath' (*Nature* 455, 724-725; 2008) incorrectly stated that nitrogen-fixing bacteria are 1-2 millimetres in length. They are, in fact, 1-2 micrometres long.