Further development of sustainable products

Bayer Group objective	Status
Health Care business segment	
New Bayer active ingredient Bayrepel® in the Autan® product family: an active ingredient with superior efficacy and a more favorable risk evaluation in children too	Bayrepel® is recommended by the World Health Organization (WHO) as the repellent of choice for malaria prophylaxis; continue successful roll-out
Analysis of possible environmental impact of pharmaceutical active ingredients and their degradation products during development	Projects to detect or determine degradation behavior of certain drugs in the environment; ecological studies, including collaboration agreements with universities and institutes
Promotion of the health service through health education and improved information	Establishment of the LIBRA initiative with the aim of maximizing the therapeutic benefit of antibiotics while at the same time limiting the development of resistance
Safeguarding the supply of Bayer's tropical drugs Germanin® and Lampit®	Agreement with the WHO on the supply of the "essential drugs" Germanin® and Lampit®; both products will be provided to the WHO free of charge for an initial period of five years
Agriculture business segment	
Replacement of crop protection products by new combinations requiring lower application volumes	In Germany, Akteur® will replace the carbofuran seed pelleting carried out for sugar beet; launch scheduled for 2002
Development of products with a favorable toxicological profile, faster degradation in soil/water and high selectivity; they will therefore be given preferential treatment during registration in the United States as "reduced risk" products	Approval of the fungicide trifloxystrobin (Flint® etc.) by the Environmental Protection Agency (EPA) in the United States and expansion of approval to include numerous applications
Development of active ingredients with a favorable ecotoxicological profile	Application for registration of thiacloprid (Calypso®) featuring particular ability to spare beneficials
Early deployment of crop protection agents to avoid expensive and time-consuming frequent spraying later in the vegetation period	Treatment of cotton seeds with small volumes of Gaucho® to save one or two full-field sprayings
Development of methods ("closed system") to make handling safe for the user and thus to reduce the burden on the environment	Introduction of special drums and valves (Micro-Matic) to ensure complete emptying and cleaning of crop protection drums used on banana plantations
Expansion of the herbicide range by products with targeted action against weeds combined with selectivity for many major crops	Continue successful roll-out of Tacco®/Sinal® for further crops (including potatoes)
Polymers business segment	
Development of plastics for use in automotive engineering, sparing use of resources and considerable energy savings	Various applications are already in use or being developed, including some as composites based on renewable raw materials (Baypreg®, Baynat® F): interior panels, roof liners, roof frames; the weight of structural parts can be reduced by one quarter on average
Improved raw materials for environmentally compatible vehicle tires: tire rubbers with optimized polymer structure and new types of processing auxiliaries	Further development of modern "green tire" generations: market trials with the anti-reversion agent Vulcuren® in 2002

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Polymers business segment	
Special-purpose elastomers with increased temperature resistance for more environmentally friendly car engines	The trend towards low-fuel-consumption engines with increased efficiency is creating much higher temperatures in the engine compartment; market launch of five new Therban® grades in 2001
Greater use of high-temperature elastomers with reduced fire risk	The Bayer rubber Levapren® can be made flame-retardant during compounding; any combustion gases generated are non-corrosive and low on smoke
Energy-saving construction using polyurethane rigid foam insulating boards	Increase transfer of know-how to customers via "ecobalance"
Low-solvent paint and coating systems based on Bayhydrol®/Bayhydur® components and powder coatings based on Crelan®/Rucote®	Aqueous two-component polyurethane coatings meet future requirements for a reduction in solvent emissions without sacrificing quality
Sprayable, recyclable peel-off films for transportation of automobiles	Replacement of previous hot wax preservation; market introduction January 2001
Biocide-free antifouling coatings	Specially developed polymer material eliminates need for organo-tin compounds in marine coating systems: more in-depth technical trials
Development of thinner packaging films for foodstuffs	Conservation of resources and energy based on Walothen® products, target: to reduce thickness of film by up to 33 %
High-quality chemical products based on cellulose, a renewable raw material	Broadening of range of cellulose derivatives as special-effect additives in construction materials, foodstuffs, cosmetics and pharmaceuticals
Chemicals business segment	
Baypure® biodegradable complexing agents	Continue successful market introduction of Baypure® product group; production expansion concept for up to 12,000 t/a already drafted; implementation in line with market development
Replacement of nitro and polycyclic musk fragrances with macrocyclic substances	Ongoing target: the macrocyclic musk fragrances, unlike nitro and polycyclic musk substances, are easily biodegradable
Switch from animal to plant-based raw materials for flavorings	Ongoing target: the use of plant-based raw materials is much more sustainable than that of animal-based raw materials
Recycling of refractory metals	Recovery of tungsten, cobalt, tantalum and rhenium from scrap hard metal, slag and other production residue, achieving recycling rate of >50 % (relative to raw material use)
Felt-free treatment of wool	Plasma treatment of natural wool, market launch by 2002
Waterproofing of leather	Development of emulsifier systems without heavy metals, market launch by 2002
Enzyme-based textile processing chemicals	Continue successful market introduction of enzymes for the removal of excess dyes in the dyeing process and for pretreatment of cottons: clear ecological advantages over conventional technologies