



AgraQuest's biopesticides mean business

US company AgraQuest is taking biopesticides into the mainstream. CEO Marcus Meadows-Smith tells Andy Beer about AgraQuest's strategy and its plans for growth

Biopesticide companies have come and gone, but AgraQuest will mark 15 years in the business next year in a sound position and with ambitious growth plans. It has established products, a pipeline full of prospects and a chief executive who aims to take the company public as part of a five-year plan to achieve sales in excess of \$200 million.

AgraQuest puts its success down to selecting and marketing products that work effectively for organic and conventional growers and can stand comparison with established pesticides. "AgraQuest has a compelling platform of unique, highly efficacious products that are not only environmentally friendly, but produce higher yields as well," says chief executive officer Marcus Meadows-Smith. "They perform consistently and, when launched, have taken market share and developed strong customer loyalty. This has given us the confidence to persevere."

The company has received strong financial backing from the financial community, which has provided funding of over \$130 million towards product development and commercialisation. "Our investors' confidence is being repaid as AgraQuest is now cashflow positive, with several established and growing brands," Mr Meadows-Smith points out. However, the company will need a further injection of cash to accelerate the next generation of product leads through its development pipeline. It plans to conduct an initial public share offering to raise the funds in late 2010 or early 2011, depending on market conditions.

In addition to supporting the development of new products, the funding will be needed to secure EU approvals of products already on the market.

AgraQuest's biofungicide, Serenade (*Bacillus subtilis* strain QST 713), is its only product to be listed on Annex I of the EU agrochemical registration Directive (91/414). It is also looking towards Annex I listing for Sonata (*B. pumilus* strain QST 2808) and its plant-derived insecticide/acaricide, Requiem (*Chenopodium ambrosioides* extract).

While biopesticides have reduced regulatory requirements and accelerated review times in the US, the EU process is considerably more onerous and makes no distinction between biopesticides and conventional pesticides. AgraQuest hopes to introduce up to six new products over the next three years, but none of these are likely to gain EU approvals within the next three to five years unless there is a dramatic change to the EU regulatory process.

That is rather ironic, given the EU's tough stance on conventional chemistry and the opportunities for biopesticides being opened up by the banning and withdrawal of traditional products. AgraQuest sees good opportunities for its biopesticides as resistance management tools in view of the loss of older products and the shortage of new classes of synthetic chemicals coming to market.

The need for increased food production and the drive from consumers and regulators for food with lower levels of pesticide residues are also seen as important factors in accelerating the acceptance and growth of biopesticides. "We believe this will soon become a \$5,000-10,000 million low-chemical sector," Mr Meadows-Smith declares.

It is a sector that the R&D-based multinationals are also keen to exploit. The growing interest in biopesticides has been demonstrated by company and product

acquisitions, and distribution deals by players such as BASF, Bayer CropScience and Syngenta. AgraQuest is particularly proud of its recent distribution deal for Serenade with BASF. Such deals "validate our strategy", AgraQuest's CEO maintains. "I am not yet sure if it has changed the way people view biopesticides generally, but it has certainly changed the way people view AgraQuest and our products. It has strengthened our image in the eyes of many companies, distributors and growers."

AgraQuest views Serenade as "an exceptionally good fungicide" and places it in the same class as naturally-derived pesticides such as strobilurin fungicides and the insecticides, spinosad and abamectin. BASF's interest in the product therefore came as no surprise. "We would not say that all biopesticides on the market are as effective and consistent as Serenade, Sonata and Requiem, but we have found that many people have taken note of our deal with BASF and are looking at biopesticides with new or renewed interest," Mr Meadows-Smith says. "We have recently received a large amount of interest in our pipeline of products from companies that we would not have associated with biopesticides in the past."

BASF is a "great partner" for Serenade, the AgraQuest CEO declares. The biopesticide firm will gain from the multinational's fungicide marketing expertise and its extensive global network. As a result, it expects sales of Serenade to grow rapidly in existing markets and in new markets that AgraQuest had not even considered. One of BASF's priorities is to introduce the biofungicide in Brazil, where the registration is eagerly awaited. Serenade is well suited to the crops and disease pressures in Brazil and AgraQuest

is keen for its product to enter the world's leading fungicide market.

The BASF deal covers many countries throughout Europe, Africa, the Middle East, Asia and Latin America. The rights include exclusive distribution in countries not covered by existing AgraQuest partnerships. Where contracts allowed, some existing partnerships were ended in favour of BASF's distribution.

The deal is limited to Serenade, but AgraQuest would certainly consider distributing additional products through the multinational if it were of mutual benefit and interest. It is also in discussions with other multinationals for some of its products for a range of markets. AgraQuest expects several of its new products to be sold through multinationals, with others going through local distributors.

The selection of distribution channel depends on the product and the country. "Our selection of distributors has shifted to identifying the best partners who can service both conventional and organic farmers, and who can deliver low-chemical solutions either through tank mix or spray programmes that include both biopesticides and synthetic chemicals," Mr Meadows-Smith points out.

When Mr Meadows-Smith joined AgraQuest in May 2008, he was struck by the similarities in the sales and distribution of biopesticides and conventional pesticides. In the US, AgraQuest's products are sold through the large distributors such as Wilbur-Ellis and Helena that the CEO was familiar with from his days running Chemtura's agrochemical business.

Mr Meadows-Smith has plenty of industry experience. He was working in Sumitomo Corporation's agrochemical business in the 1980s before starting a 14-year career with Uniroyal and its successors, Crompton and Chemtura. Before joining AgraQuest, Mr Meadows-Smith was running a \$1,900 million portfolio of Chemtura businesses comprising crop protection, consumer products and plastics additives.

AgraQuest's former CEO, Mike Miille, worked with the board of directors to bring Mr Meadows-Smith to the Davis, California-based company. The former Chemtura executive was chosen for his

agrochemical experience and industry relationships, and for his track record of growth with large public companies. Mr Miille remains as president and chief operating officer, with a focus on manufacturing and R&D functions. He also leads AgraQuest's BioInnovations division and is a key participant in corporate development efforts.

growth plans . . .

The executives will be working together to achieve substantial sales growth over the coming years. AgraQuest currently measures its sales in the "tens of millions" of dollars. Sales grew by over 70% in 2008 and further strong growth is expected this year, Mr Meadows-Smith notes. The company is targeting sales of over \$200 million in 2013.

The growth is expected to come from new uses and markets for existing products, the introduction of new products, and moves into areas such as animal nutrition, food safety, and the home and garden sector. Serenade and Sonata were originally targeted at the high-value fruit and vegetable sectors and were differentiated by their disease control spectrums. Their use is being boosted in the NAFTA region by expansion to arable crops such as potatoes, canola, soybeans and rice.

AgraQuest also points to international expansion. The company has registrations in 20 countries outside the NAFTA region. It recently set up a sales, marketing and development team to drive product commercialisation in Central and South America. The region is seen as a key strategic growth opportunity.

The "globalisation" of Sonata and Requiem should also drive growth. Requiem was introduced for use on fruit and vegetables in the US late last year. The registration came close to the use season so a full market launch was not possible. Frost in Florida in the first quarter of 2009 reduced pest pressure, but Requiem "still captured good share", Mr Meadows-Smith says. "The launch year continues to go well as we expand the registration into states such as California and Arizona." The product has potential for use in arable crops, but further formulation development is needed before this can occur. A formulation for use on ornamentals, Metronome, was approved in the US in 2008.

While Serenade and Sonata were derived from in-house research, Metronome and Requiem resulted from the acquisition of the Canadian biopesticide company, Codena, in 2006. AgraQuest remains committed to in-house research, but acknowledges that some development projects were slowed while bringing Requiem to market. "We were burning through cash and decided to focus on a small number of commercialisation projects such as globalising Serenade and Sonata and launching Requiem." The company focused on projects that would bring it to profitability. "We are now cashflow positive and are accelerating the development of the most exciting products in our pipeline," AgraQuest's CEO declares.

One of the pipeline products that has faltered on the commercialisation path in recent years is the *Muscodor albus*-based biofumigant, Muscodor (QRD 300). The technology was licensed from Montana State University and it was set to be the first in-licensed product to be marketed by AgraQuest in 2006. However, the US-registered formulation proved too expensive to bring to market. It has since been reformulated and trials are under way to renew the approval.

The development of the *Streptomyces galbus*-based bioinsecticide, Virtuoso (QST 6047), has also been hampered by focusing resources on other projects. However, a prototype formulation is being evaluated for co-development by a prospective multinational partner. AgraQuest hopes to be able to reveal its partner in the second quarter of 2010.

The company's product launch schedule for the next three years includes four products from in-house research and two in-licensed products. One of the latter is an oomycete fungicide/bactericide. Other product leads include fungicides and a nematicide.

AgraQuest considers its group of 30 scientists in California to be the world's largest private R&D team to be focused on biopesticides. It has identified some 100 potential product leads from in-house research. The company has also looked at around 150 potential biopesticides from third parties. However, AgraQuest has high standards when it comes to selecting those for commercialisation and few make the grade.