



## Business Review 2002: Australia, New Zealand and Oceania

**Partnership.** One that is united or associated with another or others in an activity or sphere of common interest. Person who shares with others in business.

**Foundation.** The basis on which a thing stands, is founded, or is supported. The act of founding, especially the establishment of an institution with provision for future maintenance. **Symbiosis.** A close, prolonged association between two or more different organisms of different species that may benefit each member.

**Connect.** To join or fasten together; to become joined or united. To establish a rapport or relationship; relate. **Fusion.** The merging of different elements into a union. The union of atomic nuclei to form a heavier one, usually with the release of energy; this process as a source of energy.



## Bayer Facts

- Bayer is an international, research-based group with major businesses in health care, crop science, polymers and specialty chemicals.
- Employing some 123,000 people worldwide and almost 900 in Australia and New Zealand, the Bayer Group has a portfolio of more than 10,000 products and operations in nearly all countries of the globe.
- Worldwide operations are managed from Group headquarters in Leverkusen, Germany.
- Bayer is research-based and aims for technological leadership in its core activities.
- Fundamental to our business is the acknowledgment that technical and commercial expertise involves a responsibility to work for the common good and contribute to sustainable development.
- In 2002 the Bayer Group recorded sales of €29.6 billion, and spent €2.6 billion on research and development.
- Bayer's operations in Australia/New Zealand/Oceania generated \$A709 million in revenue in 2002.
- The Bayer Group occupies leadership positions in 80% of its businesses.

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# Business Review 2002

## Australia, New Zealand and Oceania



## Partnership

1. One that is united or associated with another or others in an activity or sphere of common interest.
2. Person who shares with others in business.



*Alan McGilvray  
Senior Country Representative  
Bayer Australia/New Zealand/Oceania.*

## Our Path to Success

The year 2002 was one of enormous change for Bayer. New structures and processes were implemented, improving our ability to respond to today's fast-changing markets and shifting global economy. It was a year of transition and transformation, laying the foundations for greater competitiveness and continuing growth.

During 2002, Bayer was reorganised into four, key business areas (known as "subgroups"): Bayer HealthCare, Bayer CropScience, Bayer Polymers and Bayer Chemicals.

The new structure ensures that the subgroups can act flexibly in their markets, make rapid decisions and capitalise quickly on innovations. It also enables them to focus on their core competencies so that Bayer

as a whole becomes more competitive and closer to our customers.

A shining example of Bayer's new manoeuvrability was the successful integration of Aventis CropScience into the Bayer CropScience business in 2002. The worldwide acquisition was the biggest ever for Bayer, and has resulted in Bayer CropScience holding top market positions in all of its core business areas. Bayer CropScience is now well established in Australia and New Zealand, and indications are for strong results in 2003.

Another significant development for Bayer in 2002 was the worldwide sale of our Baygon® and Autan® insecticide brands to SC Johnson, part of a broader strategy allowing us to focus on core competencies.

Overall, the economic environment was difficult in 2002, and financial results for Bayer Australia/New Zealand/Oceania, and indeed Bayer internationally, were disappointing. As in the previous year, our HealthCare business had to contend with the effects of the worldwide withdrawal of cholesterol lowering drug, Lipobay®. CropScience was burdened by one-off costs associated with the Aventis CropScience acquisition, as well as the effects of the worst drought Australia has seen in over 100 years. In a weak

economic environment, Polymers and Chemicals continued to suffer from strong pressure on margins.

The outlook for 2003 is significantly more positive. The mechanics of the reorganisation are now in motion, and it is anticipated that increased synergies and efficiencies will create new business and contain costs. We continue to invest in research and development, and some exciting new products are in the pipeline for 2003.

Throughout this time of change, Bayer has not lost sight of the importance of its partnerships. I use the word "partnership" in a broad sense, covering customers, staff, community, government and other stakeholders. We remain committed to providing our partners with sustainable solutions, exemplary service, quality products and a safe and productive workplace. The restructure has set the platform for success. By working closely with our partners, we will build on this platform to our mutual benefit in 2003.

**Alan McGilvray**  
Senior Country Representative  
Bayer Australia/New Zealand/Oceania

*A Bayer employee oversees quality assurance for production of Bayer's world-famous painkiller Aspirin®, one of over 10,000 products in the Bayer portfolio.*



## Business Areas

Many companies have a strong core business. We have four.

When most people think of Bayer, they think of Aspirin®, health care or chemicals. We think of the future – and we have created a new Bayer Group: streamlined, agile, transparent and even more closely focused on our core competencies.

At an international level, we have completely reorganised our enterprise by establishing a management holding company with four independently operating subgroups: Bayer HealthCare, Bayer CropScience, Bayer Polymers and Bayer Chemicals.

Locally, Bayer Australia Ltd now encompasses the “holding company” function and within it retains our HealthCare and Polymers businesses. Bayer CropScience Pty Ltd, Bayer Chemicals Pty Ltd and Laserlite Australia Pty Ltd (sheeting) are separate legal entities. Bayer New Zealand Ltd remains the legal entity representing the holding company and all four subgroups in New Zealand.

Faster decision-making processes and flat hierarchies create greater flexibility and enable us to optimally exploit resources. The ultimate goals are improved competitiveness, faster reactions and more intensive customer orientation for outstanding results.

### Bayer HealthCare

- Pharmaceuticals
- Consumer Care
- Diagnostics
- Biological Products
- Animal Health

### Bayer CropScience

- Crop Protection
- Environmental Science
- BioScience

### Bayer Polymers

- Plastics
- Rubbers
- Polyurethanes
- Coatings
- Adhesives
- Sheeting (Laserlite Australia Pty Ltd)

### Bayer Chemicals

- Basic Chemicals
- Performance Chemicals
- Fine Chemicals
- Material Protection Products
- Inorganic Pigments
- Wolf Walsrode Cellulosics
- Colorants for Plastics & Specialties
- Paper Chemicals
- Textiles Processing Chemicals
- Leather Chemicals
- Ion Exchange Resins



## Global Financial Results

The economic environment was difficult in 2002, and overall financial results for the Bayer Group were disappointing. Although net income improved by 10% to €1.1 billion, chiefly through divestment proceeds, our operating result from continuing operations before exceptional items fell by 46% to €989 million. Sales fell by 2.2% to €29 billion.

At the same time, the company achieved its capital-structure and cost-containment goals set in the previous year and has slashed net debt since the acquisition of Aventis CropScience by more than €6 billion to €8.9 billion.

Chairman of the Board of Management of Bayer AG, Werner Wenning said that whilst Bayer's financial results for 2002 were not satisfactory, following the company's restructure we are now well-placed for future growth. "With our efforts directed toward streamlining and focusing our portfolio, we are already on the right track. We occupy leadership positions in 80% of our business. This is an excellent foundation for the road to success, because the new Bayer Group will build on outstanding products, markets and technologies."

## Australia/New Zealand/Oceania Financial Results

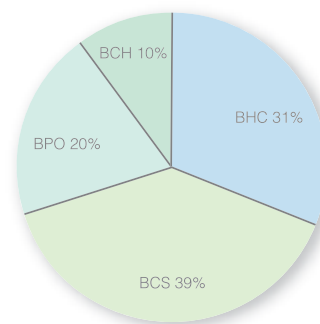
Bayer in Australia, New Zealand and Oceania also faced a challenging year in 2002. Results were influenced by the slow global economy, a decline in spending in the retail industry and the effects of the drought in Australia. Overall, the Bayer Group in Australia, New Zealand and Oceania generated \$A709 million in revenue. Although this represents a 17% increase compared with 2001, operating result decreased by 20% over the same period to \$A23 million. The increase in revenue was attributable mainly to additional sales generated by Bayer CropScience following the acquisition of Aventis CropScience.

The following pages provide details of the performance of each of Bayer's subgroups in Australia and New Zealand for 2002. In summary, 2002 revenue for the subgroups totalled:

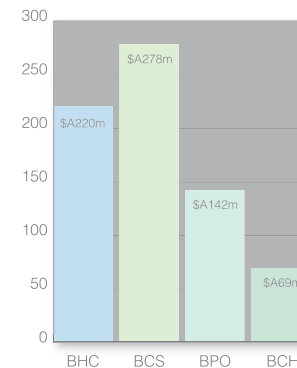
<b>Bayer HealthCare:</b>	\$A220 million
<b>Bayer CropScience:</b>	\$A278 million*
<b>Bayer Polymers:</b>	\$A142 million
<b>Bayer Chemicals:</b>	\$A 69 million
<b>Total Revenue:</b>	\$A709 million

*\*This figure includes revenue generated by Aventis prior to the acquisition by Bayer (January – June 2002).*

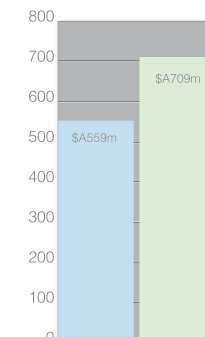
Percentage of Total Revenue by Subgroup



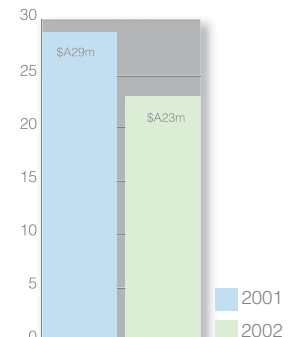
Total Sales for 2002 (\$A Million)



Sales/Turnover (\$A Million)



Operating Result (\$A Million)



■ Bayer HealthCare (BHC)
 ■ Bayer CropScience (BCS)
 ■ Bayer Polymers (BPO)
 ■ Bayer Chemicals (BCH)

*Note: All graphs illustrate results for ANZ/Oceania. For reporting purposes New Zealand Dollars have been converted to Australian Dollars (\$A).*

## Overview

### Australia and New Zealand

- **Locations:**
  - Head office in Pymble, Sydney
  - Offices in Melbourne, Perth, Brisbane and Auckland
  - Operations Centre in Melbourne
- **Employees:** more than 340
- **Revenue:** \$A220 million
- **2002 Highlights:**
  - Overall, Bayer ANZ HealthCare finished 2002 on budget for sales and ahead of budget for operating result.
  - Pharmaceuticals, Biological Products and Animal Health divisions had strong performances, retaining market share and defending major brand lines despite increased competition.
  - Consumer Care successfully sold and transferred the Baygon® product line.
  - Diagnostics refined its strategic approach to become vendor of choice for targeted customers.

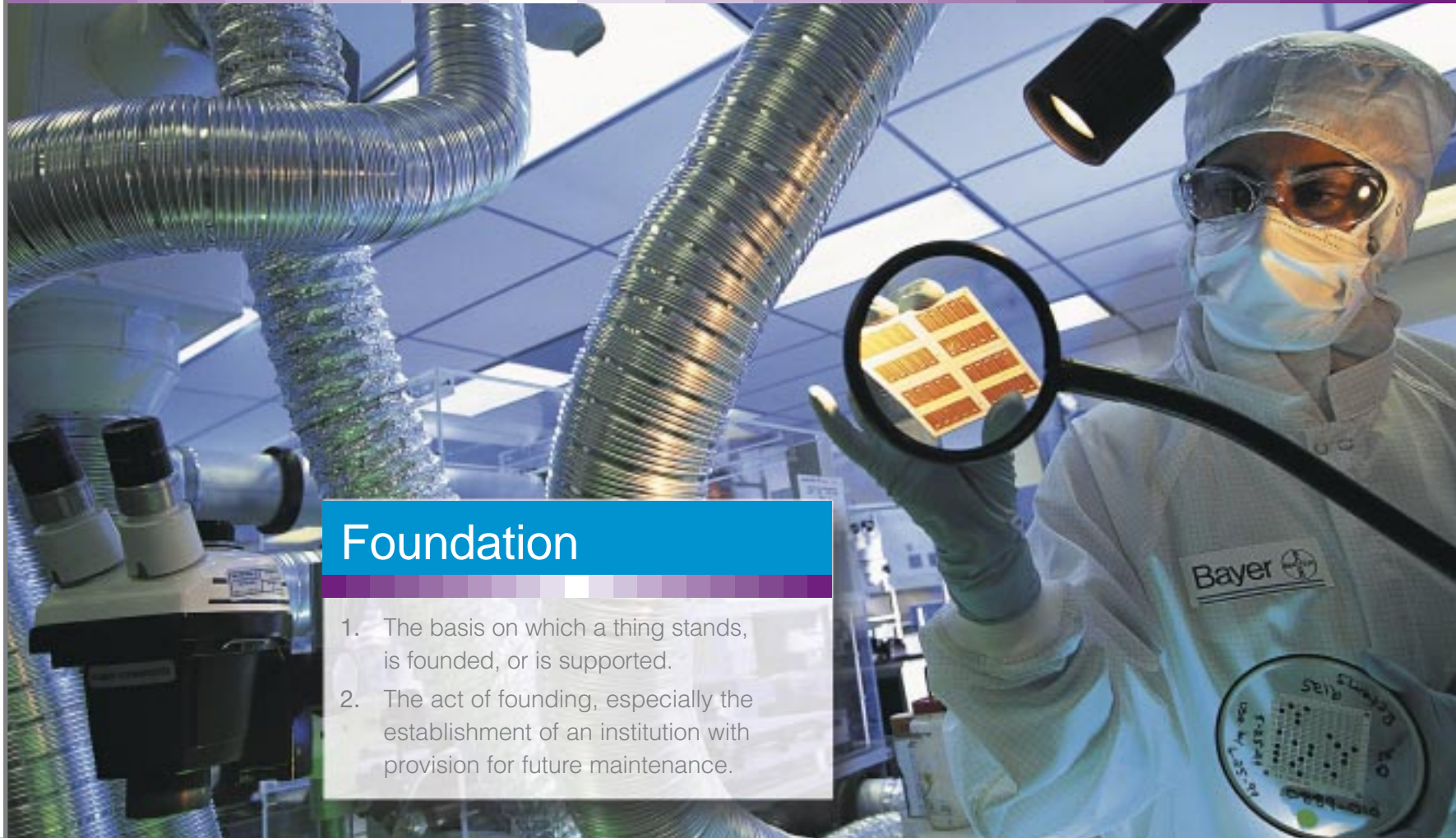
### Global

- **Employees:** 34,000
- **Revenue:** €9.4 billion
- **Operating Result Before Exceptionals:** €739 million
- **R&D Investment:** €1.4 billion and a well-stocked pipeline of more than 30 substances.



# Bayer HealthCare

A Foundation for Good Health



## Foundation

1. The basis on which a thing stands, is founded, or is supported.
2. The act of founding, especially the establishment of an institution with provision for future maintenance.



*Bayer has developed a new erectile dysfunction drug: Levitra®. The photo shows a laboratory test undertaken in preparation for the product's launch.*



## Introduction

Bayer HealthCare comprises five divisions: Pharmaceuticals, Biological Products, Diagnostics, Consumer Care and Animal Health. Our mission is to discover, manufacture and successfully market innovative products. We aim to contribute to the global health of humans and animals alike and to enhance well being and quality of life through the diagnosis, prevention and therapy of diseases.

## Pharmaceuticals

Pharmaceuticals develop innovative and highly effective drug products. The division's international research program covers life-threatening conditions that impair quality of life and life expectancy. These include cancer, diabetes, bacterial and viral infections, cardiovascular, obesity and urological disorders.

**Year in Review:** Driven by outstanding sales of antibiotic Ciproxin® and with increased support for anti-hypertension agent Adalat®, the Pharmaceuticals division finished 2002 ahead of predicted performance for both sales and operating results.

Antibiotics, Ciproxin and Avelox® both performed well in the hospital market with 20% growth over previous years.

Adalat sales stabilised in 2002, a positive turnaround from declines in previous years. Adalat

continues to be supported by evidence attained in the powerful INSIGHT clinical outcome hypertension trial, which provides long term, clinical evidence that Adalat has the ability to save patient lives.

Trasylo® a blood volume expander for high-risk surgery and Nimotop® (treatment of subarachnoid haemorrhage) experienced strong results. This offset a disappointing performance from diabetes treatment, Glucobay®, and Synvisc®, a viscosity supplement for joints.

**Outlook for 2003:** 2003 looks very positive. The highlight will be the launch of the new erectile dysfunction drug Levitra®. In clinical trials Levitra has demonstrated a powerful ability to improve erectile dysfunction in even the most difficult to treat cases.

Adalat performance is expected to remain stable. Ciproxin results will be impacted by new generic competition, however this will be offset by increased utilisation of Avelox, an antibiotic offering a rapid treatment response across a broad range of pathogens.

## Biological Products

Biological Products is dedicated to developing novel treatments to extend and enhance the lives of patients who suffer from life-threatening conditions, such as haemophilia and other immune diseases.

**Year in Review:** Customer focus combined with personalised support helped Biological Products

exceed performance expectations for 2002. Reliable production and product availability, and renewed efforts to increase market presence in Australia was rewarded with new sales. In New Zealand, Bayer continued to be the growing market leader with strong Kogenate® (blood coagulation agent for haemophilia) sales.

**Outlook for 2003:** Our focus will be to continue Bayer's customer support amongst the wider haemophilia community. In 2003, the Australian Healthcare system will consider a single "National Tender and Supply Contract" for biological related products such as Kogenate. This tender provides both risk and opportunity for Bayer. In New Zealand, increased availability of Kogenate dosing units will provide greater patient flexibility. Supported by reliable production and customer support, we continue to predict growth and increased utilisation of biological products in 2003.

## Diagnostics

Diagnostics is a world market leader in medical laboratory, diagnostic systems. Diagnostics products used in Australia and New Zealand include: blood gas and near patient testing, diabetes management, haematology, urinalysis, immunoassay, chemistry, laboratory automation and nucleic acid diagnostics. Diagnostics distributes products from Diagnostica, Stago, Sakura, Fujirebio and Orion Diagnostica.



Star products for Bayer HealthCare in 2002 include anti-fungal agent Canesten® and Animal Health's flea control product Advantage®, which held the number one position in the cat flea market.



Year in Review: Diagnostics consolidated its position as a top three supplier of pathology products in Australia and New Zealand and continued to adapt to the challenges of a changing marketplace, meeting the demands of an increasingly consolidated customer base.

Diagnostics was chosen as one of the test providers for the Australian Government's major, new health initiative in bowel cancer screening. Other growth areas included Stago coagulation, growing its market share by 24%, the ADVIA® Centaur immunoassay system, and the innovative Rapidpoint® 400 near patient testing system for the analysis of critical blood gases.

The near patient testing segment faced consolidation of the customer base, increased pressure from existing competitors and new entrants into the market, yet maintained approximately 50% market share.

Outlook for 2003: 2003 promises to be a year of opportunity, with new products and innovative, near patient testing systems.

The extension of the ADVIA Chemistry instrumentation range, coupled with the release of ADVIA Lab Cell automation and an increasing menu of infectious disease testing on the ADVIA Centaur Immunoassay system, positions Bayer globally as the only diagnostics company able to provide larger laboratories with effectively integrated automated systems.

The release of HCV (hepatitis) and HIV (AIDS) serology tests will see ADVIA Centaur become the only high volume platform with a comprehensive range of endocrinology, tumour markers, infectious disease and other immunoassays.

### Consumer Care

The Consumer Care division of Bayer HealthCare is one of the leading suppliers of non-prescription (OTC) drug products and dietary supplements.

In Australia and New Zealand, 2002 performance was highlighted by the successful worldwide sale of the Baygon® line of products for insect control.

In competitive markets, with increased price and distribution pressure, Bayer delivered strong results.

Pluravit®: In Australia, Pluravit maintained market leadership in the multi-vitamin segment of Grocery, which it has led and developed since 1996. In 2002, Pluravit's market share declined slightly as a result of increased competition in Women's and Men's Multi-vitamins. Pluravit is set to continue to differentiate and lead the market with a relaunch of its entire vitamin range. Improved formulations and new products will be supported with a TV campaign in 2003.

In New Zealand, Pluravit supplies a core set of lines, and has had a presence for four years. It will continue to challenge the dominant New Zealand brands.

Canesten®: Canesten (anti-fungal agent) retained market leadership in Australia in the Topical and Gynaecological segments. In Gynaecological, Canesten dominates with over 80% market share. The Topical market is increasingly competitive with new generic versions continuing to proliferate. Canesten will enter 2003 with an intensive marketing plan, including TV advertising and training for Pharmacists, General Practitioners and Podiatrists.

In New Zealand, Canesten continues to maintain market leadership despite health policies encouraging physicians to prescribe lower cost generic reproductions. Canesten Hygiene Rinse (laundry liquid) is expected to continue its growth in 2003.

Amolin®: Amolin (baby care range) continues to perform well. Growth in 2002 was supported by the launch of Amolin Sensitive Laundry Liquid. In 2003, Amolin will launch a new pack design and bottle for our baby toiletry range. Targeted promotions are planned to position Amolin as a strong number two player in this market.

Production: In 2002, Bayer finalised upgrades to its cream production facility in Melbourne, an initiative to support Asia Pacific production requirements and gain "clean room" status (protection against contamination during manufacturing). The improvements have created a recognised, world-class pharmaceutical/

## Helping the Haemophilia Community



Mary Brasser, Clinical Nurse Specialist (left) and Dr Ockelford from the AHC watch Bayer HealthCare's Jill Porter demonstrate the DiaLog (right), a new tool for patient treatment monitoring.

Haemophilia camps, education groups and home delivery services are just three of the ways our Biological Products division supports the Auckland Haemophilia Centre (AHC). This is another example of a Bayer HealthCare partnership that extends well beyond just supplying products.

This year the partnership celebrates its ten-year anniversary. It all started in 1993 when Bayer introduced Kogenate®, its recombinant Factor VIII, to the New Zealand market and formalised a relationship with the Auckland District Health Board's Haemophilia Centre to supply the product.

Jill Porter, Bayer Biologicals Business Manager for Australia/New Zealand, has seen the business relationship with the AHC develop into a rewarding partnership. "We have similar aims and work together toward a common goal – to provide a better quality of life for people with haemophilia. It's not about being suppliers and clients – we are all part of the same team."

Dr Paul Ockelford, AHC Director, says that Bayer's approach to patient needs enhances the nature of the service. "Bayer's service of providing Kogenate to patients at home enables the patient to secure product in a timely fashion. This was a direct response by Bayer to patient feedback and requirements of patient care.

"They have also developed a direct relationship with patients and the Haemophilia Foundation and make contributions to facilitate meetings between groups," said Dr Ockelford. "Bayer provides financial and ground support for the haemophilia camps – a major undertaking."

"These are real examples of working with the wider haemophilia community towards improving quality of life for people with haemophilia," said Jill.

Dr Ockelford says that Bayer has supported treaters' groups, including the National Haemophilia Nursing Focus Group, and helped local experts attend international meetings such as the World Haemophilia Congress and the International Society of Thrombosis and Haemostasis.

"Essentially it's the personal nature of the relationship which, through open and honest communication, offers benefits on a number of levels – for the patient, for the Foundation and for the treater," said Dr Ockelford.

Both parties hope the development of the partnership into a relationship over the past ten years will continue for at least another ten. Jill and Bayer's aim? To continue to improve quality of life for people with haemophilia in New Zealand and Australia.

consumer care production site, key to growth opportunities in 2003 and beyond.

**Outlook for 2003:** An exciting year lies ahead for Consumer Care, setting the stage for market share growth. Canesten and Pluravit will be supported with new TV campaigns. New pack designs will be rolling out for our Pluravit and Amolin ranges. The dedication of the Consumer Care team combined with strategic plans will make 2003 a successful year.

### Animal Health

Animal Health markets a wide range of products to maintain the health of livestock and companion animals. Despite the difficult environment caused by severe drought conditions, 2002 provided very satisfying results.

**Year in Review:** Flea control product, Advantage® held its number one position in the cat flea market. Advantage DUO, the innovative topical product for control of fleas and heartworm in dogs and cats increased its sales and presence in vet clinics in 2002. Drontal® Allwormer, for intestinal worm control in dogs and cats, also retained its dominant, number one market position.

Animal Health introduced its "Veterinary Leadership Program", which provides vets with skills and tools to help grow their businesses.

To protect Australia's export trade in beef, Bayer supported the withdrawal of pour-on tickicide, Bayticol®. Whilst being number one in the Australian market, Bayticol is currently not registered in a number of countries, such as the USA, and thus has had a potential impact on beef exports to these countries.

In New Zealand, Animal Health achieved record turnover and operating results. Strong sales of Zapp® Pour-on (registered for lice control and fly-strike prevention in sheep), Drontal and Advantage were important contributors. Baycox® for Piglets (for parasites) was launched and Bayer gained a license for Baytril® Otic (eardrops for dogs and cats).

**Outlook for 2003:** Animal Health will continue to face challenges, not only from Mother Nature but also from competitors in the livestock market.

The companion animal market maintains good growth prospects as pet owner spending continues to support health and aging of pets, particularly through pet accessories and professional services.

Intensive local research and development efforts continue through contract research organisations. Exciting new products will include an expansion of the Advantage and Zapp product lines.

## Overview

### Australia and New Zealand

- **Locations:**
  - Head office in Hawthorn, Melbourne for Australia and Auckland for New Zealand
  - Operations Centres in Wyong (NSW), Pinkenba (Qld) and Kwinana (WA)
- **Employees:** 290
- **Revenue:** \$A278 million\*
- **2002 Highlights:**
  - Successful merger of Bayer's Crop Protection business with Aventis CropScience to form Bayer CropScience.
  - Maintained market share in many areas of the business despite tough market conditions caused by the drought in Australia.
  - Successful year in New Zealand, achieving increased turnover in a declining market.
  - Launched a number of exciting, new products in the Crop Protection and Environmental Science areas.
  - Brought the Genetically Modified (GM) canola (InVigor® hybrid canola) closer to commercialisation in Australia, with a favourable assessment from the Office of the Gene Technology Regulator.

*\*Includes Aventis revenue for 2002 prior to the acquisition by Bayer (Jan-June 02).*

### Global

- **Employees:** 22,000
- **Revenue:** €4.7 billion
- **Operating Result Before Exceptionals:** €-15 million
- **R&D Investment:** €598 million



# Bayer CropScience

Your Partner for Growth

## Symbiosis

1. A close, prolonged association between two or more different organisms of different species that may benefit each member.



*Walabi®, a fungicide for control of early blight in tomatoes and potatoes performed well in 2002.*

## Introduction

Bayer CropScience offers farmers one of the most comprehensive portfolios of agricultural products in the world, as well as the latest developments in chemistry, biotechnology and seeds.

Bayer CropScience was established in Australia and New Zealand in July/August 2002 following the worldwide acquisition by Bayer Crop Protection of Aventis CropScience. The result of this acquisition is a company that offers one of the most comprehensive crop protection portfolios in the world. It holds top market positions in all its core business areas and has now created two new divisions in addition to the existing Crop Protection area: Environmental Science and BioScience.

2002 saw the completion of the Aventis acquisition and the formation and launch of Bayer CropScience. Since then, Bayer CropScience has established itself in the Australia/New Zealand market and is regarded as having one of the best sales forces and business structures in the industry.

Like all businesses in the agricultural area, Bayer CropScience faced a difficult year in Australia in 2002, with the country gripped by one of the worst droughts in 100 years. The end of the drought should see improved results for Bayer CropScience in 2003.

In New Zealand, Bayer CropScience had a successful 2002, increasing both turnover and market share despite an overall reduction of 2.5% to the total market caused by hail and frost damage to a large area of apples and grapes.

## Crop Protection

The Crop Protection business division provides solutions for the protection of crops. This encompasses protection from pests, weeds and diseases as well as prophylactic treatment of seeds.

In Australia, due to the drought there was an estimated decline of around 30% for the total Crop Protection market in 2002 compared with 2001. The biggest drops occurred in cotton and summer crops (approx. 55%) and broadacre (approx. 20%).

Although a difficult year, 2002 also saw a number of highlights for the Crop Protection business, including:

**Horticulture:** Successful launches in Australia of Prosper® (grape fungicide), Confidor® Guard (insecticide for sugarcane) and Calypso® (insecticide for the control of codling moth on pome fruit). Positive growth was achieved with Walabi® (fungicide for control of early blight in tomatoes and potatoes) and Flint® (fungicide for control of apple scab, pear scab and mildew on apples and grapes). The division also developed an innovative packaging solution for

corporate viticulture with 60L returnable Scala® (fungicide for grapes and strawberries) containers.

In New Zealand, Flint® was also a good performer. A Scala® promotion into the grape market led to increased volume sales in a market that declined due to frost damage. Buster® (non selective herbicide) also performed well in line with new grape plantings. Folicur® (fungicide for cereals) maintained its strong market share in conjunction with Twist®. Eurapen® Multi for the apple market, and Sereno®, for potatoes and onions, were successfully registered and launched.

**Broadacre:** Two relatively new herbicides to the Bayer portfolio in Australia, Hussar® (for the post-emergent control of certain weeds in wheat) and Balance® (for the control of various weeds and grasses in sugarcane and chickpeas) showed good growth in what was a particularly tough market. Viper® (rice herbicide) was successfully launched. In New Zealand, Tropotox® (selective herbicide) remained a flagship product in the pastoral market segment.

**Cotton:** Bayer CropScience maintained market share in Australia with its defoliant range in the face of a difficult season and increased pressure from generic competitors. Dropp® was the star performer in this area.

**Seed Treatment:** The seed treatment range of products maintained market share in Australia.

*Modern crop protection in action: an employee is investigating whether substances have had the desired effects on soybean and corn plants.*



Performers included Gaucho® (for control of thrips, aphids and soil pests in cotton and soil pests in maize, corn, sorghum and sunflowers) and Jockey® (broad spectrum disease control for wheat). Gaucho® was the top-performing product for Bayer CropScience in New Zealand.

Specific challenges faced by Crop Protection in Australia in 2002 included a significant downturn in the cereals post-emergent herbicides market (herbicides applied after the emergence of weeds). There was also a decline in the Fungicide market with the loss of distribution of the Rohm and Haas product range after the purchase by DOW. Hot weather in the 2002 cotton season resulted in reduced demand for defoliant. This was combined with another year of low insect pressure and reduced demand for insecticides.

Challenges for New Zealand included a difficult regulatory system, which extended product registration times and costs, and the introduction of a new government assessment requirement for all registered products.

**Outlook for 2003:** The outlook in Australia for 2003 is optimistic for Broadacre and Horticulture products with the expectation that the drought will be broken in time for the season. The Seed Treatment market will be strong with Bayer CropScience further consolidating its

market leader position. The Cotton market will remain depressed due to ongoing water shortages and the introduction of new insecticide traits.

Overall, the outlook for the Crop Protection business in 2003 is good, with signals pointing towards a strong year in the cropping sector fueled by strong grain prices and the need for cash crops following the drought.

In New Zealand, the outlook is also positive, with three new product launches set to increase turnover: Poncho® (seed treatment for maize), Teldor® (fungicide for grapes) and Hussar® (herbicide for cereals). Although a reduction in pastoral markets is expected (due to reduced income, particularly in the dairy industry), it is anticipated that the horticultural, vegetable and arable markets will remain solid.

### Environmental Science

After the acquisition of Aventis CropScience, the former Bayer General Pest Control (GPC) business and the Bayer Farm Hygiene business were combined to form Bayer Environmental Science.

In Australia and New Zealand, Environmental Science is primarily focussed on pest control, turf and amenities, vector control (control of the transmission of human and animal diseases by certain groups of insects) and home and garden products.

Environmental Science has an extensive range of

fungicides, herbicides and insecticides for the Turf and Amenities markets. The Chipco® brand, specialising in products for forestry and turf, is expected to build on solid 2002 results in 2003 with the introduction of "Club Chipco", a loyalty program for both the distributor and the end user.

Environmental Science's Pest and Termite Control business experienced very strong growth in 2002. Further success is anticipated in 2003 with a continued increase in building permits and moderate population growth in Australia. Revolutionary products such as termiticides Premise® 200SC and Kordon® are at the forefront of our portfolio. The launch of Maxforce® Gold, a fipronil-based cockroach gel, will add another dimension to our cockroach control portfolio, which already includes Premise® Gel and Maxforce Gel.

The Stored Product business is concerned with grain protection. This business was drastically affected by the drought in 2002. The outlook in 2003 is much brighter with new products and the prediction of record plantings.

The Consumer Branded business, which includes the Home and Garden sector, (distributed via Bayer's partner company Yates) saw a drop in sales in 2002. Contributing factors included the drought, as well as adjusting to the integration and product rationalisation that followed Bayer's merger with Aventis CropScience. The planned

## Sowing the Seeds of Success



(L-R) Dr Bernard Convent, Global Head of Bayer BioScience Research, Susie O'Neill, General Manager of Bayer BioScience for Australia and New Zealand and Dr Geoff Garret, CSIRO Chief Executive.

Australia's premier research organisation, the CSIRO (Commonwealth Scientific and Industrial Research Organisation) and Bayer CropScience have "sown the seeds of success" through their highly productive, collaborative research efforts.

Both organisations have developed a model partnership, delivering benefits to farmers and growing Australia's R&D capabilities. Testimony to this successful relationship is the continued development in modern biotechnology tools for cotton and other crops.

"The success of our alliance with Bayer CropScience is based on our common commitment to strategic and fundamental research that leads to innovative and valuable scientific discoveries," said Dr Jim Peacock, Chief of CSIRO Plant Industry.

For Bayer CropScience, the alliance with the CSIRO is regarded as a model for global cooperation.

"This alliance is one of the most successful and important collaborative research efforts our company is undertaking," said Dr Bernard Convent, global head of BioScience Research for Bayer CropScience.

First established in 1998, the alliance has already seen some significant scientific advances including innovations in the control of insect pests, cotton fibre development and the mechanisms that control seed development. With further development, the benefits to cotton growers will include new cotton varieties that reduce the need for insecticides, have higher and more reliable yields, and produce a higher quality product.

"We have some cotton breeding lines with improved insect resistance that are currently being commercially evaluated. Additional, similar developments can be expected as a result of our partnership with Bayer CropScience," said Dr Peacock.

Dr Tony Arioli, Bayer CropScience Research Alliance Manager said, "Bayer CropScience has committed to foster and support our alliance with the CSIRO which delivers valuable intellectual property and knowledge. The collaboration provides a platform for future research and patenting opportunities not only in Australia but also worldwide. Our farmers in Australia will ultimately reap the rewards."

launch of a number of exciting new products in 2003, such as Confidor® Hose On, Confidor Drops and Baythroid® Crawling Insect Killer Surface Spray, should see strong growth in this part of the business.

### BioScience

The BioScience division of Bayer CropScience finds new crop solutions through advances in biotechnology, seed breeding and the development of hybrids. Its primary goal is to improve the quality of crops, thus increasing yields.

BioScience has been actively developing Genetically Modified (GM) canola (called InVigor® hybrid canola) for commercialisation in Australia over the past seven years. In 2002, an application for a licence to release the GM canola commercially was submitted to the federal regulatory authority (the Office of the Gene Technology Regulator, OGTR). Field trials with GM canola continue under strict risk assessment procedures. In 2002 an excellent report card for compliance at all GM canola trial sites was achieved.

On 1 April 2003 the OGTR released its Risk Assessment and Risk Management Plan (RARMP) on Bayer CropScience's submission. Its conclusion was that InVigor hybrid canola posed no more risk to the environment or to human health and safety than conventional canola.

InVigor hybrid canola has two key features. It is a high yielding hybrid canola variety (10% – 15% increases over conventional canola), and it is tolerant to Liberty® herbicide. Liberty herbicide is a new option for weed control for broadacre farmers and offers new choices for control of resistant weeds.

It is anticipated that approval from the OGTR to sell InVigor hybrid canola will be given in mid 2003, following a public consultation period. Whilst this is late in the season, small-scale commercial plantings are planned.

The OGTR decision is not the only approval required for commercialisation of InVigor hybrid canola. The state governments are responsible for trade and market access issues. Each state government needs to be convinced that the industry protocols for co-existence, and Bayer CropScience's stewardship plans for managing the technology, will not jeopardise export markets for non-GM canola. All growers will be trained on how to ensure GM grain can be kept separate from non-GM grain through the industry supply chain.

In 2002, no sales occurred for the BioScience division as preparations were made for commercialisation in 2003. Globally, BioScience is undertaking a strategic business review which will define crops and markets for the foreseeable future.

## Overview

### Australia and New Zealand

- **Locations:**
  - Head office in Pymble, Sydney
  - Head office for Laserlite Australia Pty Ltd (sheeting business) in Melbourne
  - Customer Service Centres in Melbourne and Auckland
- **Employees:** 125
- **Revenue:** \$A142 million
- **2002 Highlights:**
  - New business gains in Plastics, in particular for SAN<sup>®</sup> and Makrolon<sup>®</sup>.
  - Maintained high market share in Polyurethanes.
  - New Coatings products set to increase turnover in 2003.
  - Strong sales in Baypren<sup>®</sup> and Dispercoll<sup>®</sup> C in the Adhesives business.
  - Solid results in Rubber business due to ability to supply leading global products.
  - Highly successful year for subsidiary company Laserlite Australia Pty Ltd.
  - Major, global restructure of Bayer Polymers into three, new marketing divisions to take place in 2003.

### Global

- **Employees:** 23,000
- **Revenue:** €10.8 billion
- **Operating Result Before Exceptionals:** €418 million
- **R&D Investment:** €298 million



# Bayer Polymers

Connecting with the Future

## Connect

1. To join or fasten together; to become joined or united.
2. To establish a rapport or relationship; relate.





*Polymers already account for more than 17% of the total weight of a modern mid-sized car, making them the second most frequently used automotive material after steel. Shown here is a "car" made of Bayer products.*



## Introduction

In 2002, Bayer Polymers comprised the Plastics, Rubber, Polyurethanes, Coatings and Adhesives business divisions. In Australia and New Zealand, Bayer Polymers also includes subsidiary company Laserlite Australia Pty Ltd, which makes polycarbonate sheeting.

Internationally, Bayer Polymers will implement a major restructure in 2003, merging its existing business groups into three, new marketing divisions: Performance Materials, Performance Systems and Polymer Solutions. Each division will comprise several marketing units, focussed around customers and industry expertise rather than product areas. Reporting for this Business Review follows the 2002 business division structure.

The materials and solutions provided by Bayer Polymers are the backbone of modern life, serving primarily the automotive, construction, information technology, appliance, furniture, sports and leisure industries.

## Plastics

The Plastics business division supplies Polycarbonates (Apec<sup>®</sup>, Makrolon<sup>®</sup> and Makrofol<sup>®</sup>), used in applications ranging from car electrics to DVDs and medical technology. The division also makes Styrenics (Lustran<sup>®</sup> ABS), used mainly in the automotive segment in the production of housings and covers. Polyamides and polyesters (Durethan<sup>®</sup> and Pocan<sup>®</sup>),

due to their high heat resistance, are ideal for under-the-hood applications in the auto industry. Thermoplastic polyurethane (Desmopan<sup>®</sup>) is used for the production of transparent, scratch-resistant film in consumer markets.

The Plastics division faced a challenging 2002 in Australia and New Zealand with strong competition from businesses with local manufacturing capabilities. SAN<sup>®</sup> and Makrolon were the products with the largest business gains, won through reputation, technical ability and consistent quality.

Plastics secured business for our SAN product for use in food packaging, and Makrolon for use in returnable water bottles. Business was also secured for Durethan<sup>®</sup>, for injection moulding into car radiator fans and Novodur<sup>®</sup> for injection moulding into car air registers.

**Outlook for 2003:** Plastics will remain competitive through providing the market with technical solutions and products manufactured to leading quality standards. Major opportunities exist to increase sales in Lustran<sup>®</sup>, Polycarbonate<sup>®</sup>, SAN, Durethan<sup>®</sup> and Makrolon<sup>®</sup> for use in the automotive, industrial, consumer and white goods markets.

## Polyurethanes

Market share for Bayer's Polyurethanes raw materials into the Comfort and Insulation sectors remained high during 2002 in both Australia and New Zealand.

The ability to supply the full range of products opened up new opportunities. However, exchange rate fluctuations, and volatility in the pricing and supply of Toluene Diisocyanate (TDI), saw results a little lower than expected.

**Outlook for 2003:** 2003 looks like continuing the trends of 2002. It is hoped the supply situation of TDI will ease during the second half of the year. The opening of the new technical centre in Shanghai during 2003, will enable Bayer to be more responsive to an ever changing Polyurethane market.

## Coatings

In Australia, the Coatings business experienced a positive sales result for 2002 due to strong export growth for key customers and increased paint production by Bayer customers.

Desmodur<sup>®</sup> MDI performed particularly well. Other strong brands for Coatings included Desmodur<sup>®</sup> aliphatic polyisocyanates and Desmophen<sup>®</sup> polyols, primarily sold into the automotive and industrial sectors.

In New Zealand, our range of Aliphatic hardeners and acrylic polyols did well on the back of the country's growing marine industry.

Highlights for Coatings in 2002 included the introduction in Australia and New Zealand of new, environmentally-friendly, water-based technology for

Bayer's Shanghai Chemical Industry Park facilities include a polymers pilot plant where customers can access a laboratory for digital versatile discs (DVDs).



both wood and glass coating (Bayhydrol®, Bayhydur®). We also finalised the introduction of single-pack moisture curing technology for steel and launched low emission Volatile Organic Compounds (VOC) for steel protection. There were ongoing developments in the Desmodur® and Desmophen® product areas for soft feel plastic coatings.

Major challenges in 2002 included increased raw material costs and stock availability issues.

**Outlook for 2003:** New products introduced in 2002 are expected to increase turnover in 2003, resulting in a positive year for Coatings. In addition, implementation of SAP, new materials planning processes and closer working relationships with service providers will see customers benefit from improved logistics solutions in this area.

## Adhesives

Bayer manufactures raw materials for the adhesives industry, making products for virtually every application – whether it be heat-activated adhesives, contact adhesives, reactive adhesives or hot-melt adhesives.

Baypren®, a solvent based polychloroprene, was our highest performing product in Australia and New Zealand in 2002, accounting for more than 40% of adhesive sales. Bayer currently has approximately two thirds of the market share for solvent-based

polychloroprene, which is used in contact adhesive applications. Another major product for 2002 was Dispercoll® C, which also accounted for over 40% of adhesive sales. A polychloroprene dispersion, this product is used in foam-to-foam adhesive applications.

Major challenges in 2002 for the Adhesives business included ongoing pricing pressure, the strengthening of the Euro and supply delays on some lines.

**Outlook for 2003:** With the Bayer Polymers restructure in 2003, the Adhesives and Sealants portfolio will be treated as a separate unit (rather than part of Coatings), providing an opportunity to develop a greater brand awareness amongst current and potential customers and grow this market sector. Good financial results are expected.

## Rubber

Rubber can be found in many areas of our daily life due to its unique properties, such as high elasticity and resistance towards oil or water. With an annual production capacity of around 1.1 million metric tons of solid rubber, Bayer is the world's largest synthetic rubber producer. Bayer also makes rubber chemicals to supply the finished rubber product with certain properties, eg antidegradants to protect against oxidation.

Bayer Polymers supplies high quality products from ISO approved, world-scale plants for the rubber

industry in Australia and New Zealand. Our major brands in 2002 were the solid rubber products Buna® EP (EPDM) and Baypren® (CR), typically used for all kinds of moldings, as well as Krynac® (NBR), used for various applications in industrial equipment and machinery. Rubber chemical products Vulkacit® (rubber accelerators) and Vulkanox® (antioxidants) also performed well for our business in 2002.

The rubber business division in Australia and New Zealand faced a mixed year in 2002. The total rubber market in Australia decreased by around 20% due to the rationalisation of the tyre manufacturing industry. At the same time, demand for rubber products in the non-tyre sector grew due to an increase in automotive production.

**Outlook for 2003:** Bayer Polymers' rubber business will remain competitive in a difficult market thanks to our ability to provide products that represent the forefront of rubber technology. In addition, new developments in e-commerce and the internet will allow us to service our customers more efficiently on a global basis.

## Sheeting (Laserlite Australia Pty Ltd)

Laserlite Australia Pty Ltd began as a distributor of translucent roofing in the late 1980's. It became the first manufacturer of polycarbonate roofing in Australia in the mid 1990's, and later formed a joint venture with Alsynite,

## Sweet Dreams are made of Makrolon®



*Bayer's Justin Gleeson (standing) with the Fisher & Paykel Healthcare Aclaim™ Nasal Mask development team.*

For over 20 years, Fisher & Paykel Healthcare in New Zealand and Bayer Polymers have enjoyed a mutually beneficial relationship, with Bayer providing raw materials and technical back up for medical products that make a difference to the lives of people globally.

Most recently, Bayer Polymers has supplied Makrolon® polycarbonate (a high-tech plastic) for

Fisher & Paykel Healthcare's Aclaim™ Nasal Mask – a product which helps people who suffer from Obstructive Sleep Apnea (OSA), to sleep easy.

OSA is a condition where, while sleeping, the muscles that keep the airways open relax to partially or completely collapse the airway. The brain rouses the sleeper to take a breath, causing sufferers to wake up to as many as 80 times a night. The Aclaim Nasal Mask provides OSA sufferers with Continuous Positive Airway Pressure (CPAP). Air is pumped through the masks at just enough pressure to “splint” the airways open.

“When developing the major mask components, we were after a transparent material with suitable physical properties, such as strength, toughness and resistance to heat and chemicals,” said Ivan Milivojevic, Product Development Engineer at Fisher & Paykel Healthcare. “It also needed an adequate level of biocompatibility approvals – Makrolon was the solution as it has passed all testing that is required for medical application.”

Since the successful launch of the first Aclaim Nasal Mask almost two years ago in the New Zealand, US, Australian, European and Japanese markets, the mask has been upgraded and is currently sold as Aclaim 2.

“Bayer is able to provide us with good technical product and process support, supplying the answers and resources we need to successfully develop products. This is very useful when we are utilising technologies that are foreign to us,” continued Ivan.

Justin Gleeson, Bayer Polymers Technical Representative, has worked closely with Fisher & Paykel for over 15 years, and was actively involved with the development team responsible for the Aclaim Nasal Mask.

“It is very rewarding to be involved at every stage of the product development process – from mould design, to material specifications and ongoing technical back-up,” said Justin. “It is great to see a New Zealand company supplying quality medical products to the rest of the world and Bayer Polymers is proud to play a part in Fisher & Paykel Healthcare's success.”

bringing fibreglass roofing into the range. Now a part of the Bayer Group of companies, Laserlite continues to develop new and exciting products for a range of building applications in Australia, New Zealand and South Africa.

The company had a very successful year in 2002, achieving a significant increase in sales revenue. Contributing factors included a buoyant DIY (Do It Yourself) market, sales realised from the 2001 launch of the Laserlite® Polycarbonate Roofing range (featuring the highly successful Laserlite® Apollo with its fashionable metallic appearance) and the launch of the Makrolon® brand into the Australian sheet market.



*Laserlite® Apollo is heat-reflective, transparent polycarbonate roofing for pergolas, patios, carports, verandahs, skylights, canopies, pool covers, screens and fences.*

Laserlite's highlights for 2002 included a growth in New Zealand sales following three successive years of decline. This was attributable to the signing of new distribution agreement for Polycarbonate Corrugated Sheeting and a major promotion for the launch of Laserlite® 2000 into the New Zealand market. High hopes are also held for a new

distribution agreement for Laserlite products in South Africa.

Laserlite's customer service, warehouse and transport employees achieved unprecedented levels of efficiency in 2002. A strategy was successfully implemented to increase inventory levels of finished goods during the slow winter months, ensuring a high level of service during the peak summer season.

Challenges faced by Laserlite in 2002 included ongoing pricing pressure from competitors in the Polycarbonate Corrugated Sheeting area, and competition from low cost imports in the Solid Sheet market. This will be addressed in 2003 through a “Direct to Market” strategy for Solid Sheet to grow future volume with a broader range supplemented by imported products from other Bayer sheet companies.

Outlook for 2003: First quarter sales and business activity indicate the market has weakened, which has been acknowledged by our major customers. Causes appear to be the ongoing drought, bushfires and consumer disquiet with the Middle East conflict. With no further deterioration in consumer confidence, no rapid increase in PC Resin prices or weakening of the Australian Dollar, Laserlite is confident of achieving positive results in 2003.

## Overview

### Australia and New Zealand

- **Locations:**
  - Head office in Homebush Bay, Sydney.
  - Offices in Melbourne, Perth, Brisbane and Auckland.
- **Employees:** 45
- **Revenue:** \$A69 million
- **2002 Highlights:**
  - Overall satisfactory results, due principally to continued growth in construction sector.
  - Continued growth of pigments business, which contributed nearly 40% of total sales.
  - Consolidated role as important supplier of nitrocellulose products to the ink industry.
  - Good industry acceptance of new enzyme-based textile products.
  - Significant technological developments in paper chemical business.

### Global

- **Employees:** 14,300
- **Revenue:** €3.3 billion
- **Operating Result Before Exceptionals:** €106 million
- **R&D Investment:** €100 million



# Bayer Chemicals

## Fusing Technology and Expertise

### Fusion

1. The merging of different elements into a union.
2. The union of atomic nuclei to form a heavier one, usually with the release of energy; this process as a source of energy.





## Introduction

Adding colour to construction materials, whiteness to paper, quality to ink and finishes to fabrics, Bayer Chemicals improves countless products used by people all over the world, every day.

Bayer Chemicals products are essential to the electronic, optics, metal processing, food, coatings, textile, leather, paper, plastics, rubber, building materials, and engineering ceramics industries. Completing the Bayer Chemicals portfolio are advanced intermediates and active ingredients for the pharmaceutical and agrochemical industry.

## Structure

Bayer Chemicals underwent a significant restructure in 2002 and is now an amalgamation of the former Business Groups of Chemicals and Specialty Products. It also includes the Inorganic Pigments activities of the former Coatings and Colorants Business Group (which comprised Bayer Hodgsons Pty Ltd and Wolff Walsrode). It is now structured into 12 Strategic Business Entities.

As a result of synergies achieved through the restructure, Bayer Chemicals Pty Ltd now has products for almost every industry sector in Australia and New Zealand. It offers experienced and specialised staff and provides a broad and integrated solution to manufacturing operations throughout the two countries and the Pacific Region.

### BAYER CHEMICALS STRATEGIC BUSINESS ENTITIES AND PRODUCTS

In 2002 Bayer Chemicals was restructured and organised into 12 Strategic Business Entities to increase synergies and improve customer service.

Strategic Business Entity	Examples of Products
<b>BAC – Basic Chemicals</b> Used in processes in the chemical industry.	Inorganic Acids, Cyclohexylamine, Benzylalcohol, Benzylchloride, Benzothiazole.
<b>PCH – Performance Chemicals</b> Includes plastics additives, phosphorus chemicals and specialty chemicals.	Baymod®, Levagard®, Unimoll®, Disflamol®, Bayhibit®, Baypure®.
<b>FCH – Fine Chemicals</b> Used as ingredients for the pharmaceutical, agrochemical, veterinary and cosmetics sectors.	3.4-DCPI, Vulkanox®.
<b>MPP – Material Protection Products</b> Biocides and corrosion inhibitors.	Prevento® range – includes bactericides, fungicides, insecticides and corrosion inhibitors.
<b>IPG – Inorganic Pigments</b> Pigments and oxides used in the construction, plastic, coatings and other industries.	Bayferrox®, Minox®, Hydrocol®, Hydroferrox®.
<b>WWC – Wolff Walsrode Cellulosics</b> Cellulose derivatives used as raw materials for printing inks and coatings and as additives for building materials, high purity derivatives used in the food, cosmetic and pharmaceuticals industries.	Methylhydroxy ethyl/propyl cellulose, Nitrocellulose, Walocel®, Antisol®.
<b>CPS – Colorants for Plastics and Specialities</b> Organic colorants, pigments and auxiliaries such as emulsifiers, antifoams, dispersants and binders.	Macrolex®, Chrome Oxide Green, Bayscript®, Emulsifiers, Nigrosin®.
<b>PAP – Paper Chemicals</b> Provides paper colorants, fluorescent whitening agents, sizing and strength agents and other paper making chemicals.	Blankophor®, Baysize®, Baystrength™, Pontamine® dyes, Parex®.
<b>TPC – Textiles Processing Chemicals</b> Used in the textile industry for the processes of pre-treatment, dyeing, finishing and textile printing.	Persoftal®, Acramin®, Baylase®, Baygard®, Levegal®, Eulan®.
<b>LEA – Leather Chemicals</b> Used in the manufacturing of leather including tanning agents, preservatives, finishing auxiliaries and dyestuffs.	Chromosal® B, Preventol® WB, Lubritan®, Bayderm®, Euderm®, Acrysol®, Hydrholac®, Tanigan®.
<b>ION – ION Exchange Resins</b> Used in applications for water treatment, eg cooling stations, power plants, mining plants as well as treatment in foodstuff processing.	Lewatit® range.
<b>OTHER</b> Pigments and other products not sourced from Bayer.	White and off white cement, UOP Products, Zeolites (former Baylith®), Vitreous Enamels, Baracade concrete additives.



Sales of our pigments brand Bayferrox® continued at high levels in 2002.

## Year in Review

Overall, the business environment in 2002 continued to be positive for Bayer Chemicals in Australia and New Zealand, and the business generated \$A69 million in revenue.

In particular, as a result of the direct dependence of many of our businesses on the building industry, we continued to see strong sales into the construction and coatings sectors.

## Success for Pigments Business

Our Homebush Bay pigment blending facility in Sydney was kept busy in 2002 with unprecedented demand for special colour-blended pigments (Minox®) and pigment slurries (Hydrocol®), predominantly used in the manufacture of masonry products and concrete roof tiles. Sales of our European-produced pigments brand Bayferrox®, used in more demanding high-quality applications (such as the paint and plastics industry), also continued at high levels.

Overall, sales of iron oxide and chrome oxide green pigments contributed to nearly 40% of Bayer Chemicals' sales in Australia and New Zealand. Through an ongoing and effective cost reduction program, the pigments business also contributed a positive operating result to Bayer's overall financial performance.

## Consolidation in Ink Industry

During 2002, sales of products from our Bayer subsidiary company, Wolff Walsrode, continued to grow, and we have now consolidated our place as an important supplier of quality nitrocellulose products to the ink industry.

With worldwide supply of nitrocellulose closely matching demand, the market fluctuates between one of slight over-capacity, to a market in which production does not meet demand. Bayer Chemicals is committed to servicing our customers during times of under-supply and has developed strong, mutually-beneficial customer partnerships with all major ink manufacturers as a result.

## Developments in Textiles

A highlight in the textiles business area, in a very tough and declining sector, was the acceptance of our new enzyme-based textile products by various sectors of the industry. Baylase® EVO, which is a new bio-scouring concept for the enzymatic pre-treatment of cotton and our wash-off enzyme for reactive dyes (Baylase® RP System), are both environmentally friendly processes. These products produce some 20% – 50% less wastewater than processes using conventional products.

## New Technologies in Paper

Technological developments in our paper business provided a number of successes during 2002.

The business developed several products which offer a unique approach for the application of sizing chemicals. Preliminary trials have identified important advantages over traditional sizing technology practices. With patents now filed, these products offer significant sales growth potential in the Asia-Pacific region.

We have also improved the performance of our dyes and optical brightening agent product portfolio through



Paving at Sydney's Coogee beach (above) is coloured with Bayferrox® pigments, blended at Bayer Chemicals Homebush Bay Facility (insert).

### BAYER CHEMICALS CREATES LOCAL COLOUR

Located at Homebush Bay, adjacent to Sydney's Olympic site is the laboratory, blending and packing facility for Bayer Chemicals Inorganic Pigment business. The laboratory provides a dual purpose. It ensures that the broad spectrum of blended colours comply to the most stringent colour quality control in Australia, and importantly for architects and specifiers, provides a professional and thorough colour matching service to the construction industry.

The blending and packing facility also allows Bayer Chemicals to be extremely flexible when it comes to delivering pigments to the end user. From bulk liquid dispersions to handy dispersible packs for use in the premix and asphalt industries, pigments can be readily supplied in a form most convenient to the customer.



continual development of our product chemistry, supported with on-site technical expertise.

Recently an operation was established for the local manufacture of strength aids to be used throughout the papermaking industry. These products are aimed at a particular segment of the market where the currently available chemistry does not fulfil requirements. Preliminary machine trials have shown superior results, which will translate to significant sales growth for 2003.

Overall the success of the paper business area is based on our ability to offer an excellent range of products supported by a high level of expertise, resulting in strong customer relationships.

### Outlook for 2003

Overall, Bayer Chemicals is positioned for a strong year in 2003. Many structural changes have been made, and our cost base has been further reduced to ensure that we remain a competitive force in the chemicals industry. In addition, during 2002 a thorough review of our business logistics (freight and product management) was completed, with significant savings projected for 2003 and into the future.

Our strong focus on customers will continue and we expect that 2003 will be a positive year for Bayer Chemicals Pty. Ltd.

## Pigments Provide Polished Service



Jeremy Unsworth (left) from Bayer Chemicals with Mike Phelan, Manager of Ferro Finishing.

Pigments that work as a polish? But surely pigments just provide colour! Not so, as Manager of polish company Ferro Finishing, Mike Phelan, will tell you.

"Pigments are more versatile than people might think. The red and green inorganic pigments made by Bayer Chemicals not only add colour to our polishes, they are actually a key active

ingredient," said Mike. "These pigments are metal oxides, and the particle size is just right to provide the abrasive qualities needed in some of our metal polishes," he explained.

A long-time Bayer customer, Ferro Finishing is a true Australian success story. Started in 1968 by Reg Nolde, the family-run company researches, develops and makes all of its own polishes, exporting extensively to the Asia-Pacific.

Creating its own product range means that Ferro Finishing needs suppliers who can provide a flexible, innovative service. Bayer Chemicals works closely with Ferro Finishing to supply the right pigments for its polishes.

Product Manager for Bayferrox® (the pigment used by Ferro Finishing), Jeremy Unsworth, said, "The vast bulk of our pigment products are used for colouring, mostly in the construction and coatings industries. The fact that Ferro

Finishing uses them for a completely different purpose means we need to look at our product in a different light. For example, we are currently analysing the granule size needed by Ferro Finishing for a new polish it is developing."

The relationship between Bayer and Ferro Finishing has been an enduring one. "The company founder and director, my father-in-law Reg Nolde, emigrated from Germany as an industrial chemist in the 1960's. He established the business later that decade, supplying chemicals to the electro-plating industry. Being German he already knew of Bayer (Bayer has its headquarters in Germany), and used Bayer ingredients right back then," said Mike.

With new and improving products always in the pipeline, Bayer Chemicals hopes that whatever direction the Ferro Finishing business takes, we will continue to provide the products to contribute to its success.

### DID YOU KNOW?

Interestingly, makers of metal polishes have known about the polishing qualities of pigments for a long time. Chrome-oxide, which is a green pigment, has relatively hard particles and is traditionally used in polishes for hard metals, such as stainless steel. Iron-oxide, which is red in colour, has softer particles, and is used in polishes for soft metals, like gold. Ask any jeweller and he will tell you that he insists on red polish – or "jeweller's rouge" as it is known in the industry.

Students at the launch of the Eco-Innovate 03 forum with Alan McGilvray, Bayer Senior Country Representative, Australia/New Zealand/Oceania (far right), Susie Maroney, OAM, (second right) and Dr Surendra Shrestha, Regional Director and Representative of the United Nations Environment Programme (UNEP) in the Asia Region (fifth right).



# Sustainable Development

At Bayer we believe that our technological and commercial expertise entails a responsibility to contribute to sustainable development – a principle we wholeheartedly endorse, mindful of both its social and environmental elements.

## Community Involvement

In Australia and New Zealand, Bayer is involved in a wide range of community initiatives to encourage environmental protection, further education and research, promote cultural endeavours, provide assistance in times of need and support our staff in their community activities.



By sponsoring the upcoming regional forum Eco-Innovate 03, Bayer is encouraging youth to help create a sustainable future.

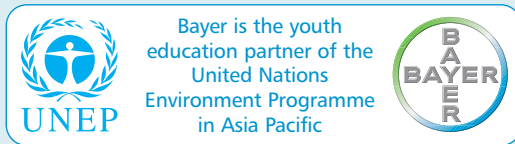
## Protecting our Environment

Bayer has a long tradition of supporting environmental programs including an alternative energy boat race (Australian Science Festival), a wetland conservation program (Parks Victoria and Greening Australia) and an endangered butterfly rescue scheme (CSIRO).

In New Zealand, Bayer supports the Whangarei Native Bird Recovery Centre, which cares for injured and endangered birds, and also has a seed propagation program to help preserve rare New Zealand plantlife.

### ECO-INNOVATE 03 AND BEAM

In 2002, Bayer embarked upon an exciting, new environmental education partnership, joining with the United Nations Environment Programme and the University of New South Wales to create "Eco-Innovate 03", a dynamic forum set to take place in Sydney in July 2003. The forum will encourage young people from across the Asia-Pacific to develop "eco-innovations", creating positive environmental outcomes in the region. In conjunction with the forum, Bayer will also host BEAM (Bayer Environment Award – Media) recognising excellence in print and online journalism focusing on sustainability issues.



## Education and Research

As a company founded on the strength of its R&D, Bayer understands the vital importance of education and research to create a sustainable future. Bayer supports educational programs for school leavers, professional education programs and high level grants for graduate and post-graduate research. Examples range from sponsoring the New Zealand Chemistry Olympiad, through to supporting the Bayer Institute, an accredited doctor education program on effective communication with patients, through to providing the Bayer Australia Medical Research Fellowship, awarded biannually by the Royal Australasian College of Physicians.

### BAYER YOUTH TRAINEESHIP SCHEME

Each year our Bayer Youth Traineeship Scheme takes on Australian school-leavers, providing work experience in different parts of the business and guiding them towards their chosen careers. Over 50 students have successfully gone through the scheme since it began over a decade ago.

## Promoting Cultural Endeavours

Bayer has supported cultural programs for many years, through an ongoing association with Opera Australia, as well as local bodies such as the Ku-ring-gai Philharmonic Orchestra. We also sponsor German student exchange programs in both Australia and New Zealand. In 2002, Bayer became a corporate supporter of the Sydney Dance Company.



Environmental protection is a century-old tradition at Bayer. Today the company employs high-performance facilities, technically advanced processes and specialist know-how to recycle or dispose of waste and treat industrial wastewater. This spectrum is supplemented by modern environmental analysis and container cleaning processes. The picture shows a chemical laboratory technician taking a flue gas sample.



## Helping in Times of Need

As a citizen of the global community, Bayer seeks to assist those in need and lessen human suffering. The company donates a wide range of products in response to natural disasters, to assist charitable programs and in answer to individual needs. For example, some of the organisations supported by our CropScience business include the Smith Family, the Royal Flying Doctor Service and recent drought relief efforts for farmers.

### DONATING VITAL ANTIBIOTICS

Following the October 2002 terrorists bombings in Bali, over 110 of the injured were flown to Australian hospitals to receive treatment. Many of the injured faced an ongoing challenge – the threat of infection. Bayer Australia donated supplies of the antibiotic Ciproxin® to Australian and Balinese hospitals treating the injured to assist in the fight against infection.

### IMPROVING ANIMAL WELFARE

As a company that produces quality products to improve the health and wellbeing of animals, Bayer is concerned with animal welfare. Bayer's Animal Health division supports a number of initiatives to help animals in need, including the Greyhound Adoption Program, which aims to find loving homes for greyhounds whose careers are at an end, the Canine Blood Bank, run by the University of Melbourne to provide vital supplies to dogs in need of a blood transfusion; and the Port Macquarie Koala Hospital, which treats sick and injured wild koalas.

## Environment Health and Safety (EH&S)

Our commitment to sustainable development also includes a responsibility to produce environmentally compatible products and to use safe and environmentally sound manufacturing processes that do not waste resources.



Bayer is committed to the principles of Responsible Care® in Australia and New Zealand, and at our 200 production sites around the world. Responsible Care is an initiative of the chemical industry designed to promote continuous improvement in environmental protection, health and safety. Bayer Australia is also a signatory to the National Packaging Covenant, which is aimed at reducing consumer packaging waste.

During 2002, all of Bayer ANZ's six production sites met their environmental licensing requirements and reported no off-site incidents. Reportable injury rates were low, with an average of 9.84 industrial incidents per million hours worked (MAQ). No serious injuries were recorded, and there were no transport incidents.

All sites maintained their good environmental records. The Bayer Health Care Operations Centre (BHCO) in Melbourne reported no real change in rates of water usage, wastewater emission, energy

usage, air emission and waste generation, although overall figures increased by around 10% compared with 2002 due to increased production volumes. A management review of the three Bayer CropScience production sites in 2002 showed that processes and efforts in the area of EH&S met all targets set within the annual plan.

A number of staff at Bayer's production sites participated in first-aid and/or environmental protection training in 2002. The Bayer CropScience sites Wyong (NSW), Pinkenba (Qld) and Kwinana (WA) maintained excellent relations with their local communities and were actively involved in local, community and/or industry consultation through Community Liaison Committees or Local Industry Councils.



All Bayer staff in Australia and New Zealand have received a booklet outlining key EH&S issues.

In addition to our production facilities, in 2002 Bayer began a major redevelopment of our company-wide EH&S system for all sites in Australia and New Zealand. A comprehensive manual is currently under development, which will help ensure that all EH&S policies and supporting objectives and targets continue to be met across the company.



For further information, please contact Corporate Communications:

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