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LEAD ARTICLES

FOOD SECURITY COMES OUT ON TOP

Research commissioned by the UK Crop Protection Association (CPA) and conducted by Network Research and Marketing Ltd in May this year (**www.cropprotection.org.uk**) says that almost 80% of consumers in the UK think the country should become more self-sufficient in food, although three-quarters want the government to do more to prevent further price increases. The survey also shows there is a high level of awareness and concern among UK shoppers of the global factors affecting food price rises. Speaking at the Inside Government conference alongside UK government chief scientist Professor Sir John Beddington and Food Standards Agency chief executive Tim Smith, Dominic Dyer, chief executive of CPA, said the responses showed UK shoppers were clearly worried about the impact of factors such as population growth, climate change and energy supplies on the cost of food. There was also strong recognition among consumers of the positive role science could play in boosting future food production to address these challenges.

Mr Dyer expressed concern that higher food prices might drain consumer expenditure from other areas of the economy, with serious implications for wider economic growth and recovery. To avoid this happening he called for action to unlock the productive potential of the UK and the EU. He said: "The EU remains in a state of denial over food security. Crop yields across Europe are stagnating, and without access to effective crop protection tools we could see a further 40% drop in food production. Despite this Europe's policymakers are pressing ahead with new pesticide approval rules which could see products removed faster than they can be replaced, with no added benefit to human health or the environment."

COMMON AGRICULTURAL POLICY

Food security also came out on top when the Common Agricutural Policy (CAP) budget was announced for the period 2014-2020. The European Parliament has sent out a clear signal that it wants to maintain a strong Common Agricultural Policy (CAP). Agriculture spokesman Albert Dess MEP said: "The EU's agricultural policy will need to provide food security in the face of a growing world population. Moreover, the contribution of European farmers is crucial for the protection of the environment. The future common agricultural policy must meet both these aims." The view was expressed by the Parliament that the two pillar approach should be maintained but simplified. Pillar I, direct farm payments, and Pillar II, rural development and protection of the environment will, however, need to work to similar and simpler rules.

The European Commission (EC) proposals have also been released. Of greatest significance was the statement that CAP spending levels for the period 2014-2020 are to be maintained at 2013 levels. The fact that the CAP spend has been maintained is something of a surprise given the strongly held political views expressed from a wide range of sources that the cost of the CAP was totally unacceptable. The budget is to be €371.7 billion, approximately €53 billion a year, with an additional 'room for manoeuvre' of €15.2bn, over €2 billion a year, available specifically for agriculture. Several commentators make the point that by holding the budget level over the seven year period this is in effect a reduction. In practice it also means that the CAP will account for 36% of the EU budget, down from 43% for the previous period (**www.europa.eu/press_room/pdf/a_budget_for_europe_2020**).

EU Agriculture Commissioner, Dacian Cioloş, stated: "With this global envelope available for European agriculture we can preserve the EU's capacity to react with force and with clear will – to permit this strategic sector to respond to the major challenges of tomorrow." His statement went on to say: "Above all, I am thinking of food security, the preservation of our natural resources and the balanced development of rural areas."

Legislative proposals for the reform of the CAP will be presented in the autumn. However, it is clear from the budget proposals announced that core elements will remain intact. The direct payment system will stay at the heart of the CAP in order to support agricultural income. The aim is for the support to be allocated in a more equitable way. Commissioner Cioloş explained that a significant share will be dedicated to reinforcing the (eco)competitiveness and the sustainability of the agricultural sector. At the same time rural development programmes will be maintained with a consistent level of support.

The greening of the direct payments, there more equitable distribution and a ceiling on them will be important elements in this reform. The intention is already declared that 30% of direct payments will be conditional on implementation of greening methods at farm level. The EC intends to limit CAP support only to active farmers; a simplified allocation mechanism for small farms is planned.

Some elements previously in the CAP budget will come out but there will be several new elements at a total cost of €10.5 billion. Included in this will be an additional €4.5billion for agricultural research. This is intended to form the basis for a strategy for the sustainable increase in agricultural production and the adaptation of production to consumers' expectations. A budget of €2.5 billion is allocated to help farmers face the new challenges not previously encountered such as commodity price volatility. Additionally an emergency reserve of €500 million a year, €3.5 billion over the seven year period, is to be established to allow for unforeseen problems, the cause of which may be from outside of the EU or global, such as those linked to climate change, to market crises and other threats to the farming and food production capacity.

The full implications of these proposals will not be fully understood until the reform process is completed.

EUROPEAN NEWS AND MARKETS

ROTHAMSTED RESEARCH APPLIES FOR APPROVAL FOR GM WHEAT TRIAL

The UK's leading plant research centre, Rothamsted Research, has applied for permission from the government to begin a trial with GM wheat. The trial will be carried out to evaluate wheat modified to resist attack by aphids. It will begin in in March next year if government officials give the go-ahead for the crop to be planted. If approved, it would be only the third GM field trial running in Britain; the others, at the John Innes Centre in Norfolk and at Leeds University, are testing different varieties of GM potato. The project is likely to require expensive 24hr security to prevent anti-GM protesters destroying the crop.

Professor Maurice Moloney, the director of Rothamsted Research, said the institute's chemical ecologists, who study the natural link between plants and pests, had discovered a way to prevent aphids landing on wheat and destroying it. “When aphids are under stress, they release a pheromone that is a signal to other aphids to get out of the locality,” Professor Moloney explained. “It turns out that pathway exists in plants, for example in mint. When this pathway is activated, the aphids do not land on the plant.” The proposed trial is scheduled to run from March 2012 to October 2013.

CERTIS EUROPE APPOINTS NEW CEO

Certis Europe has announced that it has appointed a new chief executive officer Mark Waltham. Currently strategic marketing director with the company Mr Waltham takes over from Bob Skillicorn who has been in the role for over 11 years. Since its launch in November 2001 Certis has grown rapidly across Europe from its origins in UK, France, the Netherlands and Belgium. It says that important factors driving this growth have been the development and launch of new products from shareholders and key suppliers and the establishment of new offices in southern Europe. The business has achieved 18% compound annual growth rate since its launch, pushing through the €100m sales barrier in early 2008 from a start point of €25m in 2001.

From its original position as a supplier of crop protection products and solutions to the high value and speciality crop sectors of fruit, vegetables and flowers, the company has more recently expanded its portfolio into arable crops where it has achieved significant growth in the UK and France.

Mark Waltham held technical and commercial roles in Certis UK and Certis Europe before moving to Syngenta in Switzerland for five years, where he was latterly head of Strategy, Business Development and Global Product Management in the Lawn and Garden business. He returned to Certis Europe in late 2009 and took up his new position as CEO with effect from 1 July.

NEW INVESTMENT FOR EXOSECT

UK-based pest management company, Exosect (**www.exosect.com**) has announced the completion of its latest round of funding. The investment comes from its existing investor base and will enable the company to introduce the second phase of its commercial strategy based on its patented technology, *Entostat* powder. The strategy will focus on the co-development of a range of pipeline solutions based upon the *Entostat* electrostatic wax powder formulations together with out-licensing specific product applications and product registrations. This follows on from the successful divestment of a bee health product for the control of Varroa mite on honey bees, to Bayer CropScience in November 2010, and a number of commercial collaborative projects which are in the research and development pipeline.

Martin Brown, managing director, at Exosect commented: “This investment is a further testament to the potential of *Entostat*. When the company was spun out of Southampton University ten years ago, we were focussed on developing pheromone products in agriculture. Throughout this period, our research has revealed the wider potential of *Entostat* powder as a targeted delivery platform for a broad range of active ingredients across numerous sectors. Implementing this strategy will ensure that we can capitalise on these new and exciting opportunities”. Mr Brown confirmed that the current sales base and distribution network will continue to be supported in parallel to this strategy. He continued: “We have developed significant relationships with distributors across Europe and in Japan. We value these greatly and will continue to work with and support this network”.

Entostat powder is the platform technology for Exosect’s entire range of products. Derived from a natural ‘food grade’ wax which is sustainably harvested from palm trees, the powder acts as a delivery

system for a wide range of chemistry. Even through very slight movement, *Entosta*t powder develops an electrostatic charge. Insects similarly develop an electrostatic charge as they fly or walk across physical surfaces. When placed in contact with insects, the powder adheres to them and can be passed from one insect to another through direct contact. This patented platform enables the use of very low doses of active ingredient and has potential applications in many sectors.

MAKHTESHIM AGAN LAUNCHES DIMETOMORPH IN THE UK

Makhteshim Agan UK (MAUK) has launched a new potato blight fungicide. The introduction of *Morph* in the UK makes the curative active ingredient dimethomorph, previously only obtainable as a co-formulated product, available on its own, although it must be used in mixes. “This allows growers more flexibility when deciding what to spray,” says MAUK’s Stuart Hill. *Morph* has been formulated as a low-dose liquid and is recommended at a dose of just 0.3litres/ha. It is easier to handle than the previous wettable powder co-formulations, usually applied at 2kg/ha. *Morph* is locally systemic and helps to protect new growth early in the season and has kick-back activity on mycelium. Mr Hill recommends it is mixed with 0.3litres/ha of fluazinam. “This is a multi-site protectant fungicide with good activity on tuber blight that is also effective against zoospores. It complements the persistence and curative activity of *Morph*.”

The company says that *Morph* will help control all blight strains, including those that are phenylamide-resistant plus the 13_A2 type. “The latter is more aggressive and less forgiving, so growers need to start early and keep intervals tight,” advises SAC blight specialist Dr Ruairidh Bain. He encourages growers to move away from pre-planned programmes. “Bring a range of products into your spray store, then keep an eye on risk periods and incidents of blight in your area. Use this information to match your programme to the risk, building in more robust elements as conditions dictate. The key strength of dimethomorph is its persistence, more than twice that of cymoxanil,” notes Dr Bain, “although cymoxanil is rated better for curative activity.”

BAYER AND RAGT TO IMPROVE WHEAT BREEDING

Bayer CropScience and the privately-owned company RAGT Semences (**www.ragtsemences.com**), based in Rodez, France, have signed a license and cooperation agreement. Under the agreement, RAGT grants Bayer CropScience access to winter wheat germplasm and associated molecular markers. The French company has one of the strongest winter wheat breeding programmes in Europe. In addition, both companies will explore joint projects to further improve wheat breeding and RAGT will have options to license wheat traits from Bayer CropScience.

“This mutually beneficial agreement will further strengthen the wheat breeding programmes of both partners,” said Sandra E Peterson, chairman and CEO of Bayer CropScience. “It is another important step to achieve our goal to improve sustainable cereal production.” Daniel Segonds, chairman of the RAGT executive board, said: “Wheat is a key crop for both partners that deserves huge research efforts involving both conventional and new breeding techniques in order to address the future challenges in agriculture. “Bayer CropScience’s strong traits portfolio and the company’s unique skills in advanced technology means that it is the ideal partner for us,” said Daniel Segonds.

In July 2009, Bayer CropScience announced the expansion of its global activities in seeds and traits, to include a focus on cereals. As part of its investment plans, the company is increasing its research and development resources to raise productivity of wheat cropping. To support its internal research and development efforts, Bayer CropScience has already entered into collaborations with CSIRO in Australia, the University of Nebraska in Lincoln, USA, and Evogene in Israel. In 2010, Bayer CropScience also acquired two wheat breeding programmes in the Ukraine. The first new wheat varieties from the company’s global wheat breeding programme are expected to be available within the next five years.

AMERICAN NEWS AND MARKETS

BAYER APPOINTS NEW CEO FOR NORTH AMERICA

Bayer CropScience has announced that Jim Blome became president/CEO and head of Crop Protection for the North American region on 1 July 2011. He succeeds Bill Buckner, current president/CEO, who retires at the end of the year. Mr Blome joins Bayer CropScience from Valent USA where he most recently served as executive vice president and COO. In this role, he has led Valent's North American crop protection business since 2009, delivering record sales and profits. With more than 25 years of experience in agriculture, Mr Blome has held management roles at companies such as Agriliance LLC, FMC Corporation, Agtrol International, Griffin Corporation and Nufarm Limited. "Jim's depth of knowledge of the agricultural industry and his leadership experience will guide the North American business to a new level of success," said Lykele van der Broek, global COO of Bayer CropScience. Mr Buckner joined Bayer in 1993 and has held several senior positions in the US, Canada and Germany prior to being named president and CEO of Bayer CropScience North America in 2006. He will support Mr Blome during the summer months and will focus on completing his term as chairman of the CropLife America board.

BASF AND EMBRAPA SIGN TECHNICAL CO-OPERATION AGREEMENT

BASF Crop Protection and Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA), the leading Brazilian agricultural research institution, have signed a technical cooperation agreement to develop and bring new agriculture technologies and products to Brazilian growers. The cooperation brings together the expertise and know-how of both partners in the areas of biotechnology, genetic improvement, soil fertility and mechanisation, plant protection, and physiology. The agreement is valid for five years with no limit on the number of projects to be explored.

BASF and EMBRAPA have a long history of joint projects. In 2010, the companies announced the approval for commercial cultivation of the soybean *Cultivance*, the first genetically modified crop developed in Brazil from laboratory to commercialisation. With this latest agreement, new joint projects will be brought through the development and commercialisation stages at a much faster rate. "The agreement is a great example of effective public-private partnerships capable of developing technologies and furthering the economic, social and environmental strength of Brazilian agriculture", said Markus Heldt, president of BASF Crop Protection.

The cooperation has already resulted in projects that are currently in the development stage. The initial project evaluates the feasibility of using a bacterium to enhance nitrogen fixation for sugar cane plantations. "There is a strong demand for biological products", says Eduardo Leduc, senior vice president BASF Crop Protection Latin America. "With their unique mode of action and features, biological products are a perfect complement to our chemical portfolio."

BAYER SEED TREATMENT AVAILABLE FOR SOYBEANS AND COTTON

Bayer CropScience has announced that *Poncho/VOTiVO* will be available on soybeans and cotton for the 2012 growing season. The company says that with these additions, growers will have a new tool to fight nematodes and early season pests. "The proven efficacy of *Poncho/VOTiVO* on corn gives soybean and cotton growers assurance that their crops will thrive by reducing damage and loss due to pests and nematodes," said Kerry Grossweiler, product manager of Bayer CropScience.

In 2011, Bayer expects that 76.6 million acres will be planted with soybeans. Soybean cyst nematode (SCN) is the No. 1 pest affecting yields for soybean growers. It accounts for an estimated $1 billion loss in soybean crops annually. The combination *Poncho (*clothianidin*) and VOTiVO* (a bacterial strain) is considered to be the ideal partner for soybean seed with genetic resistance to nematodes. The product prevents important soybean nematode species, including reniform, root-knot and soybean cyst from reaching the root. In addition to nematodes *Poncho/VOTiVO* protects against early-season aphids, over-wintering bean leaf beetle, seed corn maggot, and grape colaspis. Extensive field testing with the product has shown a significant yield advantage in soybeans, with an average of one to two bu/a (123-246kgs/ha) gain over and above the increase experienced with *Gaucho* (imidacloprid) seed-applied insecticide.

On cotton nematodes are the most important yield-reducing pests. The Cotton Disease Council's Cotton Disease Loss Estimate Committee attributed more than 500,000 bales (113,500 tonnes) of lost

yield to nematode damage in 2009. Cotton acreage increases are expected in every US state in 2011, giving a total of 12.6 million acres. For cotton plants, Bayer says that the combination product can protect against nematodes, including root-knot, reform and Columbia lance. The seed treatment on cotton is long-lasting, protecting against even second generation nematodes, and fast-acting. Because it protects against multiple types of cotton-parasitic nematodes, *Poncho/VOTiVO* is a key component of Integrated Pest Management programmes. The seed treatment promotes a higher yield through a healthier root system and a more vigorous and uniform crop.

BAYER REACHES SETTLEMENT AGREEMENT WITH US RICE GROWERS

The US Department of Agriculture announced in August 2006 that trace amounts of Bayer CropScience's genetically modified rice LLRICE 601, resistant to *Liberty Link* were found in US long-grain rice stocks. Although LLRICE 601 is now deregulated by the USDA, at the time of the contamination it was not approved for human consumption. Farmers have since sought to recover damages for market losses and expenses they claim to have incurred because of the contamination.

The company has now reached settlement agreements with attorneys and will pay up to $750 million to resolve claims submitted by the growers. The settlement programme will be open to all US farmers who had been growing long-grain rice during the period of 2006 through 2010.

Settlement agreements have been reached with two groups of lawyers. One agreement involves those cases that are a part of the federal multi-district litigation; the other involves those cases in state courts. Rice growers have a 90-day period in which to submit their claims. Although Bayer CropScience believes it acted responsibly in the handling of its biotech rice, the company considers it important to resolve the litigation so that it can move forward focused on its fundamental mission of providing innovative solutions to modern agriculture.

Bayer is recommending that all rice growers interested in participating in the settlement programme consult a lawyer in regard to their claim submissions. The settlements are contingent on the participation of a sufficient number of growers to represent at least 85% of US long-grain rice acreage. Bayer regards the inclusion of all long-grain rice growers in the settlement programme, whether they have filed a lawsuit or not, to be crucial to demonstrating its long term commitment to rice, which remains an important crop for the company throughout the world.

SYNGENTA AND PASTEURIA TO DEVELOP BIO-NEMATICIDES

Syngenta has entered into an exclusive global technology partnership with Pasteuria Bioscience Inc. (**www.pasteuriabio.com**), a US-based biotechnology company. Under the terms of the agreement, the two companies will develop innovative bio-nematicide products based on the naturally occurring soil bacteria *Pasteuria* spp. This group of bacteria controls nematodes across a broad variety of crops. Joint development will initially focus on seed treatment products for the control of soybean cyst nematodes (SCN), estimated to cause more than $1 billion in crop losses each year in the US alone.

Syngenta and Pasteuria aim to launch the first product from their collaboration within two years. The addition of Pasteuria will complement Syngenta's existing *AVICTA* nematicide range. "The technology will offer growers a novel biological mode of action for nematode control," said Christoph Goppelsroeder, Syngenta global head of Seed Care. "Recent field trial results in US soybeans have shown encouraging results, demonstrating that this technology combined with Syngenta's seed treatment expertise can provide growers with a significant opportunity to increase their yields."

SYNGENTA LAUNCHES PHOENIX SEEDS

Syngenta has announced the launch of *Phoenix*, a new seed brand that broadens grower access to Syngenta germplasm and innovative *Agrisure* traits. The Phoenix brand offers growers the opportunity to purchase hybrids containing diverse genetics and leading trait technology, like *Agrisure 3000GT* and *Agrisure Viptera 3111* trait stacks, from local representatives with which they have long-standing relationships. *Phoenix* corn hybrids will be available regionally beginning with the 2012 planting season and will be distributed by Beck's Superior Hybrids, Inc.

"Syngenta is committed to supporting independent seed companies, recognising that growers appreciate the option of a local choice in their seed suppliers. The *Phoenix* brand allows us to increase access to Syngenta corn germplasm and traits, particularly in the Eastern Corn Belt, with our Beck's distribution agreement," said David Morgan, Syngenta regional director of North America and

president of Syngenta Seeds, Inc. “The Beck’s team has an outstanding reputation for customer service and we are pleased to be working with them to bring our germplasm and traits to their customers.”

SYNGENTA RECEIVES US APPROVAL FOR BESEIGE

Syngenta has received US registration for *Besiege* (lambda-cyhalothrin + chlorantraniliprole), an insecticide for use on cotton, tobacco and pastures. A foliar application of *Besiege* offers fast knockdown and long-lasting residual activity on key lepidopteran pests including budworms and armyworms, as well as effective control of multiple stink bug species. “*Besiege* is a modern insecticide, combining two active ingredients at robust rates in a convenient premix formulation,” said John Koenig, Syngenta insecticide asset lead. “This product gives growers the benefit of multiple modes of action for consistent, high-level control on both traited and conventional crops in all areas of the South, including those with emerging pyrethroid resistance.”

TAGROS TO ACCESS TERPENES FROM EDEN RESEARCH

Eden Research has signed a development agreement with Tagros Chemicals India PVT Limited based in Tamil Nadu, India. The agreement grants Tagros the right to use Eden's terpene encapsulation system to co-encapsulate one of Tagros’ important crop molecules, used in agricultural as well as public health, with blends of synergistic terpenes. Following the development period provided under the agreement, Eden will then look to enter into a full licensing agreement with Tagros. Clive Newitt, managing director of Eden, said: “This is the second 'co-encapsulation' agreement that Eden has now entered into, following the SBM development deal announced in December last year. These arrangements present a significant opportunity to commercialise Eden's encapsulation technologies based upon products that are already being sold within the global agrochemical industry, and at minimal cost to Eden. Using the encapsulation system will allow Tagros to create new products that will exhibit a wider spectrum of activity, longer persistence and be less prone to resistance development.”

MAKHTESHIM REQUESTS VOLUNTARY CANCELLATION OF DICOFOL

Makhteshim Agan has requested voluntary cancellation of all of its dicofol registrations in the US. The Environmental Protection Agency (EPA) is requesting comment for 30 days on the registrants’ request. Dicofol is the last organochlorine pesticide to go through a cancellation process to terminate all its remaining uses in the US. The company ceased all production of dicofol as of 17 May, 2011, and has agreed to cease all sales and distribution of the pesticide by 31 October, 2013. It has also agreed to amend product labels for existing stocks by 31 August, 2011, to prohibit use of dicofol after 31 October 31, 2016. EPA plans to revoke the tolerances associated with commodities treated with dicofol from 31 October, 2016.

Dicofol is registered for use as a miticide on cotton and several other agricultural crops and on non-residential lawns and ornamentals. Use of dicofol has significantly declined since the amended Reregistration Eligibility Decision (RED) in 2006. The 2006 amended RED significantly increased the re-entry interval for most crops in order to protect workers harvesting the crops after application of dicofol.

MONSANTO INCLUDES IMPACT IN ITS ROUNDUP READY PLUS PLATFORM

Monsanto and Amvac Chemical Corporation, a subsidiary of American Vanguard Corp. have entered an agreement that broadens Monsanto's *Roundup Ready PLUS* weed management platform in the US to include Amvac’s herbicide *Impact.* Impact is the first post emergence herbicide to be added to the platform for control of emerged broadleaf and grass weeds in corn.

Monsanto says the herbicide platform allows farmers to fully utilise the benefits of its *Roundup Ready* crops by using the best practice recommendations for weed management and receiving financial incentives for using many of the products in the programme. Weed scientists recommend that farmers use multiple mechanisms of action when managing weeds. The active ingredient in *Impact*, topramezone, is an HPPD inhibitor herbicide that provides an effective tool in weed resistance management.

Eric Wintemute, chairman & CEO of American Vanguard stated: “We are very pleased to be partnering with the leader in glyphosate herbicides. This programme will allow growers to preserve the

moisture and nutrients in their soil that would otherwise be consumed by many of these hard-to-control/glyphosate-resistant broadleaf weeds. This collaborative engagement provides Amvac with the opportunity for expanded sales of its high-performance *Impact* herbicide, provides Monsanto with even more effective and comprehensive herbicide control for its *Roundup* brand herbicides, and most importantly, provides our customers with the potential for maximum yield enhancement." Under the agreement, Monsanto will license its *Roundup Ready PLUS* trademarks for use on *Impact* and will co-market Amvac's post-emergent corn herbicide as part of the *Roundup Ready PLUS* weed management programme.

WILLOWOOD LAUNCHES RICE HERBICIDE

Willowood USA has received EPA registration for *Willowood Propanil 4SC*.The product is currently registered for use in the US rice growing states of Arkansas, California, Louisiana, Mississippi, Texas and Missouri. *Willowood Propanil 4SC* controls a wide range of both grass and broadleaf weeds in rice and is an important product to the US rice farmer. "*Willowood Propanil 4SC* represents our first product entry into the US rice market," said Joe Middione, vice-president sales and marketing for Willowood. "We plan to launch additional propanil formulations in the months that follow along with some additional products for the US rice grower." With its recent propanil registration, Willowood USA now has a product portfolio that spans the key US crops including corn, soybean, rice, wheat and cotton. In addition, the company's portfolio covers specialty crop markets such as tree fruit, grapes, and lettuce.

DOW HOSTS BRAZILIAN AGRICULTURAL LEADERS

Dow AgroSciences recently hosted a group of influential Brazilian agricultural leaders in the US. The Brazilian group included large commercial and family growers, influential weed scientists and researchers, university professors of agriculture, government representatives, commercial agriculture and chemical executives, as well as Brazilian commodity group representatives. All of the delegates had a specific interest in weed management and improving agricultural conditions for the growers of Brazil. They participated in meetings at Dow's research farm, Purdue University as well as Dow AgroSciences' global headquarters before moving on to Washington to meet with the United States Department of Agriculture (USDA) and various commodity, food chain, and biotechnology industry organisations.

The meetings focused on technology and policy and participants discussed the global significance of agriculture, farming and weed control issues, as well as Dow AgroSciences' role in helping to solve these challenges. "It was an excellent opportunity to advance knowledge of technologies that will be essential for sustainable agricultural production," said Edivaldo Vellini, CEO of FEPAF (a university research foundation) and director of UNESP-Botucatu, Sao Paulo State University, who researches weed control, weed resistance and spray technology as well as new weed science methodology.

The Brazilians were interested in current US weed control challenges and new technologies that will enhance the economic and environmental benefits of Brazil's current cropping systems. They and the Dow AgroSciences management discussed future weed control challenges and reviewed the *ENLIST* Weed Control System, the new Dow AgroSciences technology currently undergoing regulatory review. According to Dow *ENLIST* will introduce a more effective combination of herbicides, traits in elite seed genetics and stewardship programmes to meet the needs of today's farmers globally. "By partnering with and improving on the current glyphosate-tolerant cropping system, the *ENLIST* Weed Control System will address growers' needs while enabling exceptional weed control," said Tony Klemm, global business leader, Dow AgroSciences.

DOW RELOCATES FIELD RESEARCH STATION

Dow AgroSciences is expanding and relocating its Central Iowa Field Research sites to Ames, Iowa, to accommodate growing corn and soybean breeding programmes. Dow has purchased 155 acres of land just northwest of Ames for the new site, and construction is now complete. The research station includes an office building, seed lab and equipment storage. The new facility features approximately 17,500 square feet (1,625 square metres) of office/seed laboratory building and approximately 15,300 square feet for storage. It houses corn and soybean breeding programmes along with a finishing trait corn conversion nursery, which supports Dow AgroSciences products like *SmartStax*, the *ENLIST* Weed Control System and other new technologies coming to corn and soybeans.

"Our plant breeding efforts in corn and soybeans are targeted to develop and evaluate products to satisfy the needs of growers in Iowa and other neighbouring states," said Marcelo Queijo, Dow AgroSciences research station site leader. "This expansion is one of many projects we are engaged in around the globe to bring farmers the best technologies and the best agronomic traits to meet their needs," said Dan Kittle, vice president of research and development at Dow AgroSciences. The Ames site has more than 20 full-time employees, plus a large number of seasonal and contract employees, and is expected to grow in the near future.

OTHER NEWS AND MARKETS

CHEMINOVA ACQUIRES REMAINING STÄHLER SHARES

Cheminova has acquired the remaining 25% in the Stähler group for DKK 65 million ($12.35 million) in accordance with an option agreement it entered into in 2009. The payment will be made in cash and in shares in Auriga Industries. In January 2008, Cheminova acquired a 50% ownership stake in Stähler, and in March 2009 an additional 25% stake. Cheminova says that the Stähler acquisition has strengthened its market position in Europe through direct market access in Germany, Austria and Switzerland and contributed to an improved product portfolio through several new, unique products and access to a formulation and packaging plant in Germany. Moreover, the business integration has resulted in a number of synergies. The opportunity to achieve further synergies will now be advanced compared to the originally planned acquisition of the remaining ownership stake in 2014. The three family members active in the company will continue working in the Cheminova group.

MAKHTESHIM TO MARKET KIRALAXYL AS SEED TREATMENT

Makhteshim Agan Industries ((MAI) has reached an agreement with Isagro for the exclusive license of the active ingredient kiralaxyl globally. MAI will have the rights to register, develop and market mixtures and formulations based on kiralaxyl for the seed dressing market. Isagro will continue to manufacture and hold registrations. The agreement allows for development and registration of products to better address customer needs in the segment of seed dressing, predominantly in North America.

"We are pleased to add an attractive active ingredient such as kiralaxyl to our portfolio. The molecule complements our product offering for seed dressing applications and the agreement is consistent with our strategy of expanding and enhancing our product range. By joining forces with a reputed player, such as Isagro, we can advance our ability to create and deliver simple, effective and unique solution to farmers globally," commented Efrat Segal, head of Global Seed Dressing Sector at MAI.

Kiralaxyl is a systemic fungicide with protective and curative action. The molecule is mostly used as a foliar fungicide in grapes, potato and vegetables and is sold in mixtures. The agreement allows for further development of seed dressing applications which are focused on field crops.

MONSANTO THIRD QUARTER SALES UP 21%

Monsanto Company has reported that the strength of its seeds and traits business in the US and Latin America combined with the well-received implementation of its agricultural productivity strategy drove a successful fiscal third quarter for the company. "The third quarter is always important for us, as it effectively concludes our fiscal year from an operational standpoint," said Hugh Grant, Monsanto's president and chief executive officer. "Our US selling season is almost complete, and farmers in Latin America are now harvesting their crops. We made significant changes to our business this year, and those changes resonated with our customers. We earned their business and achieved what we set out to achieve: unit volume growth in our core crops, a successful implementation of our agricultural productivity strategy and sustained cost-discipline across our operations. That positions us well for the coming years and the mid-teens earnings growth opportunity we see for this company."

In the third quarter net sales increased $628 million, or 21%, driven by unit volume growth in both the seeds and genomics and agricultural productivity segments. Gross profit rose 41% in the quarter to approximately $2 billion, with higher margins due to product mix and cost improvements. For the first nine months, gross profit is up 20% or $856 million. Operating expenses were up $124 million in the third quarter compared to the prior year, as expected. Research & Development (R&D) expenses increased as the company continues to make incremental investments in R&D to help fuel future growth.

In total, sales for Monsanto's Seeds and Genomics segment in the third quarter of fiscal 2011 increased 12% or $285 million over the prior year period, driven by global unit volume growth and a mix upgrade in the US. The company expects to reach the high end of its gross-profit range of $5.1 billion to $5.2 billion for the business on the strength of the double-digit gross profit results year-to-date. The company expects to achieve the mid-teens millions of US acres it had targeted for both its *Genuity Roundup Ready 2 Yield* soybeans and the *Genuity* reduced refuge corn family this year, adding a positive mix improvement across its US soybean and corn portfolios and establishing a

foundation for future growth across both crops. US corn volume growth is complemented by volume growth in Europe and Latin America, where Monsanto has seen volume increases in Argentina and a rebound in planted acres in Brazil.

The cotton business continues to deliver a strong performance, with an increase in acres and breeding improvements bringing growth. Monsanto expects to grow volume as the cotton market expands. The company also continues to work towards achieving sales growth and margin expansion in vegetables.

The Agricultural Productivity segment saw a strong quarter, with gross profit of $249 million led by the positive response to the repositioning of the glyphosate business and contributions from the lawn and garden business which despite unfavourable weather, is set to achieve its second year of above-historical profitability. The company now expects the segment to deliver gross profit of roughly $700 million for the year, an increase over its previous estimate. Sales in the third quarter of fiscal 2011 for the segment increased 57% with gross profit improvement as well, a function of volume and cost improvements.

NISSAN SALES TO GROW

Nissan Chemicals agrochemical sales were up 1.9% to 34.4 billion yen ($429 million) in the fiscal year ending 31 March 2011. The company who acquired Monsanto's Japanese herbicide business in 2002 suffered a 12% drop in *Roundup* sales.

In 2010 Nissan Chemicals launched Vista 2015, a new medium term management plan that seeks to enhance brand potential and corporate value in partnership with its customers. As part of the plan the company intends to grow its agrochemical business by increasing its business overseas from 20% to 25% by 2015 to achieve total agrochemical sales of 40 billion yen ($494 million). Currently Nissan generates 40% of overseas sales in Asia, 30% in Europe and Africa and the rest in North, Central and South America.

The company plans to reinforce its overseas channels by expanding its partnerships with multinationals, local manufacturers and trading companies globally, and by increasing sales of its own active ingredients. It is expecting the overseas business to compensate for a decline in its home market and will focus on the Asian region where is says population and economic growth are forecast to lead to accelerated food production and demand growth for agrochemicals.

Nissan acquired the fungicide thifluzamide, used on paddy and potatoes, from Dow Chemical in 2010. It intends to register the product in other crops and overseas. A similar approach will be adopted for the herbicides *Targa* (quizalofop-ethyl), *Sirius* (pyrazosulfuron-ethyl) and *Permit* (halosulfuron-methyl) and the fungicide amisulbrom. It is also working on the registration of a new paddy herbicide, NC620, in Japan and South Korea. NC620 is effective on sulphonyl urea resistant weeds and the company hopes to launch the product in Japan in 2013.

PIONEER SHOWING GOOD GROWTH IN 2011

DuPont confirmed at the recent Deutsche Bank Global Industrials and Basic Materials Conference in Chicago, US, that its seed subsidiary, Pioneer Hi-Bred, is showing strong early financial results for this season through volume gains and price improvements. Pioneer president Paul Schickler stated: "Pioneer is on the right path for strong growth in its global business in 2011. In North America where the planting season is coming to a close, we anticipate an increase in corn and soybean market share coupled with mid single-digit price increases, in line with our objectives."

In the corn seed business, the company attributes its sales growth projections to strong customer demand in North America for its newest corn hybrids and *Optimum AcreMax 1* system, coupled with a smooth integration of its PROaccess business. Growers have planted *Optimum AcreMax* on almost four million acres this year, exceeding the company's expectations, it said. Mr Schickler noted that about 55% of Pioneer's 2012 above and below ground lineup of triple-stack products containing *Herculex XTRA* will be converted to *AcreMax 1* products. In the soybean seed business, the stream of innovation including the 29 new Pioneer soybean varieties for 2011 is expected to deliver further growth in 2012 and beyond.

DuPont said its Agriculture & Nutrition segment, which included the seed, crop protection and nutrition and health businesses, would deliver sales at a compounded annual growth rate of eight to 10% from 2010-15 and increase pre-tax operating margins in the range of 19 to 21% in the same time period.

ROTAM HOLDS GLOBAL REGULATORY CONFERENCE

Rotam recently held its first Global Regulatory Conference in Kunshan, China. The company said that its regulatory professionals have been instrumental in expanding the company's registration portfolio from 48 in the year 2000 to 769 by 2011. The number of registration professionals has doubled in the last three years and will continue to play a key role in meeting the company's ambitious goal of increasing the level of registrations by around 75% by 2013.

At the in-house run conference executive chairman Mark Lu pointed out that Rotam consistently invests around 10-12% of its turnover in capital expenditure, with the majority going to registration and R&D. He said: "This level of consistent and continuing emphasis in R&D and intellectual property (IP) makes Rotam uniquely responsive and adaptive to fast changing market environments and especially competitive in the industry." Garth Drury, conference facilitator and head of Global Regulatory and Government Affairs, added: "We have clearly-structured, forward looking five-year plans for new product development from patent expiry to market launch. Our network of international experts has a thorough understanding of crop protection regulations in our existing and potential new markets. This is crucial to successful product registration and it gives us a clear advantage in more exacting environments such as the US, Brazil and the EU."

SYNGENTA INTEGRATING ITS GLOBAL OFFER

Syngenta recently ran a week-long series of events at its Jealotts Hill Rearch Centre in the UK attended by over 400 visitors. It was demonstrating how its new business strategy (*February CPM*) would bring the company's broad range of technologies to the world's major crops: cereals, corn, oilseeds, rice, cereals, soybeans, sugar cane and vegetables. To hand were its global crop managers and R&D managers to explain how the new technologies work.

The company kicked of the week with its 2011 Capital Markets Day when senior company executives explained to investors the significant value creation potential of the company's new integrated strategy. They outlined how the company is now targeting market share gains driven by a fully integrated commercial and R&D organisation with a global crop focus.

"Since we announced our new strategy in February, we have made major progress in its implementation. Today we are sharing the value creation potential of that strategy," said Mike Mack, chief executive officer. "Syngenta is focused upon the discovery and development of integrated solutions which go beyond the single product paradigm. Our confidence in the future growth potential of our business is underpinned by an innovation pipeline which will increase sales of key crops to over $17 billion post 2015, compared with $8.4 billion today. This, combined with our integrated business model, will enable us to grow faster than the global market and deliver superior returns to our shareholders. In addition, the resilience of our sales in the second quarter, despite adverse weather conditions, demonstrates the strength of the current portfolio upon which we are building our new strategy."

"This is an exciting time to be working at Syngenta as we embark on a new era of innovation and productivity," added Sandro Aruffo, head of Syngenta R&D. "Our crop and grower-focused approach to research and development, combined with our broad range of technologies and the quality of our scientists, underpins our confidence that we will continue to outperform the market in the years to come."

BIOCONTROL PROGRAMMES BRING BENEFITS TO AFRICA

Biological control programmes by the International Institute of Tropical Agriculture and partners on cassava green mite have brought benefits worth more than $1.7 billion to Nigeria, Benin, and Ghana in the last 18 years. "The figure represents the amount those countries would have spent over the years on other methods such as chemical control and or yield losses if they never adopted biological control," says Dr Ousmane Coulibaly, IITA agricultural economist.

The cassava green mite is a pest that was responsible for between 30 and 50% yield loss of cassava in Africa, until a natural enemy of the pest helped contain the devastation. In 1993, scientists from IITA and partners identified *Typhlodromalus aripo* as one of the most efficient enemies against cassava green mite, and its introduction reduced pest populations by as much as 90% in the dry season when pest populations are usually high; in the wet season, pest attacks are not as severe.

T.aripo was brought in from Brazil and first released on cassava farms in Benin. Subsequent introductions were made in 11 other countries and the natural enemy is now confirmed as established in all of them, except Zambia. *T. aripo* has also spread into Togo and Côte d'Ivoire from neighboring countries. It moved about 12 km in the first year, and as much as 200 km in the second year. Today, the cassava green mite predator has been established on more than 400,000 square kilometres of Africa's cassava growing areas. Scientists say the control of the pest through the application of chemicals was ruled out because of possible adverse effects on illiterate farmers and the environment. There is also a risk that disease pathogens and pests will gradually develop resistance to chemicals pesticides over time and that pesticides might destroy the natural enemies and the pests together.

CROPWORLD GLOBAL 2011

CropWorld Global 2011 will be held at London's ExCel Centre from the 31 October to 2 November. The organisers, UBM, say they will be bringing together expert strategists, key opinion makers, government advisers and prominent scientists to address a wide range of issues. The conference will provide an integral platform for the crop production industry to debate the seemingly insurmountable challenge facing governments and businesses today which is: "How will we feed an increasingly hungry world in a sustainable way?"

Other topics being discussed during the conference include the constantly changing world of economic and political uncertainty; the roller-coaster global commodity markets and rising input prices. The event will also showcase the latest in technical innovations and R&D advancements from field to fork. UBM say the conference is the only event of its kind in the world to embrace all aspects of crop production to help the industry meet the challenges and rewards of increasing food production by more than 50% over the next 19 years and doubling production by 2050 to satisfy the world's growing population. Running alongside the conference will be the usual exhibition.

Among the keynote speakers are:-
Professor Sir John Beddington CMG FRS, Chief Scientific Advisor to HM Government
Phil Bloomer, Director of Campaigns & Policies, Oxfam
Felix M'mboyi, Deputy Director, African Biotechnology Stakeholders Forum
Cyrille Filott, Global Head-Europe, Food & Agribusiness Research & Advisory, Rabobank
Marco Ferroni, Executive Director, Syngenta Foundation

CONFERENCES AND FEATURES

BIODIVERSITY POLICY IN THE UK

*A conference on biodiversity policy was held in London on 30 June. The conference, organised by Westminster Food & Nutrition Forum (**www.westminsterforumprojects.co.uk**), brought together around 100 delegates, mainly representatives from the UK Parliament, government officials and industry. Bruce Knight reports on some of the presentations including those that related to crop protection.*

Dr Mark Wright, conservation science advisor, World Wildlife Fund UK, explained that losses of biodiversity can result from a number of activities: habitat loss, such as is at risk in Brazil with extended soya bean production areas; over exploitation, such as over fishing in the North Sea; alien species invasion; climate change impact, not yet a major factor; and general loss of abundance of individual species.

Human activity is the main factor impacting on biodiversity which is emphasised by the fact that in 1900 the global average land area per person was 7.91 hectares. By 2005 it was only 2.02. As Dr Wright put it: "…we are living beyond our bio capacity." He did, however, concede that the losses so far do not affect our lives, but the recorded trends are an important measure for the future.

Chris Knight of PricewaterhouseCoopers (PWC) put some values to the economic impact from biodiversity losses. The figures were based on studies completed by a team of 100 people from PWC, looking at ecosystems and sustainability. Globally loss of forests is the biggest threat, estimated to be worth $45 trillion. In the UK the main risks are coastal erosion - £1.5 billion ($2.5 billion), soil loss - £ 0.25 billion per year, loss of natural pollinators - £440 million per year, with an estimated cost of £1.5 billion to replace them.

Peter Unwin, director general, Environment & Rural, with the Department of Environment, Food and Rural Affairs (Defra), outlined some of the issues raised in a Defra white paper, *The Natural Choice*, released by the UK Environment Minister, Caroline Spelman on 7 June. He summarised the key points of the paper: protecting and recovering the quality of the natural environment through the selected establishment of 'natural improvement areas' allocated through competitions and also through a targeted effort on farmed land; growing a green economy by capturing value to products and services which benefit the natural environment; reconnecting people with nature through the establishment of a Green Infrastructure Partnership with civil society in England; demonstrating environmental leadership internationally and within the EU.

Dominic Dyer, CEO, UK Crop Protection Association (CPA), put the importance of agricultural productivity in the UK in context. Agriculture and the related food supply chain employs four million people and it generates 15% of the UK's GDP. The CPA has been instrumental in a number of important, and largely successful, activities aimed at environmental protection at farm level. The importance of minimising pesticide contamination into water has been a priority through the Catchment Sensitive Farming initiative. The Voluntary Initiative embraces practical field operations such as spray operator training and crop protection management plans. Recommendations are increasingly geared to minimising the impact on non-target organisms. As the projected demand for food increases, Dominic Dyer expects productivity in the UK and the EU to have to continue to grow at 2-3% per year. Less developed regions of the world could be expected to increase by 5%.

Caroline Drummond, CEO, Linking Environment and Farming (LEAF), supported the voluntary approach to environmental farm management. This presents the best approach to changing attitudes of farmers, and through farm visits, of children.

Gareth Morgan, head of Countryside and Species Conservation, Royal Society for the Protection of Birds (RSPB), spoke out strongly against the use of agricultural land for the production of biofuels and bioenergy crops. He also questioned why it was necessary for the UK to continue to strive for increased agricultural productivity for food.

Member of Parliament Neil Carmichael in closing the conference stressed that there needed to be a greater sense of urgency. A holistic approach embracing the food security issues through international dialogue needed to be adopted.

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