

## General

### Acanova technology reduces need for agricultural chemicals

Technology has been developed in Sweden which could reduce the use of pesticides. In September 2005, Lantmannen commissioned a facility at Skara for treating seeds with warm (58-70°C), damp air instead of chemicals. The patented Swedish discovery, which is owned by Acanova AB, allows a reduction in the amount of chemical used to protect cereal seeds against seed-borne diseases. The first facility has the capacity to treat 1000 tonnes seed per week at a cost similar to that of chemical treatment. It will serve as a reference unit for potential plant buyers throughout the world. The facility has been tested in European countries for a period of 7 years with very good results and marketing has now commenced. Acanova has taken part in two European projects aimed at reducing the use of chemicals.

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### Pesticide market enters sound development stage in China

The cost of pesticide production in China in 1H 2005 was 34.4% higher than in 1H 2004 as a result of increased raw material, energy and transportation costs. However, total production by the industry was valued at RMB Yuan 33.24 billion (up 31.5%) in 1H 2005, with sales of RMB Yuan 29.97 billion (up 34.8%) and profits of RMB Yuan 1.48 billion (up 48.2%). Pesticide output in China in 1H 2005 rose 13.6% to 562,300 tonnes, with insecticides up 3.1% to 237,400 tonnes, fungicides up 16.2% to 60,800 tonnes, and herbicides up 21.5% to 167,600 tonnes. In line with aims to move away from high-toxicity insecticides, the proportion of insecticides has decreased from 70% in 1999 to 42.2% in 1H 2005. Pesticide exports from China in 1H 2005 rose 13.8% to 228,500 tonnes, accounting for over 40% of production. The value of pesticide exports rose 32.7% to \$764 M, providing a trade surplus of \$656 M (up 33.5%). Although there was an overall supply surplus in 1H 2005, some high-effect pesticides with low toxicity were in short supply. Prices were generally stable, rising slightly. Pesticide production was expected to maintain a 10% increase for the remainder of 2005.

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### BASF aims for technology combinations

BASF aims to use a combination of different technologies with new possibilities in

genetic research for advanced pesticides research. In the search for new active substances BASF will apply the traditional in-vivo approach where a substance is tested directly on the target organism, parallel with the new perspectives of genetic engineering. According to BASF, the efforts in the pesticides segment are already yielding results: the product portfolio consists to more than 50% of patented active substances. Products launched during the past 5 years generate 18% of total turnover.

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### World pesticide demand to reach \$28.4 billion in 2009

Global demand for pesticides is forecast to reach \$28.4 billion in 2009, rising at 1.7%/y. This moderate growth marks a significant improvement over the 1994-2004 period, which saw price reductions in several major products due partly to patent expirations. The worldwide market for pesticides is significantly diverse based on usage patterns, product mix and regulatory climates, particularly in agriculture, which represents most of the demand. Minimal volume growth is expected in developed areas with fairly mature agricultural markets such as Western Europe, Japan, Canada, and the USA. Value gains will be driven by greater usage of newer active ingredients, specifically biopesticides, which are expected to achieve much higher gains than the global average. A more remarkable volume improvement is also predicted in developing countries such as China and some nations of Eastern Europe, Asia, and Latin America. This will be spurred by the utilisation of modern agricultural methods, including the use of pesticide to boost crop yields and minimise pesticide residues on food.

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## Fungicides

### Alternative skin spot answers: SAC seeks new treatments

2-aminobutane is currently the most effective fungicidal treatment against skin spot of potatoes. The fumigant is expected to be dropped at the end of 2006 as sales do not justify support in its Annex 1 registration review. Scottish Agricultural Colleges (SAC) is investigating 11 new treatments for seed applications including thiram, boscalid and experimental new chemicals. Results will be available in 2006 but product use may require specific off-label approval.

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### Pictor prop: the new rapeseed fungicides from BASF

BASF recently launched its new fungicide Pictor pro. Designed for use on rapeseed crops at blossom time, the product is based on BASF's new active ingredient boscalid. The chemical offers numerous advantages including increased yield, unequalled efficacy against blight and *Sclerotinia* and a different mode of action from existing fungicides. It also is harmless to bees and helpful insects.

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### Goemar records increase in sales of Iodus 40

Goemar's natural plant defences stimulator Iodus 40 (laminarine) was used on 100,000 hectares of wheat in 2005 compared with 60,000 hectares in 2004. The product is designed to protect against early fungal infections (such as eyespot, powdery mildew and glume blotch). Goemar is seeking marketing approval in France for its use on barley as a treatment against powdery mildew, *Helminthosporium* and *Rhynchosporium*.

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### Botrytis treatments effective against *Penicillium*

According to a study conducted by Syngenta, ITV France and the Toulouse Ensa, cyprodinil, fludioxynil and fluazinam have different ways of combating different species of *Penicillium*. The study concludes that combining these chemicals will reduce the development of *Penicillium* and can combat unwanted flavours in wines. This treatment should be combined with a regular prophylactic treatment against botrytis.

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### Calcium cyanamide, a fertiliser with interesting antiparasitic properties

Calcium cyanamide is a nitrogen fertiliser that has been used in agriculture for many years. Industrial production uses low cost primary materials (calcareous rock, coal and atmospheric nitrogen). One of the soil breakdown products is cyanamide which has fungicidal properties. Early research showed that calcium cyanamide is especially useful for controlling diseases caused by soil-borne fungi. Recent work at the University of Bari, Italy, has shown significant and consistent reduction in corky root disease of tomatoes, by up to 60% using calcium cyanamide and soil solarisation. There are good reasons, therefore, for including calcium cyanamide

in Integrated Disease Management of soil-borne pathogens. (For more information see: [www.calciocianamide.de](http://www.calciocianamide.de)) CBNB

### Quali'Don from BASF: a kit for detecting mycotoxin levels

In June 2005, BASF Agro launched its new diagnostic kit Quali'Don. The product is designed to measure the level of deoxynivalenol in wheat at harvest time. Deoxynivalenol is a mycotoxin, produced by several species of *Fusarium*. Developed by BASF Agro in association with R-Biopharm, Quali'Don gives a result within 20 minutes, indicating whether deoxynivalenol levels are above or below the permitted threshold for wheat for use in human food products. Quali'Don costs about EUR 600 for 25 tests and can be used to monitor the health of harvested crops. CBNB

### Herbicides

#### Syngenta and Bayer launch new herbicides

Syngenta in Basel is to launch Axial, a new wheat herbicide which has an estimated market potential of above \$150 M/y. Axial contains the new active ingredient pinoxaden and is effective in all types of grain. The product will be launched in time of the 2006 season. The global market for grass herbicides in wheat is estimated at nearly \$200 M/y. Syngenta currently achieves a market share of 2%, but plans to increase this to above 10%. In 2006 Syngenta will launch 10 new products in Germany which will be followed by a nematode seed treatment agent, 2 herbicides, 2 fungicides and 1 insecticide in 2012. The company also plans to expand in the seed and animal feed segments. Bayer CropScience also launched Firebird, a new non IPU cereal herbicide that is a co-formulation of flufenacet and diflufenican for non blackgrass situations. Firebird controls annual meadow grass and various broad-leaved weeds. Bayer is also expecting approval of a new post-emergence annual meadow grass and broad-leaved weed herbicide in 2005. CBNB

#### Brazilian soybean farmers pin hopes on generic herbicide

The Brazilian agriculture ministry has approved the sale of generic glyphosate (Roundup) herbicide in its bid to boost the sales of certified Roundup Ready soybean seeds and alleviate the tight condition of RR

soybean producers in southern Brazil. The large-scale commercialisation of the generic glyphosate was made possible by its registration with the General Agricultural Chemical Administration in September 2005. A supply company in Rio Grande do Sul will be licensed to produce and/or market generic glyphosate. The Secretary of Agriculture Defense noted that the herbicide is a first in several agricultural chemicals that will be approved by the government to lower production costs. CBNB

### Insecticides

#### Sumitomo, Okinawa firm develop host-feeding bug killer

A biopesticide, trade name Midorihime, has been jointly developed in Japan by Sumitomo Chemical and Ryukyu Sankei (pesticide sales company based in Okinawa). The product was registered in Japan on 22 June 2005. Ryukyu Sankei will start sales in November 2005 and Sumitomo Chemical will start national sales in spring 2006. CBNB

#### Sumitomo to quadruple output of mosquito nets in Tanzania

Olyset-Net is a mosquito net produced by Sumitomo Chemical which incorporates an insect repellent. Capacity for production in Tanzania is to be increased. Currently, the country has a total capacity of 2 M unit/y and by the end of fiscal 2005, this will be raised to 8 M unit/y with the construction of a new joint venture facility. Worldwide, capacity will be increased from 7 M unit/y to 20 M unit/y. An equally owned joint venture, Vector Health International Ltd, was established in September 2005 by Sumitomo Chemical and Net Health Ltd. The new facility to be built in Arusha will have a capacity of 4.2 M unit/y with production due to begin by the end of fiscal 2005. CBNB

### Rodenticides

#### Bio masculine sterility rodenticide in Wuxi Kalider

A new biological rodenticide (BIO Masculine Sterility Rodenticide) has been developed at Fudan University in China. It has recently been patented and is being produced by Wuxi Kalider Industrial Co Ltd in Wuxi, Jiangsu province, China. CBNB

### Seed treatments

#### More seed treatments on offer

Bayer has unveiled a new series of seed treatments based on its new fungicides prothioconazole and fluoxastrobin and a new insecticide clothianidin. Redigo-based products (prothioconazole) are fungicide seed treatments while Redigo Twin (prothioconazole and fluoxastrobin) is used on wheat and Raxil Pro (prothioconazole with tebuconazole and triazoxide) is for winter and spring barley. The company is also offering Redigo Deter (prothioconazole and clothianidin), which is a special purpose insecticide treatment in limited volumes for 2005 sowings. Redigo and Redigo Twin will substitute for Sibutol (bitertanol) in wheat while Raxil Pro will replace Raxil S (tebuconazole plus triazoxide) in barley. CBNB

#### Snippets .....

Adding surfactant, compared to using water only, improved the efficacy of applying *Steinernema carpocapsae* nematode for biocontrol of *Plutella xylostella* (diamondback moth) larvae. (For more information contact: [Ehlers@biotec.uni-kiel.de](mailto:Ehlers@biotec.uni-kiel.de))

Studies indicate high concentrations of ground level ozone can reduce some crops' yields up to 30 percent but also stimulate weed competition resulting in increased herbicide usage. (For more information contact: [David.Grantz@ucr.edu](mailto:David.Grantz@ucr.edu))

The website of advocacy group Truth about Trade and Technology includes an interactive counting box reputed to be registering both planted and harvested area of 'biotech crops' around the world (over one billion). (For more information see: <http://www.truthabouttrade.org>)

The fly *Coenosia attenuate* (Old World hunter fly) has recently been identified in North America and is a predator of glasshouse pest insects and, therefore, has biocontrol potential. (For more information see: [spw4@cornell.edu](mailto:spw4@cornell.edu))

In Australia, *Polygonum cuspidatum* (Japanese knotweed) has escaped from gardens to become an invasive plant that potentially could be even worse than blackberries according to John Weiss (For more information contact: [John.Weiss@nre.vic.gov.au](mailto:John.Weiss@nre.vic.gov.au))

Trap crop attractiveness to *Plutella xylostella* (diamondback moth) was enhanced by earlier, denser planting compared to a main crop. (For more information contact: [FRB3@cornell.edu](mailto:FRB3@cornell.edu))

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