

ABN AMRO World Agronomy Report

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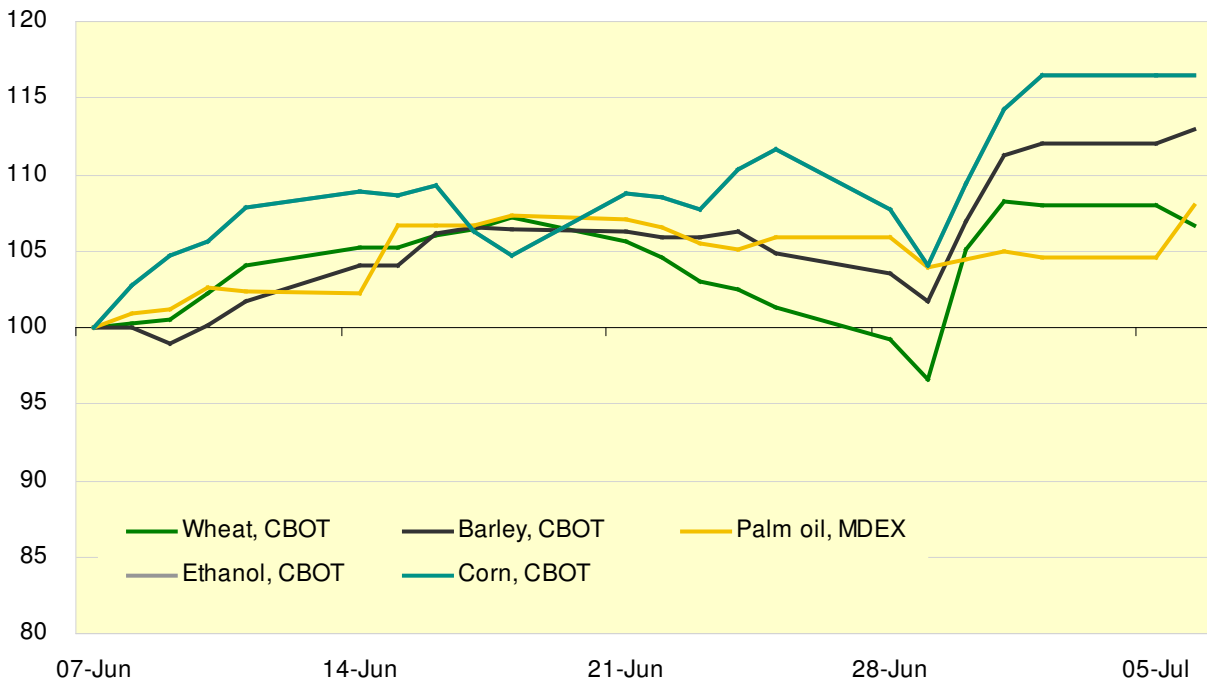
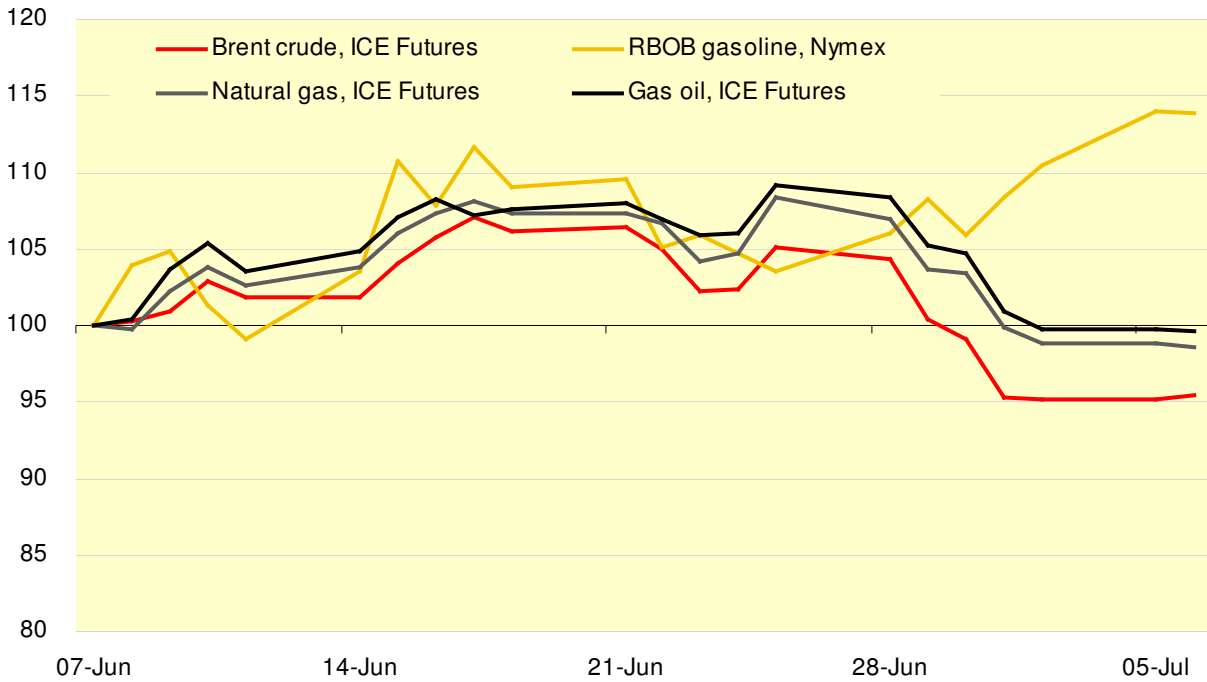
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Selected energy and crop prices, over past month: re-based to 100



Feature



The GM Trojan Horse arrives

By Paul Hannon

This month marks a watershed in the development of genetically-modified (GM) crops in the European Union. Having fought a long and bitter battle against the introduction of new GM products, European legislators are about to ease the approval process for biotech crops, allowing some countries to ban them entirely, while permitting others to grow them under strict new regulations.

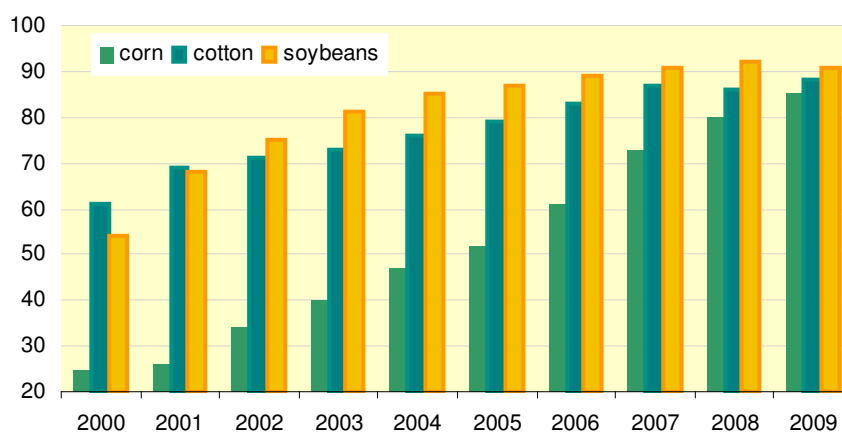
Without doubt the imminent change in EU policy is an unqualified victory for the GM lobby. Millions have been spent promoting the biotech cause in Europe which, after the US, is the biggest market that can afford to take a risk with the science and still pay the exorbitant price of the GM seed. Unless there are some unexpected glitches, large-scale commercial planting of GM crops will soon be underway in Spain, the Netherlands and the Czech Republic, while Italy, Austria and Hungary will have their existing bans on GM crops endorsed by the European Commission.

In itself, this reversal of previously entrenched opposition to GM crops in the EU comes as something of a surprise. But there may be a few other surprises in store for European farmers.

Although the yields from GM crops are impressive, the cost of GM seed is becoming increasingly expensive and, in some cases, seed prices border on extortion. Whether European farmers realise it or not, a fundamental shift is taking place in the economics of agriculture which, while allowing for greater productivity and potentially higher income, will see farmers' operating costs jump dramatically. In other words, farmers – perhaps unwittingly – will come to shoulder a larger part of the risk if a crop fails or a market price collapses.

For example, during 1975-97, US soybean farmers spent an estimated 4%-8% of their gross income purchasing seed. By 2009, farmers planting GM soybeans spent 16.4% of their income on the seed, and those planting Monsanto's Roundup Ready 2 soybeans this year will have spent 22.5% of their gross income on seed purchases. At Monsanto, CEO Hugh Grant is already on record for announcing plans aimed at doubling gross profits for the biotech group by 2012 and, although some revisions to his forecast have been necessary because of the impact on the market of aggressive competition from Chinese fertilisers, he is well on the way to achieving this goal. It might almost be seen as a licence to print money.

GMO varieties as percentage of crops planted in US



Source: VM Group, USDA

How did we get here?

The arguments for and against GM crops frequently become emotionally tangled up in all sorts of scientific detail. Promoters of GM, especially trailblazers such as Monsanto, maintain that their products are safe, although GM seed companies lack

a sufficient track record to offer any farmer or consumer an iron-clad guarantee for the eventual success of his crops or produce. Nevertheless, GM advocates maintain that the benefits vastly outweigh any unquantified risks at the moment. They show that crop yields rise, agricultural-related diseases are fewer, and water use through the development of drought resistant seeds can be significantly reduced.

There is no shortage of evidence showing that agricultural productivity has grown exponentially in the past 200 years as a result of scientific farming practices and the judicious use of fertiliser. Around 1800, an English farmer could expect to harvest under half a tonne of wheat from an acre of land. By the early 1970s, that figure had risen to about 1.5 tonnes/acre and, it had virtually doubled to 2.9 tonnes/acre by 2007, according to the UK's Department for Environment, Food and Rural Affairs. All this was achieved without the benefit, or the unquantified risk, associated with GM crops.

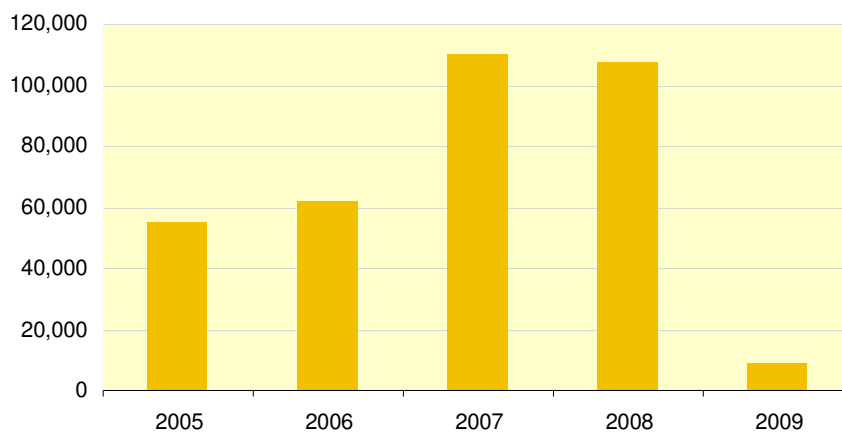
Then there is the thorny issue of independent testing of GM crops. Safety testing has been carried out by the biotechnology companies themselves and deemed acceptable. When testing has been conducted by independent bodies, the results are less convincing and, although some of the research has spawned horror newspaper headlines, it should make governments and regulatory agencies pause for thought. As anyone who has conducted scientific research knows, data can be massaged until the required answer is produced. Biotech companies like Monsanto, Pioneer and Syngenta prohibit the publication of any independent research into their products without their permission, through restrictive end-user agreements.

This reticence about permitting independent research on a new generation of agricultural seeds and pesticides inevitably opens up a space into which anecdotal evidence rushes in. One such anecdote suggests that the US incidence of gluten intolerance spiked following the first mass arrival of GM wheat into the American market a decade ago. There are reports that some GM wheat varieties contain as much as twice the amount of gluten as earlier types of wheat. Such anecdotes do not help anyone's cause; if there is indeed any truth to a link between an increase in the incidence of celiac disease of the small intestine with the arrival of GM crops, the sooner the appropriate research is carried out in this respect, the better.

The biotech companies have taken a lot of flak over their unwillingness to allow potentially critical independent research to be published, but they remain resolute. However, this issue of impartial scientific evaluation will not go away and the pressure on the seed companies to allow independent verification of their own results will become impossible to resist. It may take a decade before this happens,

but in the meantime, the GM seed suppliers rely on well-funded media campaigns that show how they will feed the world in the future.

Cultivation of GM maize in the EU, h/a



Source: VM Group, USDA

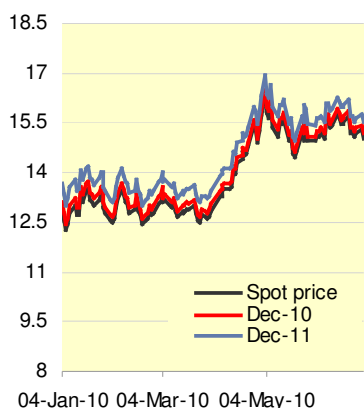
But even these claims of improved productivity have been called into question, notably by Doug Gurian-Sherman, a member of the US science advocacy group Union of Concerned Scientists (UCS), and a former senior scientist at the Center for Food Safety in Washington, DC. With its roots in the Massachusetts Institute of Technology, the UCS is not easily dismissed as a body of cranks. Gurian-Sherman, author of *Failure to Yield: Evaluating the Performance of Genetically Engineered Crops*, maintains that only one major GM food/feed crop – Bt corn, a variety engineered with a gene from the bacterium *Bacillus thuringiensis*, which produces toxins to protect the plant from several insects – has achieved any significant yield increase in the US. This increase in yield amounted to between 3%-4% over a 13-year period, during which time it was grown commercially but, according to Gurian-Sherman, this gain is substantially less than that achieved during the same period by using other methods, including conventional seed breeding. He also makes the distinction between the intrinsic yield (or the maximum potential yield under ideal circumstances) and the operational yield (or the actual yield) of crops, and notes crop breeders must improve the intrinsic yield, while biotech companies have concentrated on improving the operational yield by reducing losses caused by insects and weeds. Gurian-Sherman maintains that no GM crop has yet achieved an increase in intrinsic yield.

One of the problems with GM crops is that once the genie is out of the bottle it will be very difficult – or may prove to be exorbitantly expensive – to return us to a GM-free world. A salutary reminder of the adverse affects of a product unleashed on

consumers – apparently in all good faith – can be seen in asbestos, used a thousand years ago as a fireproof fibre, but which really only entered mainstream markets during the 1800s as a multi-faceted industrial mineral. Although the first recorded death from asbestosis occurred in England in 1924, asbestos remained prevalent for at least another 50 years and was employed in many new enterprises during that period – British American Tobacco even used a carcinogenic form of blue asbestos in its Kent Micronite filtered cigarette brand for four years during the early 1950s. Asbestos remains a stark example of how an industrial product which appears to offer tangible benefits can remain in society long after those benefits have been outweighed by its risks.

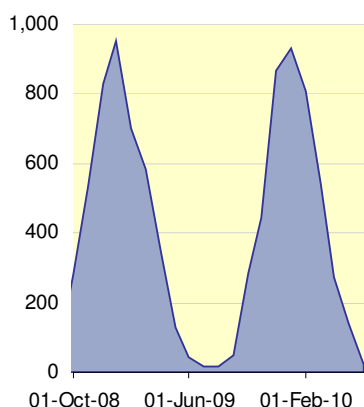
For good reason, critics of GM crops say it is too early to claim these products are without unintended consequences and, if they are found to have significant side effects, the dense economic matrix that will have to be unpicked will be enormous. Early indications from the new UK government are that GM crops are welcome despite persistent public resistance to the sale, let alone the growing, of GM products in Britain. Nevertheless, many EU farmers now preparing to grow GM crops for the first time will be awestruck by the bountiful harvest that they reap. But if independent testing of GM technologies over the next decade shows that there are fundamental defects in the seeds and fertilisers they are now embracing, they will reap a whirlwind beyond their imagination.

ECX carbon prices, €/t



Source: VM Group

United States, heating degree days



Source: VM Group

Source: VM Group

Climate News

- **July 7:** UK climate change researchers at the University of East Anglia were cleared of dishonesty by a review body.
- **June 29:** New Australian Prime Minister Julia Gillard is committed to a carbon trading scheme, according to Australian Climate Change Minister, Penny Wong. However Gillard made it clear that she has no intention of introducing such a scheme before the end of 2012.
- **June 23:** UK index specialist FTSE Group launched two new indices to help investors track climate change risk.
- **June 21:** A Stanford University survey of 1,372 climate scientists found that 97% believe climate change is mainly driven by human activity.
- **June 15:** The UN Food and Agriculture Organization urged Syria to take swift action to halt desertification of the country after three years of drought.
- **June 1:** US government figures show a sharp rise in the acreage affected by wildfires in 2009. More than 5.9m acres of land were damaged by 78,800 fires.

Analysis

Australians move the climate debate ahead

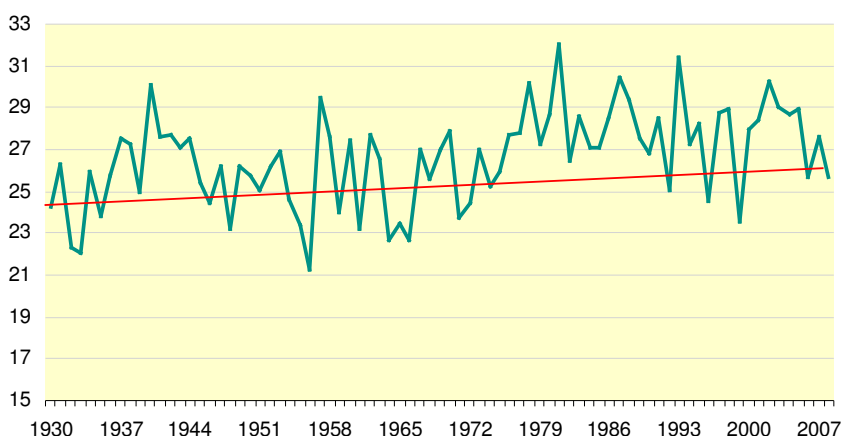
The climate change debate has moved on from scientists discussing whether it exists to how governments should respond to its consequences. This was the message coming out of the Climate Adaptation Futures conference held in late June in Brisbane, and represents an important shift in how climate change is now viewed. "The science tells us that climate change is happening faster than we thought and that the 'window' for us to adapt and prepare is smaller than we thought," said Professor Palutikof, director of the National Climate Change Adaptation Research Facility and co-chair of the conference. Palutikof noted that Australia would be one of the most severely affected among developed countries. "Regardless of what mitigation actions we take now as a nation or globally to cut greenhouse gas emissions, it is too late to mitigate our way out of the problem – we will need a mixture of adaptation and mitigation measures," he said.

UN makes case for weather insurance

Weather insurance policies may be a more effective way of protecting the livelihood of farmers in developing countries than providing emergency aid after bad weather has wiped out their crops. "Every day, we see the effects of weather-related hunger on the people we assist," according to Carlo Scaramella, Climate Change and Disaster Risk Reduction Coordinator for the United Nations World Food Programme. The suitability of weather index-based insurance

emerged following a joint study with the International Fund for Agricultural Development, which examined 37 insurance programmes. Weather index-based insurance uses an objective parameter, such as the level of rainfall at a specific location, during an agreed period, and the terms of the contract are closely linked to the possible loss of production. Policyholders within the same area receive payouts based on rainfall measurements at the weather station close to their farms, removing the need for time-consuming loss assessments in the field.

Mean annual temperature, Fairbanks Intl. Alaska, degrees F, 1930-2009



Source: VM Group, Alaska Climate Research Centre

Turning the heat up in Alaska

The US Department of Energy's Oak Ridge National Laboratory (ORNL) is planning a large-scale, long-term experiment in Alaska to test the effects of global warming on permafrost. Researchers will use above-and below-ground heaters to warm plots of land about 20 metres in diameter that will mimic future warmer climate conditions, according to Stan Wullschleger of the ORNL Environmental Sciences Division. ORNL researchers hope to eventually have replicated plots with treatments that include heating in combination with elevated carbon dioxide. Wullschleger and others working on the project hope to discover whether carbon stored in permafrost will be released as the soil warms. This could have major climate-related consequences. "Evidence is emerging that the Arctic is experiencing a greater degree of warming than the rest of the globe," Wullschleger says. "There is growing concern that this warming is already affecting a wide range of physical and ecological processes in the Arctic, including permafrost degradation. Manipulative experiments will help us study these processes and their consequences in great detail."

Water News

- **June 21:** Police in the southern Iraqi city of Nassiriya used water cannons to disperse crowds protesting over power and water shortages.
- **June 15:** The Vietnam government stressed the urgency to build a new irrigation system in the Cuu Long (Mekong) Delta.
- **June 7:** President Hugo Chávez criticised Coca-Cola and Pepsi for excessive use of water in their Venezuela plants.
- **June 2:** California officials launched a campaign to cut average daily water consumption of 200 gallons (750l) per person in the state.

Outlook

The shortage of water, once considered a curse confined to the Third World, is increasingly seen by affluent developed countries as a major inhibitor of economic growth. Within the European Union agriculture accounts for about 24% of water consumption, compared with 44% for energy production. Although public water supply (17%) and industry (15%) are relatively small users of water resources, they are the two sectors frequently expected to curb consumption. With EU governments revising previous water conservation strategies, the spotlight will turn again on agriculture as a sector where most savings can be attained. The reality is that the days of free or cheap water are gone.

Analysis

Nile states step up battle over water rights

Quiet diplomacy may yet resolve the simmering dispute over the contentious water rights of the Nile River, but publicly the five East African nations that signed a new accord in May to reallocate the water resources of the river are adamant that a new water sharing arrangement is essential for the region. The pact agreed by Ethiopia, Uganda, Tanzania, Rwanda and Kenya has drawn stinging criticism from Egypt and Sudan – two countries that historically have had exclusive rights to Nile water, despite the fact that 85% of the river flow originates in the disenfranchised upstream states. The May accord – known formally as the River Nile Basin Co-operative Framework – is expected to be joined by Burundi and the Democratic Republic of Congo later this year, adding further pressure on Egypt and Sudan to join in water-sharing talks. The next phase of the agreement will entail the creation of a permanent commission empowered to enforce allocation rights, which will be based on population, climate, economic necessity, contribution to the river flow, and current and future water use requirements. Egypt, which objects to major infrastructure projects that affect downstream waterflow, has been exerting pressure on

international development bodies such as the World Bank not to fund upstream irrigation and hydropower schemes.

Canada urged to allow water exports

Canada should repeal legislation banning the export of water and allow Canadian entrepreneurs to sell it to drought-stricken parts of the world, the Fraser Institute, Canada's leading public policy think-tank, concludes in a new report. "Canada is blessed with abundant supplies of unspoiled surface water and groundwater, and bulk exports can be undertaken in an environmentally sustainable way," according to Diane Katz, Fraser Institute director of risk, environment, and energy policy and author of *Making Waves: Examining the Case for Sustainable Water Exports from Canada*. An aversion to bulk exports is based on flawed, emotionally driven arguments and inaccurate facts, Katz claims. "Opponents argue that commoditisation of water violates human rights. But if that's the case, what possible justification can there be for keeping a portion of Canada's surplus water from those in need?" she asks. The Fraser Institute estimates that about 30% of water entering Canada's supply lines is lost through leaks, a figure which rises to up to 50% in older pipeline systems. Repairing Canada's current water supply system will cost about C\$80bn (US\$75.2bn), which the Institute argues could be part-funded by water exports. Canada has nearly 1.2m km² of water area or 37,000 m² per capita.

Irrigation systems reduce health risk

Despite the drought in the north of the country, there was good news for New Zealand dairy farmers in early June, when researchers concluded that pasture irrigation using two different spray systems, instead of traditional flooding techniques, can reduce microbial contamination of groundwater and reduce environmental health risks. Concern had been raised in recent years at the wide use of travelling irrigator and central pivot systems. Instead, the recent research reveals that while levels of some bacteria such as *E.coli* were slightly higher when simulated conditions of heavy rainfall were combined with irrigation, the overall bacteria risk was reduced by using the irrigation systems.

Mauritania offers lessons in sand dune war

As every hydrologist knows, 17 June is the annual day to highlight global attempts to combat desertification and drought. This year the event was marked by the United Nations Food and Agriculture Organization (FAO) publishing a valuable little handbook on sand containment. Called *Fighting sand encroachment - Lessons from Mauritania*, the manual offers important strategies to combat the advance of sand dunes and to conserve valuable land and property assets. While one of the best recommendations in the book is the involvement of local people in the battle to halt advancing sand formations, the manual contains a wealth of hard-won information

such as the fact that 95% of windborne sand travels just 30cm above ground (important for judging the height of screens) and that the choice of hardy local plants can make a critical difference in building barriers. In this respect the FAO planted 857 hectares of threatened land on the outskirts of the Mauritanian capital, Nouakchott, and parts of the southern coastal areas, with 400,000 seedlings produced in local nurseries. Although aimed primarily at halting large-scale desertification trends, the FAO's handbook nevertheless provides critical knowledge for combating sand encroachment problems around the world.

<http://www.fao.org/docrep/012/i1488e/i1488e00.htm>

Land News

- **June 21:** US officials began an aerial census of wild horses in Nevada and Oregon, following complaints about the unnecessary relocation of about 12,000 animals from 4m acres of federal land.
- **June 15:** Brazilian agriculture will grow by more than 40% in the next decade, according to the latest OECD/FAO Agricultural Outlook report.
- **June 12:** Saudi businessmen set up an investment company to lease agricultural land in the Far East.
- **June 9:** The Ukrainian government said it hoped to drop by 2012 a moratorium prohibiting the sale of agricultural land to private investors.

Outlook

World grain production for 2010-2011 is forecast to hit 1,776m tonnes, just under last year's record 1,785m tonnes, according to the International Grains Council. Improved growing conditions in the US and China will offset likely poorer harvests in Canada, the EU and Russia, while increased consumption of 4m tonnes, to 1,781m, will reduce the global grains carryover to just 387m tonnes. Trade in grains is expected to rise slightly by 2m tonnes to 234m tonnes, aided in part by a drop in freight rates in June as new tonnage enters the market and spare capacity is made available following reduced traffic by minerals producers. Higher grain imports are expected in Latin America and North Africa while Near East Asia and sub-Saharan Africa will import less. Poor weather in Canada has already forced grain producers to revise their export forecasts, with a drop of 1.6m tonnes likely to reduce Canadian exports to 19.2m tonnes.

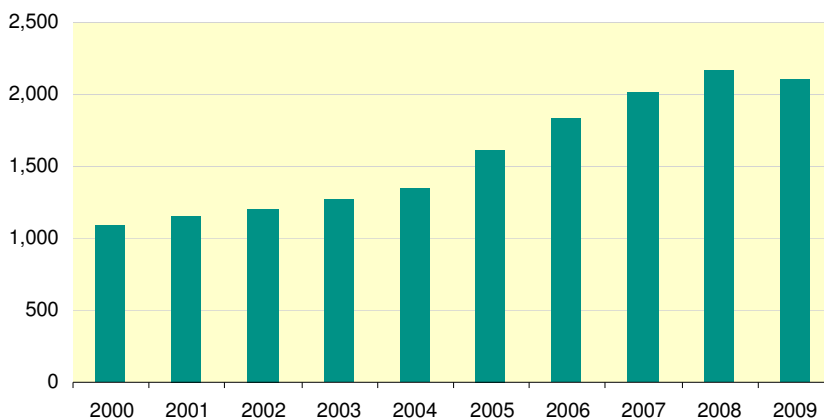
Analysis

Mixed blessings for farmers as land prices take off

The concept of happy farmers is almost an oxymoron, but when it comes to soaring farm prices at least one half of the transaction must be pleased with the current surge in land prices in the US and in the UK. Relentless world demand for food for the next three decades has been cited as the underlying cause of farmland prices passing beyond \$7,000 an acre in Nebraska and Iowa. Some highly productive land – with corn suitability ratings above 85 – have been fetching prices as high as \$8,000/acre. The US is not alone in seeing farm prices jump. In the UK, the average price of farmland rose 6.9% in Q2 2010 to a record £5,769/acre, according to the Knight Frank Farmland Index, while Strutt & Parker calculates that British farmland prices have risen by 134% in the last 10 years and could rise a further 40% to 2015 on tight supply. Within the UK, there are still wide differences in land values,

according to Knight Frank. Good arable land in Scotland has risen 8% this year to £6,000/acre compared with a 13% increase in England.

US farmland prices, \$/acre



Source: VM Group, USDA

UK Farmland prices, £/acre



Source: VM Group, Knight Frank

Switching on to cotton

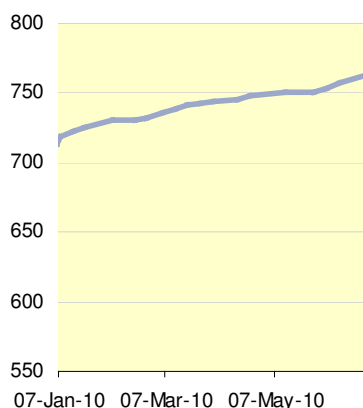
The lure of skyrocketing cotton prices has proven too much for both American and Australian farmers. With prices spiking earlier this year, US cotton farmers are now committing an additional 1.5m acres to cotton in the 2010-2011 season, according to the USDA. This is likely to translate into sharply higher output of 16.7m bales compared with 12.2m bales in 2009-2010. The approach in Australia has been similar but even more dramatic. According to the Namoi Cotton Co-operative,

Australia's biggest cotton processor, farmers are abandoning other crops and turning to cotton planting – so much so that Australian land committed to cotton production is set to soar by as much as 50% from the 210,000 hectares planted last season to a remarkable 300,000 hectares for the 2010-2011 season. Namoi estimates that the sustainable capacity for cotton production in Australia is 3m bales and expects next season's output to rise to 2.5m from 1.6m in 2009-2010.

Corn, corn and more corn

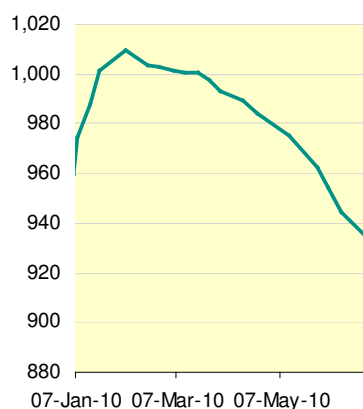
Entries are already flooding in for this year's National Corn Yield Contest in the US. Now in its 46th year, the contest has 24 categories and is expected to attract 7,000 participants from across the Corn Belt, all eager to show just how much corn you can squeeze out of an acre of land. The 2009 competition saw many growers exceed 300 bushels/acre (compared with a national average of 163 bu/a) but top honours went to Bill Wright in the Irrigated Field category, who managed 346 bu/a on part of his farm in Walsh, Colorado using Pioneer seed corn.

European biodiesel, RME, €/t



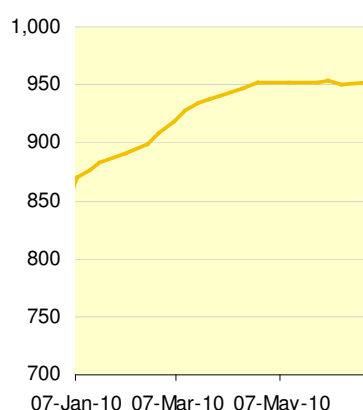
Source: VM Group

European biodiesel, FAME, €/t



Source: VM Group

Palm oil biodiesel, \$/t



Source: VM Group

Biofuels News

- **June 29:** US biofuel producer Pacific Ethanol emerged from Chapter 11 bankruptcy protection.
- **June 24:** The California Energy Commission approved \$15m in grants as part of a \$114m plan to build electric and ethanol vehicle infrastructure in the state.
- **June 21:** Petrobras said it would pay 420m reais (\$237m) for a 49% stake in a new ethanol venture with Brazilian sugar producer São Martinho.
- **June 21:** Clenergen India agreed to buy from Nandha Energy its 18MW/h biomass power plant located 40 miles southeast of Chennai.
- **June 20:** Guyana is moving closer to producing its own ethanol from sugar cane, according to President Bharrat Jagdeo.
- **June 17:** The US Environmental Protection Agency postponed until September any change to the current 10% ethanol mandate.
- **June 15:** Brazil said it would ignore UN sanctions against Iran and export ethanol to the country.
- **June 15:** A consortium led by Brazilian sugarcane processor Cosan said it will shortly seek a licence to build a 373-mile ethanol pipeline in São Paulo state.
- **June 14:** Genencor, the US biotechnology subsidiary of Danisco, launched a new liquefaction enzyme for ethanol production.
- **June 14:** UK chemical group Ineos received a £7.3m (\$11.1m) grant to build a £52m waste-to-ethanol plant in northeast England by 2012.
- **June 8:** Voters in Greenfield, Massachusetts rejected plans for a 47MW biomass power plant.
- **June 7:** The US Department of Agriculture said it will finalise the details of its Biomass Crop Assistance Program within three months.

Outlook

The third generation of biofuels may still be on the drawing board, but for the moment this sector has seen a resurgence of investment – and a respectable return on earlier investment – that has prompted lawmakers to weave biofuels into all their renewable energy strategies. Biofuel capacity will continue to grow as energy planners take fright at the scale of capital costs necessary for hydro and nuclear power programmes and politicians become wary of surrendering their energy security to far-removed oil-producing nations. Meanwhile, the price of CBOT August ethanol recovered previous losses to trade at \$1.58/gallon in mid-July compared with mid-June prices above \$1.60.

Analysis

Tanzania considers its biofuel options

The future for biofuels in Tanzania was under the microscope in mid-June when the UN Food and Agriculture Organization released a report on how bioenergy expansion might affect food security in the East African country. The report concluded that some crops like cassava were unlikely to be expanded for fuel use because of the heavy reliance on them for food production. On the other hand, sweet sorghum and especially sunflower seed had greater potential for cultivation along the northwestern coast of Africa. The suitability of the land for growing sugarcane and oil palm was extremely limited under normal rain-fed conditions, according to the report, but sunflower seed usage in biofuels appears to have the potential to chip away at the country's current diesel consumption levels.

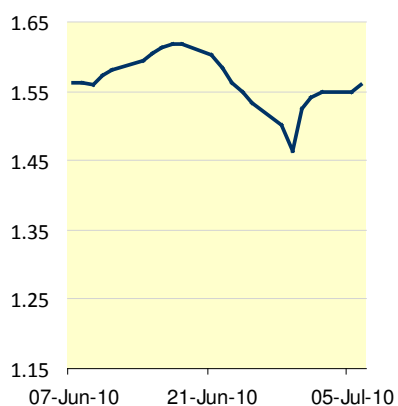
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Sugar no.11, ICE Futures, cents/lb



Source: VM Group

Ethanol prices, CBOT, \$/gallon



Source: VM Group

Huffing and puffing in the EU

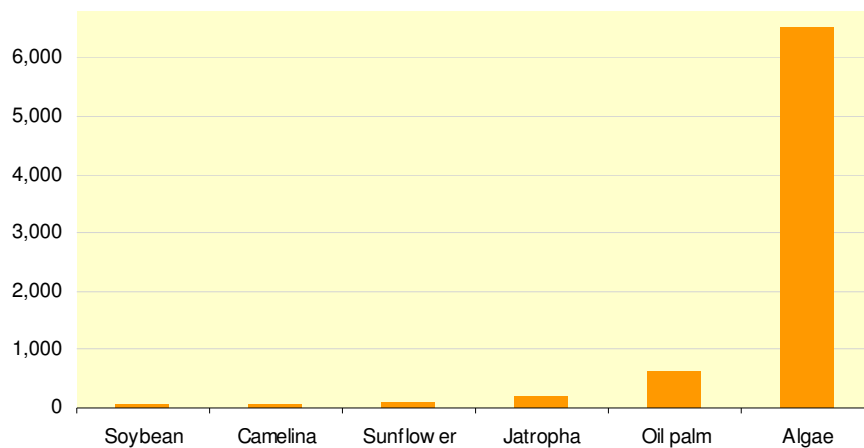
EU Energy Commissioner Günther Oettinger hoped to prove he was not only green, but greener than virtually anyone else in Europe, when he set out proposals for tough new biofuel standards that will discourage production from non-sustainable sources. So out goes biofuel processed from tropical forests or recently deforested areas – only farmland that has been used for growing biofuel crops before early 2008 will be acceptable. As for using drained wetlands and peatland, don't even think about it. Under the new proposals, biofuels that result in greenhouse gas emission savings of at least 35% compared with fossil fuels would in future be acceptable for marketing within the EU. This initial 35% will then be progressively increased to 50% by 2017 and 60% by 2018. If implemented, the proposals will make the EU a much tougher area of the world for local biofuel producers to grow their crops.

Going the distance

The future shape of the emerging algae biofuels industry was sketched out in late June with the publication by the US Department of Energy's (DOE) long-awaited National Algal Biofuels Technology Roadmap, which suggested that the goal of full-scale development is decades away. "Many years of both basic and applied science and engineering will likely be needed to achieve affordable, scalable, and sustainable algal-based fuels," the report cautioned. Although the first scientific discussions about the feasibility of algae use as a fuel source go back to R.L. Meier in his 1955 paper "Biological cycles in the transformation of solar energy into useful fuels", algae-based fuels have been considered peripheral until the successful arrival of the latest generation of biomass feedstock technologies. The DOE report suggests there is huge potential from algae-based fuels in comparison to other feedstocks (see chart),

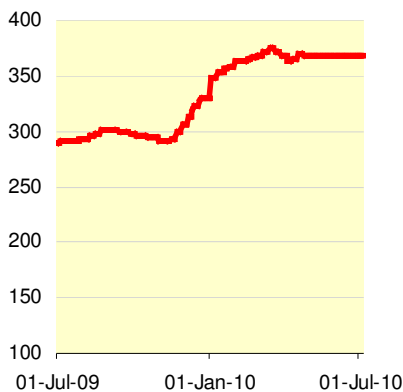
but the technical hurdles and scale of investment to bring such fuels to market will be immense.

Comparative oil yield from biomass feedstocks, gallons/acre per year



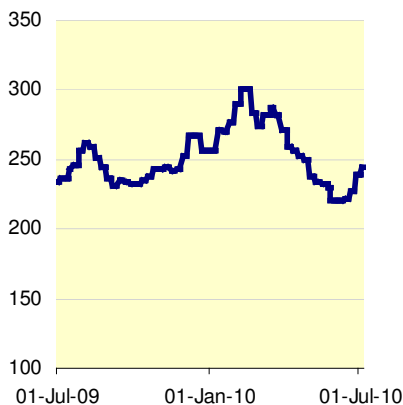
Source: VM Group, US Department of Energy

World diammonium phosphate prices, \$/t



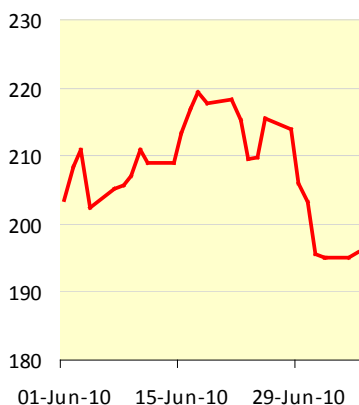
Source: VM Group

World urea prices, \$/t



Source: VM Group

Jet fuel kerosene, NY, cents/gallon



Source: VM Group

Input costs News

- **June 29:** Migao announced plans to build a new 40,000 t/year potassium sulphate plant in Changchun, China.
- **June 18:** The number of cattle on US feedlots at the start of June fell 0.8% to 10.5m compared with the start of H2 2009, according to the USDA.
- **June 18:** 49% of farmland in China was ploughed, planted and harvested by machinery in 2009, according to the Chinese Society for Agricultural Machinery.
- **June 12:** Ghana announced a major reform of state fertiliser subsidies to encourage uniform prices across the country.
- **June 10:** The USDA unveiled a new crop insurance plan designed to cut federal costs by up to \$6bn over 10 years.
- **June 11:** Potash entrepreneur Dmitry Rybolovlev sold his 53.2% stake in London-traded Uralkali fertiliser company to three Russian businessmen.
- **June 11:** French feed additives group Adisseo said it will invest €100m (\$125.6m) in three European plants.
- **June 3:** Philippine brewer and packaging group San Miguel agreed to buy Mariveles Grain Corp from Asian Terminals.

Outlook

The end of the North American planting season usually signals weaker fertiliser prices, but bargain-hunters have been disappointed not to see a repeat of last year's price collapse. If anything, prices have firmed in recent weeks. August Black Sea prilled urea gained fractionally to \$238/\$243 tonne by the end of June while the US Gulf delivered price of ammonia was pegged at \$350/\$360 tonne, with some indications that prices might begin to rise again late in July. Meanwhile, steady institutional investment keeps the pulse beating in the price of farm acreage, although the prospect of another downturn in the economic cycle means that wage inflation will be sidelined for most of next year.

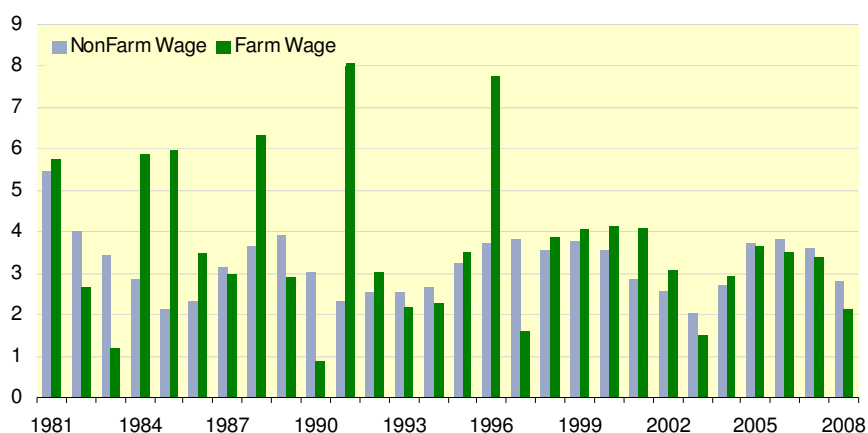
Analysis

Vilsack promises fairer trade

US Agriculture Secretary Tom Vilsack pledged in late June to introduce new proposals that would protect American livestock and poultry producers against unfair, fraudulent or retaliatory business practices. Considered by many as attempting the impossible, Vilsack said new government rules on "fairness and commonsense treatment will ensure a level playing field for producers" by providing additional protection against sharp business practices. Concern over fair practice in the industry has risen due to the dramatic consolidation and

vertical integration in the livestock and poultry marketplace, as well as shrinking farm numbers. Federal figures show that the 666,000 hog farms that existed in the US in 1980 have been whittled down to just 71,000 today. Similarly, in the cattle-farming sector, there were more than 1.6m farms 30 years ago but only 950,000 now. Vilsack also pointed out that in the hog farming industry, producers received 50% of the retail value of a hog in 1980, but only 24.5% in 2009. During the same period, beef producers saw their of the retail value of a steer fall from 62% in 1980 to 42.5% in 2009. Among poultry producers, a breeder makes \$0.34 per bird, while the processing company made an average of \$3.23 a bird.

Comparative annual growth rate in wages



Source: VM Group, USDA

How ya gonna keep 'em down on the farm?

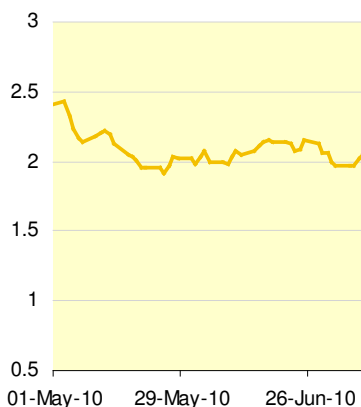
Finding and keeping farm workers has never been easy, but recent figures from the US Department of Agriculture suggest that when it comes to wage rates the lure of high-paid work elsewhere is slowly diminishing. USDA data show that the average US farm wage rate in 1981 was \$3.77/hour. This compares with a non-farm rate of \$7.44/h and a national minimum wage rate of \$3.35/h. In effect, the 1981 farm rate was just 50.6% of its non-farm counterpart. A serious bout of agricultural wage inflation during the 1980s eroded some of this disparity, so that by the end of the decade, hourly wages for US farm workers were 54.7% of non-farm employees. This trend has continued – aided by further hefty farm inflation during the 1990s – but it has evidently slowed down for much of the last decade. By 2009, the average hourly rate for US farm workers was \$10.82 compared with \$18.60 for non-farm employees. This equates to farm workers earning 58.2% of the pay of non-farm employees. One sector that has missed out on the inexorable rise of hourly wage rates in the US has been the farm workers who have been paid the minimum wage,

Diesel price, NY, \$/gallon



Source: VM Group

RBOB Gasoline, Nymex, \$/gallon



Source: VM Group

which has more than doubled over the past 30 years from \$3.35 in 1981 to \$7.25 last year.

Furthermore, wage rates vary substantially from state to state in the US. Currently farmers and workers alike in California have been watching closely the efforts of state senator Dean Florez in his efforts to extend the provisions of overtime payments to field workers. At present, hourly workers in the state qualify for overtime after working eight hours a day and 40 hours a week, while agricultural workers have been entitled to overtime since 1976 after 10 hours in a single day and 60 hours in a week. Florez, who once worked a summer job in Kern County by packing potatoes, wants to remove this discrepancy but not everyone is convinced of the potential benefits. Even the United Farm Workers Union, which has a long history of labour agitation in the state, has decided to stay out of the fray in this instance, preferring to concentrate its efforts on gaining wider union recognition in California.

California opens door to methyl iodide

Soft fruit producers in California will be allowed to use methyl iodide as a pesticide from July, following a decision by the state's Department of Pesticide Regulation to license the chemical. Despite protests from a wide body of scientists over its carcinogenic nature, methyl iodide was approved by the US Environmental Protection Agency in 2007 as a replacement for methyl bromide, which was deemed too harmful to the ozone layer. Produced by Arysta LifeScience under the brand name Midas, methyl iodide is now available in 48 states and is applied on an estimated 15,500 acres of fruit and vegetable production in the US southeast.

Pay rise for SA forestry workers

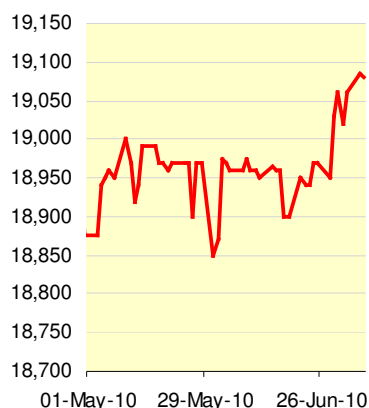
South African forestry workers received a 7.3% boost in their minimum wage for the 12 months up to March 2011. The increase means that the new minimum hourly rate is R6.26 (\$0.80) with the weekly rate rising to R282 and the minimum monthly wage is now set at R1,222 (\$157). The pay scale applies to workers aged 15 and older, and to employees who work no more than 35 hours a week.

Once again, it's organic versus chemical

The use and application of animal manure as a fertiliser can be more cost effective than using anhydrous ammonia, according to research conducted by agricultural economist Seong Cheol Park, at Oklahoma State University. Although no significant corn yield differences were found between chemical and organic fertilisers, producers benefited by cutting waste management costs and eliminating chemical nutrient purchases. Park's experiment compared the application of pig and cow manure on irrigated cornfields with using anhydrous

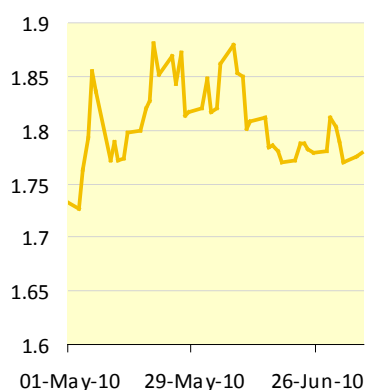
ammonia at three different rates of 50, 150 and 450 pounds of nitrogen per acre. Pig manure had the lowest costs at \$12.06, \$17.98 and \$34.51 per acre respectively, compared with \$30.86, \$54.88 and \$126.95 per acre for anhydrous applications. The decision to use one form of fertiliser over another will be determined not only by the higher costs of chemical fertiliser but also the cost of labour and equipment to apply each type.

\$/VND (Vietnamese Dong)



Source: VM Group

\$/BRL (Brazilian Real)



Source: VM Group

\$/CNY (Chinese Yuan)



Source: VM Group

Currencies & finance

News

- **July 7:** Agricultural Bank of China announced the final price of its initial public offering, which will raise \$19.2bn.
- **July 1:** UK agri-processing group Tate & Lyle said it sold its European sugar refining unit to American Sugar Refining for £211m (\$320m).
- **June 28:** Investment in the Russian pulp and paper industry plunged 51% in Q1 2010 to 1.9bn roubles (\$61m), according to statistics agency Rosstat.
- **June 17:** Speculators have little impact on agriculture and oil futures markets, according to an OECD report.
- **June 17:** The European Bank for Reconstruction and Development approved a \$50m loan to Ukrainian agri-group Nibulon, to improve shipping and grain storage facilities.
- **June 17:** Chinese timber investment group China Forestry took over Hanzhong Hengtai Bio-Tech in an all-share transaction.
- **June 8:** Clenergen Philippines, which is developing a power plant fuelled by bamboo wood chips, said it hopes to launch an initial public offering on the Philippine Stock Exchange in the next 18 months.
- **June 3:** The strength of the Australian dollar triggered a sharp rise in imports of European wine in Q1 2010, according to the Australian Bureau of Statistics.

Outlook

The unpegging of the yuan against the dollar and effectively fixing it against a basket of currencies is a strategy that may yet backfire on its originators. Showing that they are prepared to play their part in effective international exchange rate management, the Chinese have opted instead to permit a limited flotation of their currency, but not by too much.

Similarly, they are not interested in a massive one-off devaluation. As the Americans say, everyone lauds motherhood and apple pie, but while stable exchange rates are desirable they inevitably come at a cost. China's export industries will find themselves more exposed than ever, and cheaper agricultural imports are going to overwhelm rural farming in the country. Beijing feels it is in control of its currency at the moment, but the real test lies ahead in the coming months.

Analysis

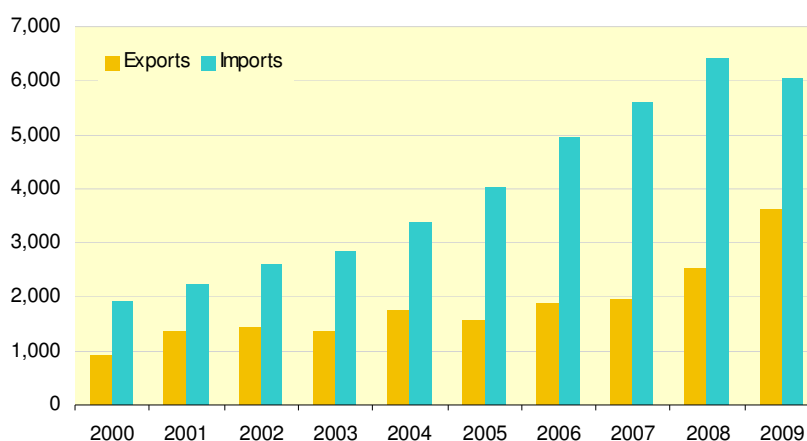
Santos win buoys Colombian peso

The landslide June election of former defence minister Juan Manuel Santos as the new president of Colombia – he will be inaugurated in August – has already had a positive economic impact on the country, despite the ongoing mind-games

being played with neighbouring Venezuela. Santos, who studied at both Harvard and the London School of Economics, has said the country's budget deficit of 3.6% of GDP will be eliminated by 2014. Nevertheless, a sharply higher Colombian peso (COP) in the wake of the election has made life more difficult for exporters – the peso/US dollar exchange rate by early July was 1,885, compared with the COP 2,202 rate in late May. The peso has risen more than 8% so far this year, impacting on Colombia's crucial floricultural business, which is worth an annual \$1bn in the US. Some thawing of strained economic relations with Venezuela may occur soon if Caracas goes cap-in-hand to purchase Colombian electricity, because its own hydroelectric industry has been paralysed by drought.

New Zealand places hopes on exports

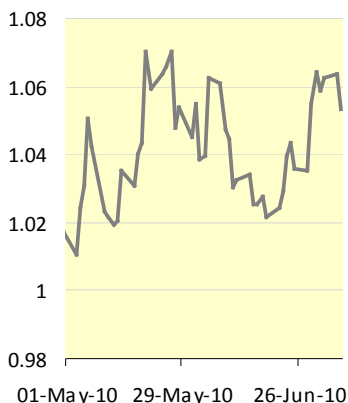
Annual merchandise trade between New Zealand and China, fob \$NZm.



Source: VM Group, Statistics New Zealand

Following a fourth consecutive quarter of growth in the New Zealand economy, central bank governor Alan Bollard raised interest rates by a quarter of a percentage point to 2.75% in early June and hinted that further rate rises will follow later this month – probably to 3% – in an effort to reduce the flow of cheap money in the economy. The Ministry for Agriculture and Forestry noted that exports have contributed much to the economic rebound: "China dramatically increased its purchases of agricultural and forestry products from New Zealand for the year ended December 2009. Earnings from primary product exports to China rose 49%, to NZ\$2.19bn (US\$1.5bn), with dairy and forestry the big contributors." While dairy exports have been hit by a drought on North Island, log exports to China are expected to jump 22% in the year ending June 30, in the wake of Russia introducing a tax on timber exports. The New Zealand dollar strengthened in the wake of the report and by early July was trading at 68.83 US cents.

\$/CAD (Canadian Dollar)



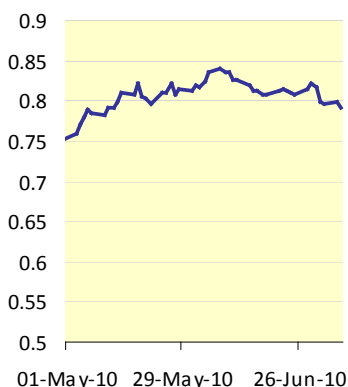
Source: VM Group

\$/AUD (Australian Dollar)



Source: VM Group

\$/€



Source: VM Group

Russians move to cut risk

When Russian Prime Minister Vladimir Putin said in late June that only 10% of agricultural producers in Russia were insured against financial loss, he was highlighting an increasing awareness among policymakers that the farm sector was unnecessarily exposed to factors outside its control and that steps needed to be taken to reduce this risk. Putin's comments come in the wake of a revealing report published by insurance group Swiss Re on the potential appetite for more sophisticated financial instruments among Russian farm enterprises. The Swiss Re report surveyed 250 of the largest farms in the country's most important agricultural region and revealed that extreme weather was the greatest factor affecting 70% of the farms. Following close behind were concerns on cost increases and falls in agricultural prices. The surveyed farms were on average 4,300 hectares in size, growing mainly wheat, sunflowers, barley and winter rye, and the farmers were generally well educated with a high level of knowledge but deep mistrust of insurance products. Nevertheless, commodity price hedges were seen by many as a useful tool, and input cost hedges were being examined for future use. The study extolled the huge future production capability of Russian agriculture and concluded that greater access to insurance and futures markets will open up the sector's full potential.

http://media.swissre.com/documents/pub_sowing_the_seeds_en.pdf

Late bloomers in China

And finally spare a thought for those lucky enough to get a share allocation in the Agricultural Bank of China's (ABC) initial public offering. The day before the rural bank announced the pricing of its shareholder offer, Kenneth Rogoff, the Harvard University professor and former chief economist of the International Monetary Fund, warned that the property market in China was on the verge of collapse and that the banking sector would inevitably be hit by the fallout. Although ABC has been refreshed by this latest injection of capital, it already has substantial recognised loan problems on its books. At the start of this year, its overall non-performing loan ratio was 2.91% – the highest among the country's leading lenders – while 3.47% of its loans to property developers were delinquent. Any investor hoping for a quick rise in the ABC share price may have to wait some time before these flowers blossom.

Agri R&D News

- **July 1:** Organic farming can lead to higher potato yields compared with farms using pesticides, according to Washington State University researchers.
- **June 18:** Spending on agricultural R&D in Ghana has doubled to the equivalent of \$92m since 2002, according to data from Agricultural Science and Technology Indicators.
- **June 11:** Biotechnology group ArborGen started trial planting of 250,000 genetically altered Australian eucalyptus trees in seven US states.
- **June 11:** The US Geological Survey published the first detailed national map of landcover vegetation.
- **June 7:** Work began on a \$3.75m pilot wind-powered fertiliser plant at the University of Minnesota that will make anhydrous ammonia.

Analysis

Higher yields cheaper than expansion

Improving agricultural yields produces fewer greenhouse gas emissions than expanding farmland, according to a study conducted at Stanford University. Jennifer Burney, along with David Lobell from Stanford and Steven Davis from the Carnegie Institution of Washington, found that although intensive agriculture has resulted in increased emissions from fertiliser production and application, the amount of land spared from conversion to cropland by higher yields was greater. The authors estimated that agricultural improvements during 1961-2005 – a period in which the world's population increased by 111% and crop production rose by 162% – may have averted 160 gigatons of carbon emissions. Increasing yields, says Burney, should be part of any greenhouse-gas mitigation policy and need to be combined with conservation efforts and nutrient management. The findings of the study were published in late June in the Proceedings of the National Academy of Sciences.

Boost for US grape growers

The US government has committed \$7.2m in research funds to help American grape growers reduce water demand without affecting yields or quality. Spread over five years, the funding was seen by the National Grape & Wine Initiative (NGWI) as a way to address water scarcity, impaired water quality, poor weather and climate change. Jean-Mari Peltier, president of the NGWI said the project would address the problems growers are facing with water scarcity and salinity issues. There are 23,800 grape-growing enterprises in the US (5,000 of which are wineries) covering 930,000 acres of land.

Nitrogen research

Researchers at Pennsylvania State University's College of Agricultural Sciences have found that straw residue left in fields after harvesting grain can significantly reduce nitrogen leaching into nearby water channels. Three different quantities of straw residue were studied on research plots planted with hairy vetch and later planted with a corn grain crop. Noticeable differences in the magnitude of the nitrogen peak in the soil and the timing of the peak were discovered. Although inorganic nitrogen levels were lowered, corn yields were also reduced by up to 16%.

Canadians invest in non-wood paper

The Canadian federal government and the province of Manitoba have agreed to fund a C\$400,000 (US\$376,000) R&D programme to produce high-quality eco-friendly paper from agricultural crop by-products. A test run of 3,000 sheets of wood-free, chlorine-free paper made from straw has been well received by commercial paper buyers, according to Stan Struthers, Manitoba's Minister of Agriculture, Food and Rural Initiatives. If the next production run of 200,000 sheets of paper is successful, the long-term goal is the construction of a C\$600m commercial scale non-wood and paper mill in the province capable of producing 200,000 tonnes of paper annually.

Rise in malaria follows logging in Amazon

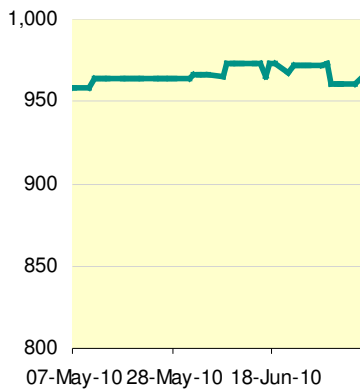
Logging activity in the Brazilian rainforest may be the cause of an increase in the incidence of malaria occurring in the Amazon Basin, according to researchers in Wisconsin. Sarah Olson, lead author of the study published by the Center for Sustainability and the Global Environment, has matched patterns of deforested areas with a spike in malaria cases in surrounding areas. Logged areas with more open space and partially sunlit pools of water are ideal breeding grounds for the *Anopheles darlingi* mosquito, the main carrier of malaria in Brazil.

New claims of bio-piracy in Africa

Fresh claims of bio-piracy are being levied against US corporations and academic institutions intent on developing new generations of crop specialities. The African Centre for Biosafety (ACB), a Johannesburg-based non-profit organisation, launched a new campaign in mid-June against what it sees as the plundering of native crops by overseas groups. The focus of the ACB's action is sorghum – a crucial foodstuff in Africa that now holds tantalising prospects for a wide range of biofuels. In its attack on Ceres, Edenspace, the Texas Agricultural and Mechanical University and Rutgers University, the ACB likens the arrival of these northern biotech groups to 19th century explorers claiming sovereignty over vast tracts of Africa. At issue is the patenting of crop varieties and the subsequent reselling of them in a proprietary form to African farmers. "The combination of a rise in patent

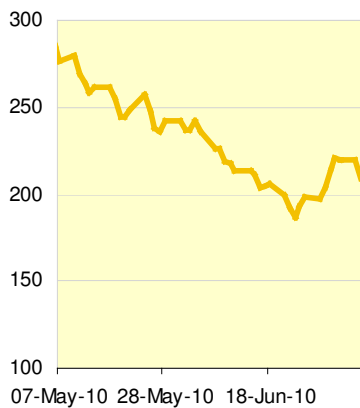
claims and international consolidation of the sorghum seed industry spells trouble for African farmers,” the ACB asserts in its pamphlet *The Sorghum Gene Grab*. Even though the magnitude of the fight has a David-and-Goliath appearance, the ACB scored a notable victory in April when the German pharmaceutical company Schwabe withdrew five patent applications for Umckaloabo, a traditional South African root variety that has a long history of successfully treating bronchial conditions.

Softwood pulp futures, CME \$/t



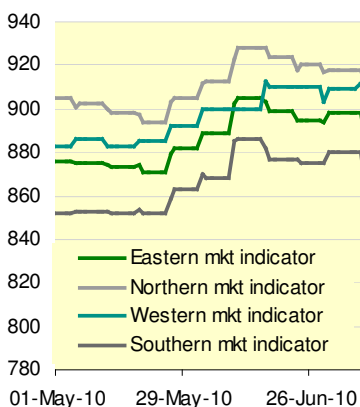
Source: VM Group

Lumber futures, CME, \$/mbf



Source: VM Group

World wool prices, Australian market indicators



Source: VM Group

Specialty markets News

- **June 27:** The Indonesian government urged the country's population to eat more fruit, currently an annual 32kg per capita, or half of the FAO recommended 65kg annual intake.
- **June 25:** EU organic olive oil producers convened in Italy to discuss improving the competitiveness of their product over non-organic oil.
- **June 21:** Reduced planting cut this year's Cuban tobacco harvest by 14% to 22.4m leaves, according to official figures.
- **June 14:** The USDA banned the Nebraska-based Organic Crop Improvement Association from certifying organic foodstuffs from China.
- **June 9:** Flooding in Poland caused extensive damage to farms growing hops, apples and soft fruits.
- **June 8:** The South African government described the discovery of a new fruit fly strain, which has spread throughout areas of Zimbabwe, as a serious threat to its own fruit industries.

Analysis

Winemakers face higher output as sales drop

Italy, France and Spain accounted for 47% of global wine production in 2009, according to the latest figures from the International Organisation of Vine and Wine (OIV). Despite the commanding position of these European producers, 2009 production in both the 15-member and 27-member European Union slipped to the lowest level in 15 years. The OIV noted that even though wine production increased last year, world consumption dropped 3.6%. Whereas the US is the world's fourth largest producer, Argentina and Chile dominated output in South America. Although Chile had a record harvest (14% up on 2008) the wine industry suffered a severe setback last February when the earthquake in that country destroyed 1.25m hectolitres of wine stocks, or the equivalent of 12% of output in 2009.

Connecticut taps into new funds

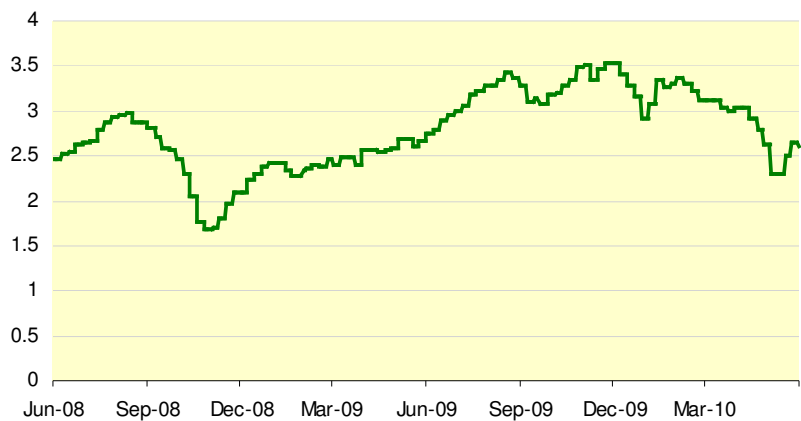
Connecticut is the latest US state to benefit from the USDA's Speciality Crop Block Grant Program which allocated in early June \$440,000 to improve the competitiveness of 10 projects in the state. The Connecticut Department of Agriculture will use some of the funds to team up with the state's Maple Syrup Producers Association to increase the number of maple trees tapped and to improve the quality of production equipment. The grant program, which is available throughout the US and its overseas territories, has a dispersible budget of \$55m during fiscal 2010.

Drought hits New Zealand dairy exports

Drought in New Zealand's North Island has resulted in a 16% drop in dairy exports to NZ\$9.9bn (US\$6.8bn) for the year to 30th June, according to the country's Ministry of Agriculture and Forestry. The downturn occurred despite an increase of 4% in the number of dairy cows available for milking in the 2009-10 season. Milk production is expected to recover in 2011 and the government is optimistic that over the next five years price rises will also be secured for beef, lamb, wool, wine, kiwifruit and forestry products. The ministry is forecasting a milk price of NZ\$7.21/kg milk solids by May 2014 compared with its current level of NZ\$6.10/kg. At that higher level, New Zealand dairy earnings are expected to reach NZ\$15.7bn. Much of the export growth is expected to come from China.

Tea producers urged to think locally

Composite black tea price



Source: VM Group

Tea-producing countries should aggressively promote the beverage in their home markets if they want to avoid a collapse in farm income as export markets stagnate, the UN Food and Agriculture Organization (FAO) advised in a report published in late June. The FAO Composite Price for tea, the indicative world price for black tea, rose 13% last year as major tea growing nations in Asia and Africa were hit by drought. While black tea exports are forecast to grow 1.8% during the next decade to 2019, green tea exports are expected to perform much better with annual growth of 5.5% projected during the same period. Although China remains the world's largest producer of tea, some tea-growing nations rely on the beverage for a large portion of their exports. Among those with a heavy reliance on tea for their agricultural export receipts are Sri Lanka (50%) and Kenya (35%).

US call for action against honey launderers

US honey producers are lobbying hard in Washington political circles following the June seizure in Philadelphia by Food and Drug Administration (FDA) officials of Chinese honey imports contaminated with unregulated antibiotics. US producers claim that China is using a complex “honey-laundering” network of third countries to avoid US duties, which have been in force on Chinese honey imports since 2001. The US remains a lucrative market for overseas supplies of honey, especially in the wake of the colony collapse disorder that has wiped out huge swathes of the American honeybee population. US Department of Agriculture (USDA) figures show that domestic US honey production plunged 12% to 144m pounds last year, allowing for a further 200m pounds of honey imports, mainly from Asia. Now, US producers want a purity standard that will effectively block cheap, unregulated imports from China via countries such as India, Malaysia and Taiwan. They are calling for a 100% purity standard that will eliminate the importation and distribution of honey in the US which is diluted with cheap sweeteners. Although the FDA is sympathetic to the calls for stricter honey standards and controls, it admits that its resources are already stretched and would find it difficult to raise the priority of honey producers over other issues. US honey producers did have some good news early in June when the USDA launched a 13-state survey of honeybee pests and diseases. “Bee health is critical for the success of pollination-based agriculture, which produces about a third of our diet in the United States,” said Agriculture Secretary Tom Vilsack.

Policy News

- **July 1:** Organic farmers should be given subsidies similar to producers of green renewable energy, the UK Soil Association urged.
- **June 23:** Indonesia's trade ministry said it would keep its export tax rate for crude palm oil at 4.5% in July.
- **June 22:** Unloading of the first shipment of US corn to China in 15 years began at Longkou Port in Shangdong Province.
- **June 21:** EU farm commissioner Dacian Ciolos said he was studying proposals for a publicly funded income insurance scheme for farmers.
- **June 21:** USA Rice Federation officials visited Havana to discuss food import policy with the Cuban government.
- **June 16:** The European Milk Board, representing dairy producers throughout Europe, rejected new proposals put forward by the European Union's High Level Milk Group to reform EU milk production.
- **June 12:** The Cuban government sacked General Ulises Rosales del Toro as agricultural minister.
- **June 10:** Vietnam announced plans to boost cocoa production from its current 1,000 tonnes/year to 108,000t/y by 2015.
- **June 9:** Ukraine's Agriculture Ministry said it will set up a state-controlled grain trading company by the end of the year, possibly with involvement from private companies.
- **June 3:** The US Environmental Protection Agency issued a new standard on sulphur dioxide emissions – its first change in four decades.

Analysis

Monsanto scores big court win, or did it?

Monsanto scored a major victory in the US Supreme Court in late June when judges struck down a 2007 injunction banning farmers from planting its Roundup Ready alfalfa seed. Despite the victory, environmentalists and organic farmers who opposed the genetically modified seed, claimed the court's restriction on the use of the seed until an environmental impact study was completed meant that nothing had changed. No date has been agreed for the conclusion of the study. Monsanto supplies about 90% of all GM seed in the US, both under its own proprietary brands such as Roundup Ready, and through licensing of its biotechnology to other seed growers. Given the success of the alfalfa seed case, Monsanto looks set to score another court battle soon over the use of its sugar beet seed. But as the legal casebook builds up for Monsanto, opponents of GM foods in the US continue their trench warfare against the biotech group. Despite the court win, some US investors are concerned about a Monsanto share price that has plunged from \$86 at the start of the year to just \$45 by early July.

FAO lends support to light regulation

The introduction of limited regulation in the commodity futures markets could be beneficial, the UN Food and Agriculture Organization (FAO) said in a policy update in late June, but the international body warned against tight controls and opposes any ban on futures trading. Futures speculation appeared to affect prices in the short term only, the FAO concluded, and efforts to reduce speculation might have “unintended, longer-term consequences” such as diverting “speculators from trading and thus lower the liquidity in the markets available for hedging purposes.”

Acknowledging that only 2% of futures contracts actually end in the delivery of the physical commodity, the FAO accepted the role that large commodity funds play in bringing liquidity to the markets. “Commodity futures have become an integral part of the food market, and they perform an important role for many market participants. Adequate regulation should improve, not ban, speculative trading in order to foster market performance,” the brief concluded.

African village policy shows early success

The groundbreaking Millennium Villages Project in Africa came under close scrutiny with the recent publication of a report into the first three years’ experience of the scheme. Since their large-scale introduction in 2006 in sub-Saharan African hunger hotspots, the villages have seen dramatic rises in agricultural output and significant improvements in health and education benchmarks as a direct spin-off of the higher farm yields. Published by the Earth Institute of Columbia University and the United Nations Development Programme, *Harvests of Development in Rural Africa* reveals that maize yields rose on average from 1.5 tons per hectare to 4.3 tons. Much of the improvement was down to a wider use of fertiliser. African farmers currently use about 8kg of fertiliser per hectare annually, compared with an average of 100kg in other developing countries and up to 200kg in developed countries. Launched in 2006 as a way of boosting farm productivity and improving local health conditions, 80 Millennium villages in sub-Saharan Africa each receive \$600,000 annually for five years and are seen as a possible template for breaking the cycle of aid dependency in Africa.

About VM Group

VM Group is a commodities research consultancy that covers not just conventional energy, but also renewable energy, carbon, base and precious metals, and agricommodities. The VM Group comprises a uniquely skilled team that is highly experienced in the analysis of the fundamentals of commodities and their geopolitical impact and contexts.

VM Group work excels in macro-economic analysis, the generation of supply and demand scenarios, costs analysis, derivative research and price forecasting. Confidentiality, experience and independence are key elements in this advisory capacity. We deliver excellence to those in need of external expertise, as well as those who wish to supplement their own in-house resources. Our extensive international contacts mean we are able to span the globe.

To see further how we can meet your research and consulting requirements, please email: info@vmgroup.co.uk

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