

# BASF Roundtable Agricultural Solutions

August 3/4, 2009  
Frankfurt, London

 **BASF**

The Chemical Company





**1 | Overview BASF Group**

**2 | BASF Crop Protection**

**3 | BASF Plant Biotechnology**

# Robust performance in challenging business environment

## Business development Q2 2009

- Cash generation remained strong; cost containment efforts show effects
- Earnings of chemical activities down; continued strong performance of Agricultural Solutions
- High special charges of €300 million due to Ciba integration

## Key figures Q2 2009 vs. Q2 2008

- |                                |                      |
|--------------------------------|----------------------|
| • Sales:                       | €12.5 billion (-23%) |
| • EBIT before special items:   | €1.1 billion (-53%)  |
| • Net income:                  | €343 million (-74%)  |
| • Earnings per share:          | €0.37 (-73%)         |
| Adjusted EPS:                  | €0.79 (-49%)         |
| • Operating cash flow H1 2009: | €3.6 billion (+39%)  |

# Acting swiftly with focus on cost and cash

## Short-term measures

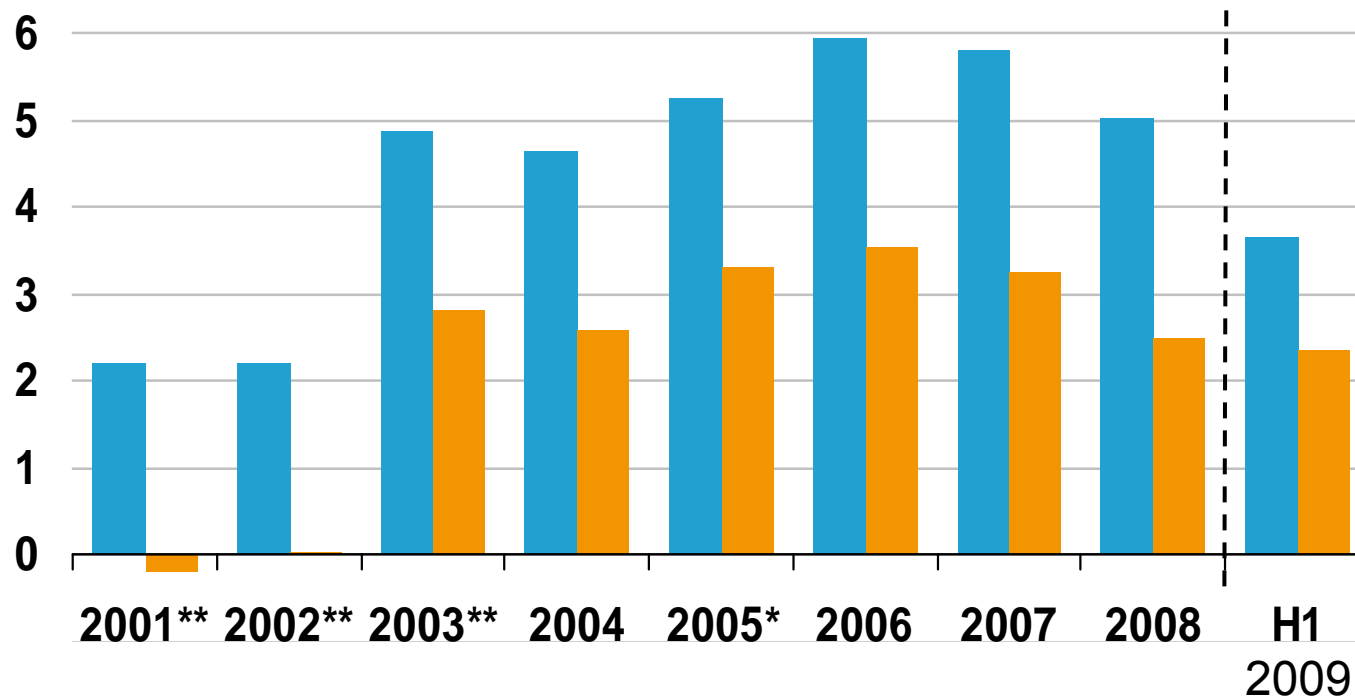
- Temporary shut-down or reduction of capacity of around 200 plants worldwide, reducing global capacity temporarily to slightly above 60%
- Implementation of short-time work
- Strict management of inventories and accounts receivable

## Longer-term measures

- Continuous consolidation of production base
- Synergies from efficient integration of acquisitions
- Reduced capex spending
- Restructuring and efficiency program NEXT

# Strong history of cash flow generation

In billion €    ■ Cash provided by operating activities    ■ Free cash flow\*

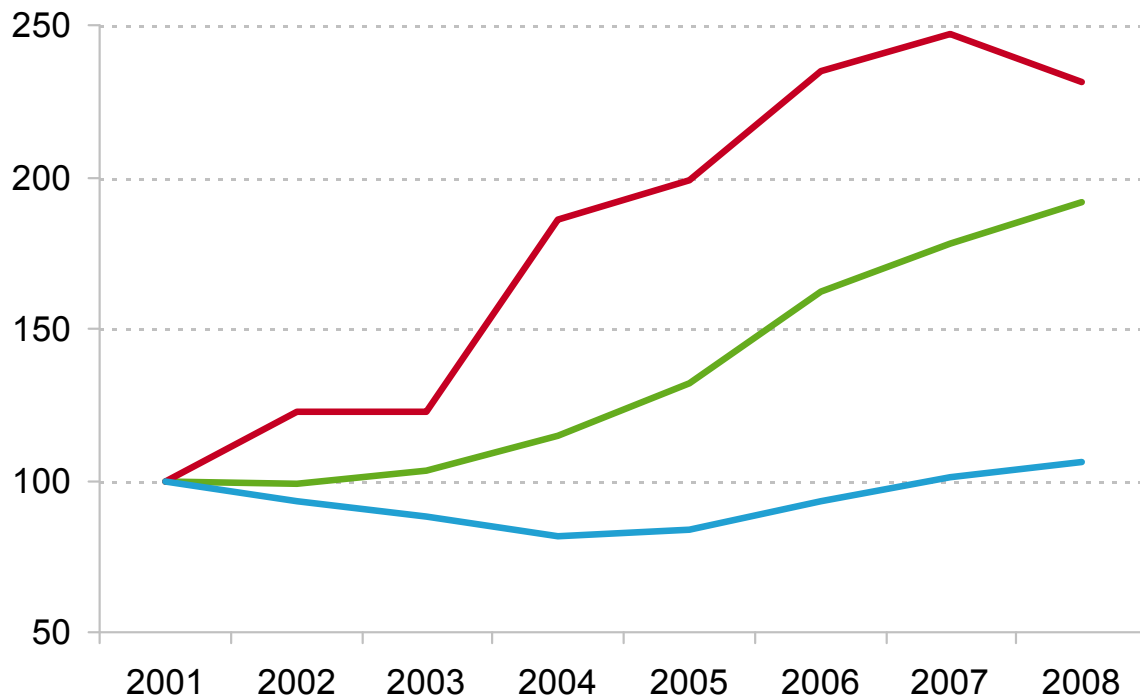


\* Cash provided by operating activities less capex (in 2005 before CTA)

\*\* According to German GAAP

# Relentless fixed cost management

## Index

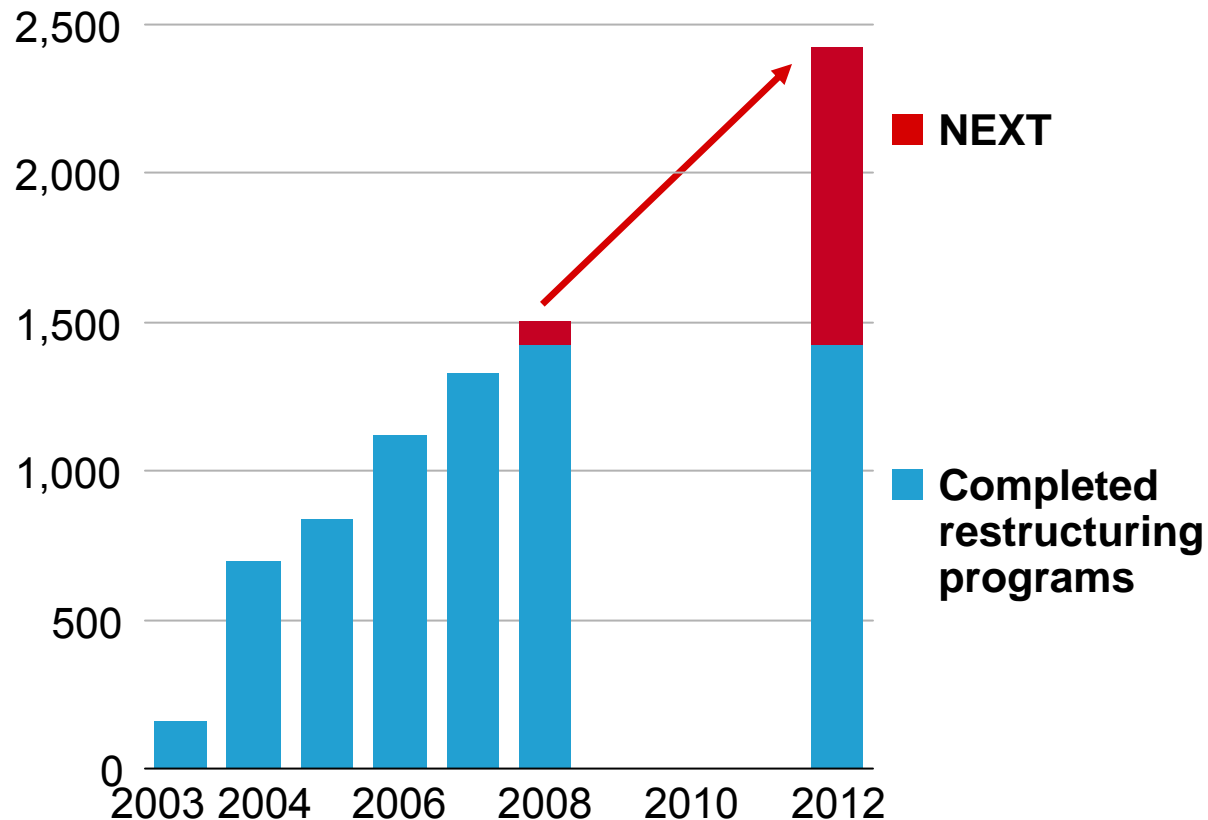


■ Fixed costs indexed   ■ Sales indexed   ■ EBITDA indexed

- Absolute level of fixed costs stable compared to last trough, while business increased significantly
- Acquisitions in 2006 pushed up fixed costs slightly
- Fixed costs represent around 30% of total costs

# Sustainable improvement of cost base




## Annual earnings contribution in €million



## NEXT

- Project timeline: 2008 – 2011
- Potential earnings contribution: >€1 billion by 2012
- Non-recurring costs: €300 million
- Investment: €700 million
- Personnel reduction: >1,000 employees

# BASF has become the leading player in specialty chemicals

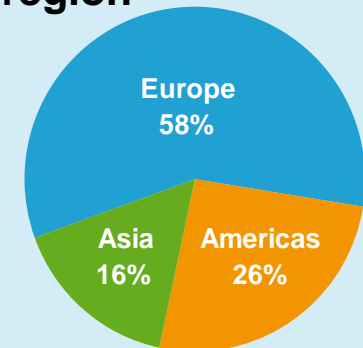
	BASF's position pre acquisition		Position of combined businesses
Plastic additives	4		1
Coating effects materials	4		2
Paper chemicals	4		1



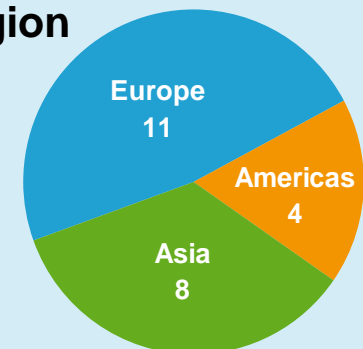
# Extensive restructuring measures related to Ciba integration

- **Personnel**
  - Reduction of ~3,700 positions, majority of reductions by end of 2010
- **Production sites**
  - 23 sites currently under strategic review, i.e. closure, divestiture or restructuring possible
  - 32 production sites planned to be optimized and/or restructured, e.g. Bradford, Grenzach, Lampertheim and Maastricht
- **Non-production sites**
  - 36 locations planned to be exited by 2010

**Headcount reduction by region**

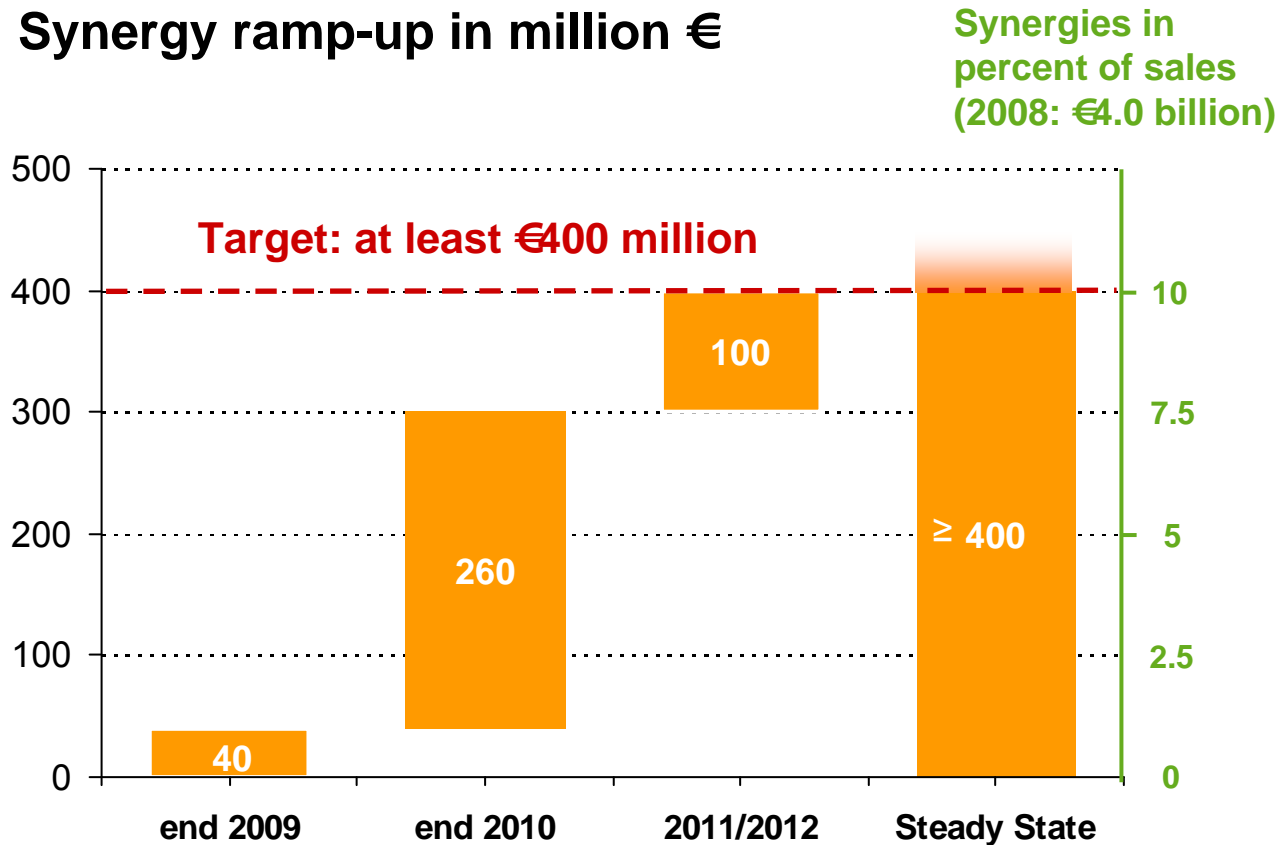


**Production sites under review by region**



# Synergies and integration costs related to Ciba integration

## Synergy ramp-up in million €



## Integration costs

- Total cash costs: ~ €550 million (thereof ~ €150 million in 2009)
- Non-cash costs: ~ €500 million (thereof ~ €400 million in 2009)

Note: Ciba revenues 2008: CHF5,919 million or €3,986 million

# Severe challenges for BASF in 2009

- **Basic assumptions for 2009**
  - Decline in
    - global gross domestic product (-3%)
    - global industrial production (-10%)
    - global chemical production excluding pharma (-8%)
  - Average exchange rate of \$1.35 per €
  - Average oil price of \$55/bbl
- **Outlook for 2009**
  - In view of the current economic environment and the expenses resulting from the Ciba integration, we anticipate a significant decline in sales and earnings.
  - Therefore, BASF is unlikely to earn its cost of capital in 2009.

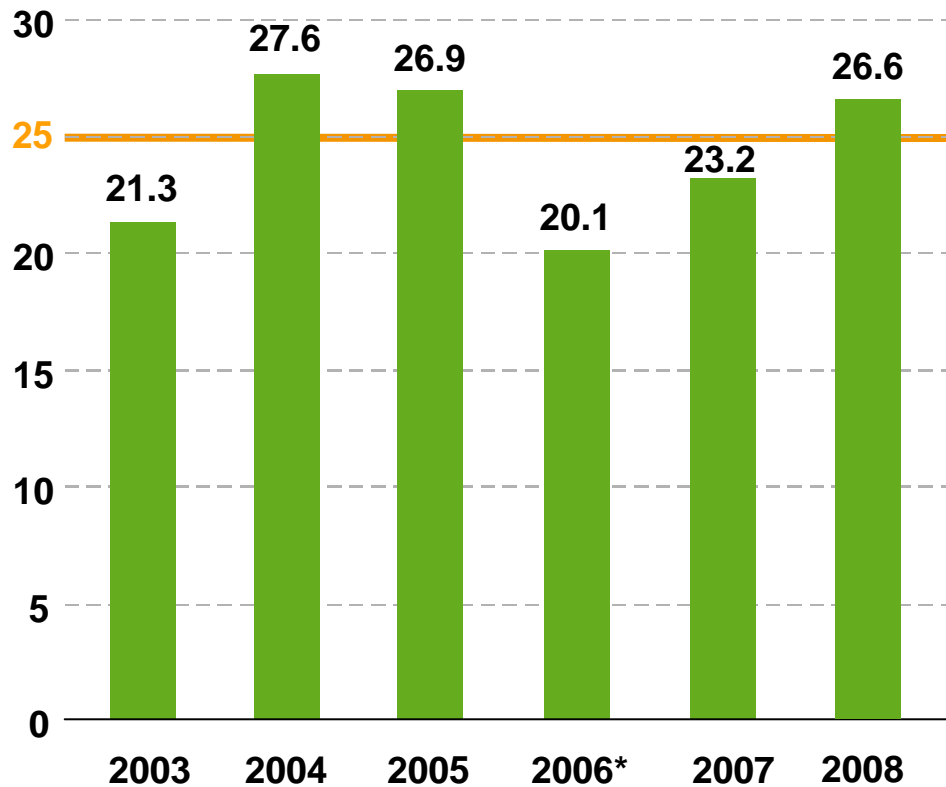
# Why is Agricultural Solutions so important in our portfolio?

- Agriculture is the only industry sector that is not severely affected by the current economic crisis
- Independent from chemical cycle
- Above average contribution to BASF's profitability
- Market of high attractiveness driven by innovations
- Highly promising pipeline
- Cost synergies & excellent know-how transfer by using Verbund advantages
- Light in tangible fixed assets



# Profitability Crop Protection – Top performer in BASF Group

## EBITDA margin before special items (%)



Year	2003	2004	2005	2006*	2007	2008	
Sales (in million €)	3,176	3,354	3,298	3,079	3,137	3,409	
EBIT before special items (in million €)	294	666	671	378	526	706	

294	666	671	378	526	706	EBIT before special items (in million €)
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- 25% EBITDA-margin target exceeded in 2008
- BASF remains benchmark in profitability

\* 2006 onwards corporate cost excluded



# Agricultural Solutions – a cornerstone in BASF's portfolio

## Percentage of sales 2008



### Chemicals

18%

Inorganics

Petrochemicals

Intermediates



### Plastics\*

15%

Performance  
Polymers

Polyurethanes



### Performance Products\*\*

13%

Dispersions &  
Pigments

Care  
Chemicals

Paper  
Chemicals

Performance  
Chemicals



### Functional Solutions

15%

Catalysts

Construction  
Chemicals

Coatings



### Agricultural Solutions

5%

Crop  
Protection

Plant  
Biotechnology



### Oil & Gas

23%

Exploration &  
Production  
and  
Natural Gas  
Trading

\* Styrenics are reported under 'Other' following the transfer of the Specialty Plastics and Foams business units to the Performance Polymers division as of January 1, 2008

\*\* Performance Products segment as of April 1, 2009 (not including Ciba)



**1 | Overview BASF Group**

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# Strategy: Growth through innovation

- Concentration on high value markets
- Strong R&D investment to safeguard sustainable high profitability:
  - Continuous development of new active ingredients to strengthen our pipeline
  - Focus on innovative products to optimally address the needs of our customers
- Develop innovative business models/new market segments (e.g. Plant Health)
- Investment in capacity expansions
- Focused acquisitions to balance our portfolio (e.g. Sorex acquisition)





# Performance H1 2009

Excellent growth despite unfavorable weather conditions

Million €

	H1 2009	H1 2008	Δ%*
Sales	2,320	2,105	10
EBITDA**	808	728	11
EBIT**	711	622	14
Assets (as of June 30)	5,118	4,631	10

\* sales change at constant exchange rates and continued portfolio in H1 2009: +5%  
(Volumes -2%, prices +7%, portfolio +1%, currencies +4%)

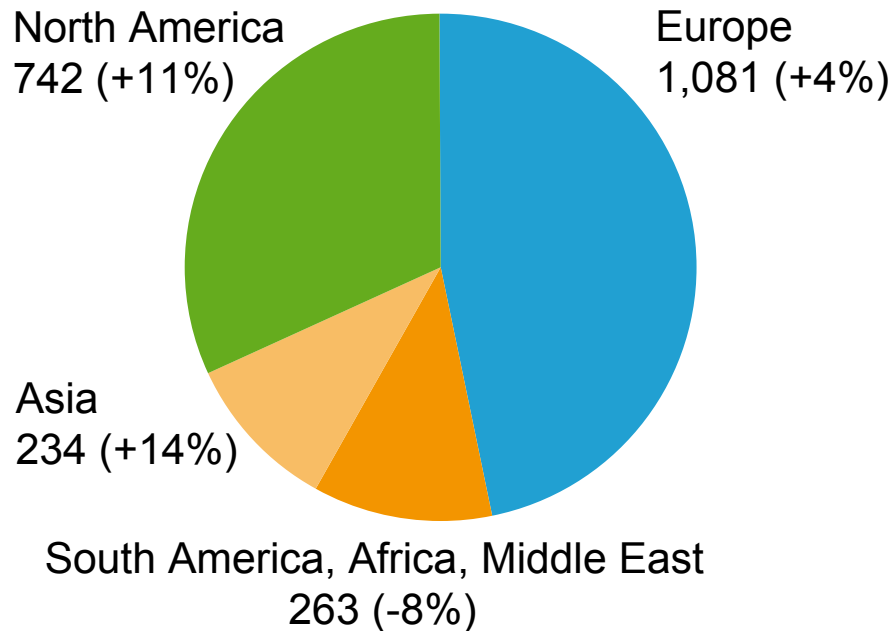
\*\* before special items

# Sales by indication and region H1 2009

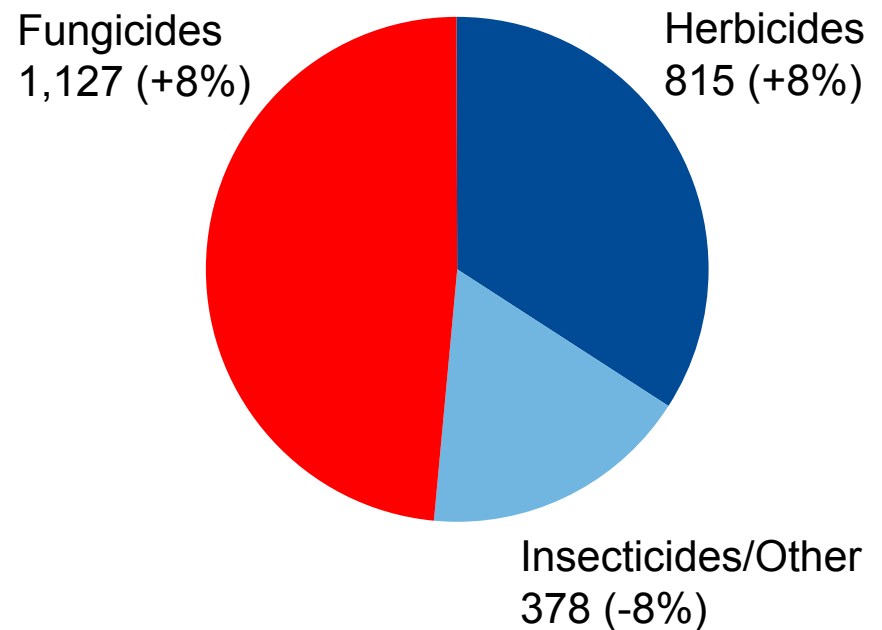
Northern Hemisphere and Asia contribute to strong growth

**Total sales H1 2009 to third parties: €2.320 billion**

**by region**  
(in € million)\*



**by indication**  
(in € million)\*



\*in brackets growth at constant exchange rates and continued portfolio in % vs. prior year

# Powerful R&D pipeline

Phase* (Launch year)	Projects	Market segments	Peak sales potential
Launched (2002-2003)	F 500® (F), boscalid (F) Tritosulfuron (H) Chlorfenapyr (I)	Field crops, specialty crops Field crops Non-crop	<b>€1,400 million**</b>
In launch (2004-2008)	Dimoxystrobin (F), metrafenone (F), orysastrobin (F) Topramezone (H), F 500® seed treatment (F) Metaflumizone (I)	Field crops, specialty crops Field crops Specialty crop	
In develop- ment (2009-2014)	2 fungicides 1 herbicide (Kixor™), 2 herbicide tolerance projects 1 insecticide	Field crops, specialty crops, seed treatment Field crops Non-crop	<b>€700 million</b>

\* Launched: First registration in major market in 2002 (or elder than 5 years to current year)

In launch: First registration in major market 1 to 5 years prior to current year

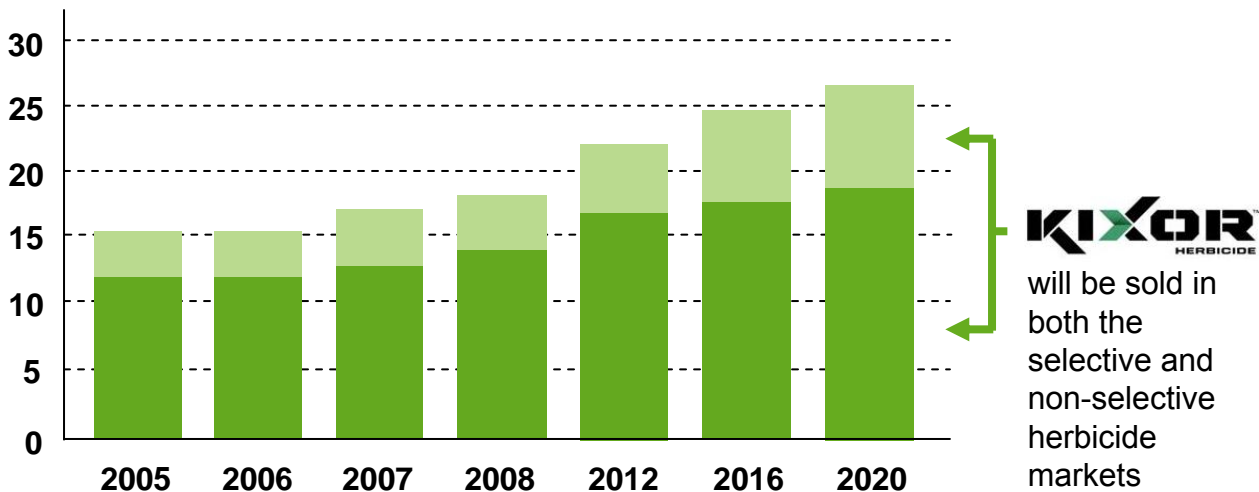
In development: First registration in major market in current year or within next 5 years after current year

\*\* thereof products launched and in launch reached 70% in 2008

# Kixor™ – novel herbicide sets new benchmark

## Projected global weed control market

Billion €



- non-selective herbicides and herbicide trait fees (GMO market)
- selective herbicides (conventional market)

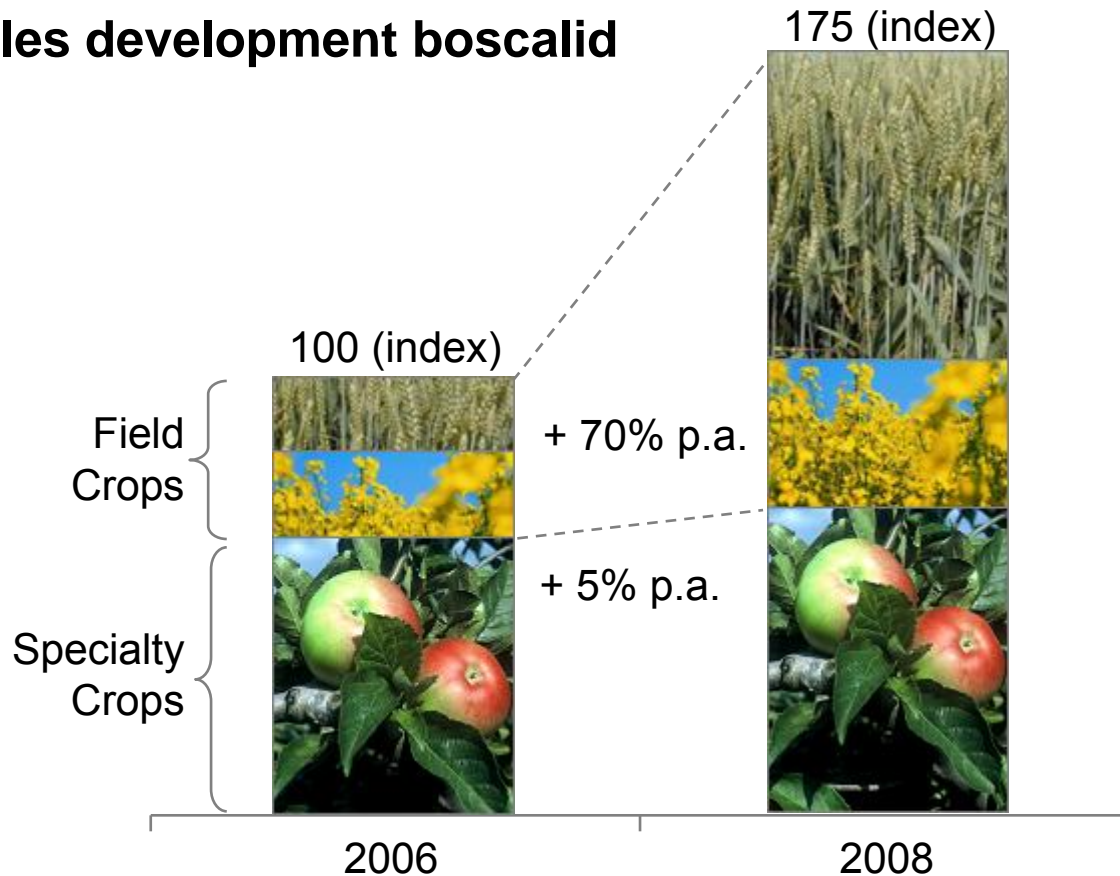
**Kixor global peak sales potential: > €100 million**

- Rebound of conventional herbicide market despite rapid GMO adaptation
- Highly attractive weed control market:
  - 2008: €18.5 billion
  - 2020: €26.8 billion
- BASF offers broad herbicide portfolio
- Kixor™:
  - highly effective against all important broadleaf weeds in key crops
  - important glyphosate resistance management tool

Source: Phillips McDougall and internal estimates

# Boscalid – novel fungicide with broad spectrum of activity

## Sales development boscalid

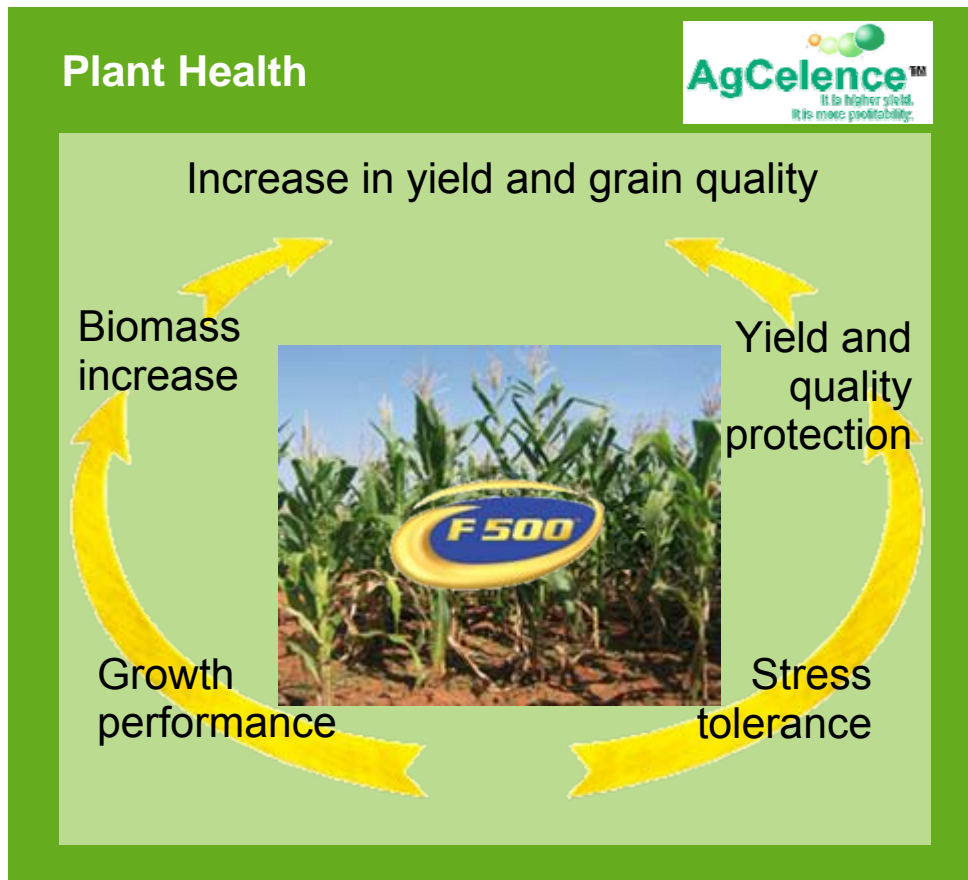


- New mode of action for efficient disease control
- Originally developed for specialty crop market
- Now strongly growing in field crops
- Boscalid is used in
  - 200 crops
  - >50 countries
  - >100 indications
- Peak sales potential increased by €50 million

**Global peak sales potential: €250 million**

Source: Phillips McDougall and internal estimates

# F 500<sup>®</sup> - pioneering a new market segment Plant Health



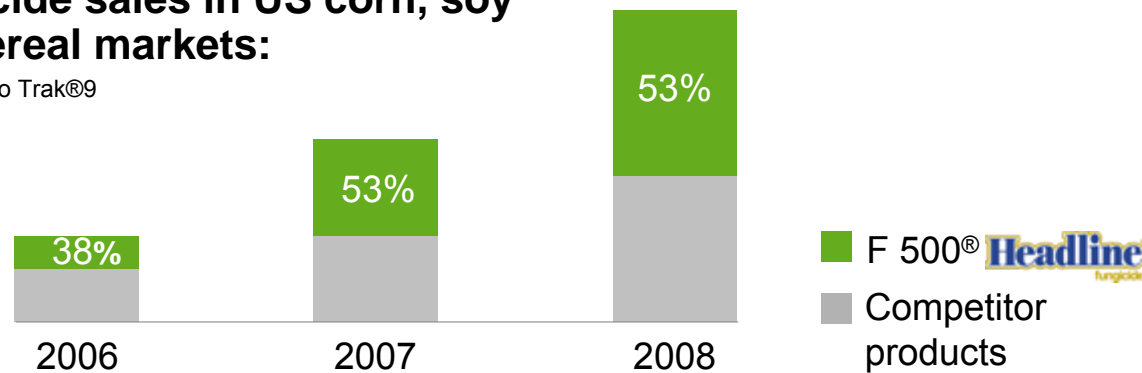
**Global peak sales potential: €700 million**

- Beyond efficient disease control F 500 delivers:
  - More yield (6-10%)
  - Healthier crops and better quality
- Global umbrella brand AgCelence™
- Leadership position in the Americas
- F 500<sup>®</sup> (Headline<sup>®</sup>) success in U.S. market:
  - Treatment nearly doubled in 2008 (>25 million acres)
- Peak sales potential increased by €200 million

# Success story of F500<sup>®</sup> (Headline<sup>®</sup>) fungicide in the US market

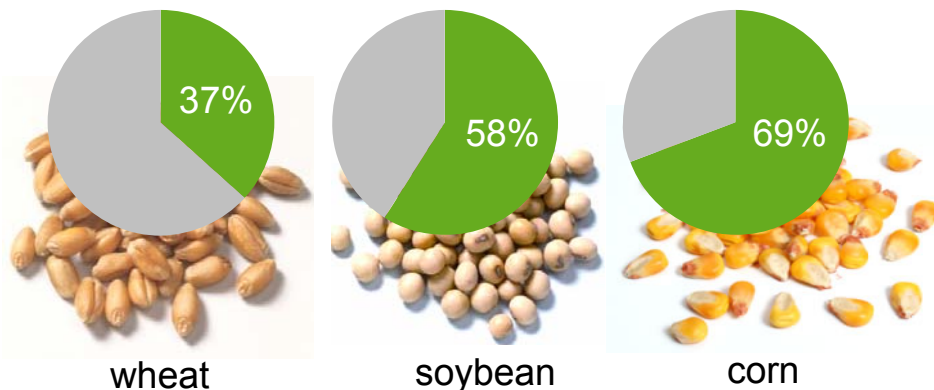
## Fungicide sales in US corn, soy and cereal markets:

Source: Agro Trak<sup>®</sup>9



## Headline<sup>®</sup> 2008 US market share\* by crop:

\*based on treated acres (source: DMR/Kynetc)



- New value proposition in a range of crops:
  - Significant yield increase
  - Improved harvest efficiency
  - Greater return on investment
- In 2008, again significant growth in all markets
- Further establishment of F500<sup>®</sup>/Headline<sup>®</sup> as the leader in disease control and plant health
- F500<sup>®</sup>/Headline<sup>®</sup> is co-promoted by Monsanto

# Successfully balancing our portfolio

## Recent acquisitions and cooperations

- **Sorex/Whitmire acquisition:** strengthens insecticide portfolio
  - Products for high-growth, non-cyclical non-crop business
  - Market leader in US general insect control and strong position in European rodent and insect control solutions
  - Sorex sales of about 60 million EUR in 2008
  - Seamless integration with first product launch (Phantom®) 4 months after closing
  
- **Serenade®\*:** innovative bio-fungicide with new mode of action
  - Favorable regulatory and environmental profile
  - Effective disease control closer to harvest
  - Excellent fungicide resistance management tool
  - Improves BASF's position in food production value chain



\* In-licensing from AgraQuest



# Outlook 2009

- Ag business less volatile & more robust against crises
- Fundamentals hold true; continued solid demand for crop protection products
- Volatile commodity prices but still above historic average levels
- Autumn business in Europe and start of season in Latin America key for second half
- Prudent credit management strictly in place, esp. in emerging markets (Latin America, Eastern Europe)
- Total investment in 2009 >€100 million, mostly related to capacity expansions
- Continued commitment to R&D with significant investment

**Profitable growth exceeding 25% EBITDA margin**





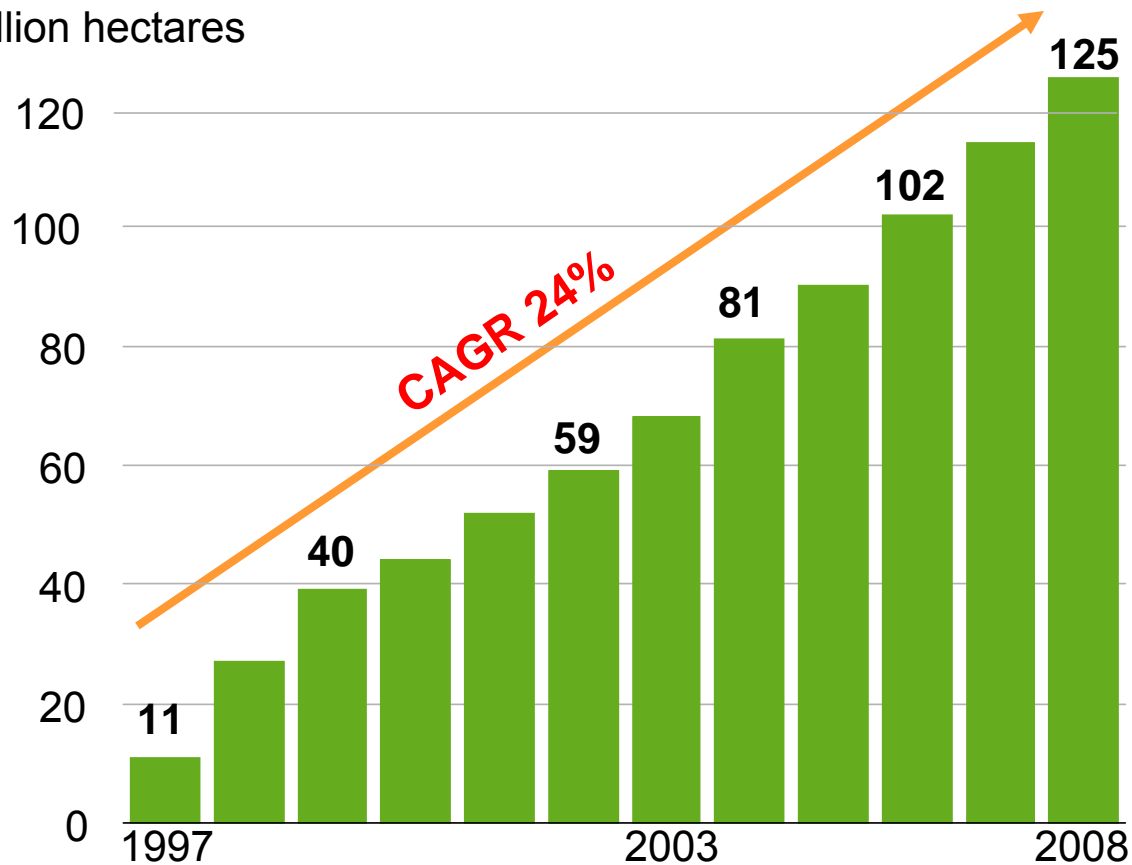
1 | Overview BASF Group

2 | BASF Crop Protection

3 | **BASF Plant Biotechnology**

# Significant plant biotechnology market

Million hectares



- Current trait value captured: 3,5 bn USD
- 125 million hectares worldwide (= cultivated area in EU 27)
- 13 million farmers in 25 countries
- Crops: corn, soybeans, cotton, canola
- 68% of soybean, 24% of corn is genetically modified
- Traits: herbicide tolerance and insect resistance

Source: ISAAA-Report 2008

# Plant biotechnology market 2025

**Market value in 2025**

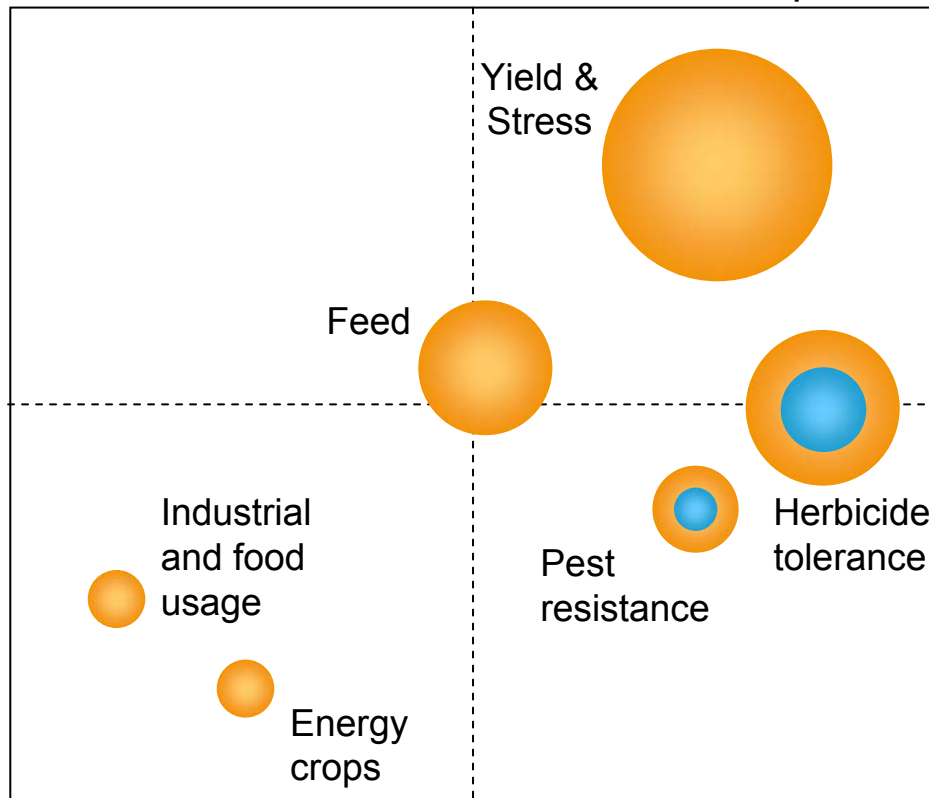
High

Low

Value captured by trait providers

● 2008

● 2025



Trait  
acreage  
in 2025

- Estimated market value in 2025: \$50 billion
- Market is dominated by agronomic traits and commodities
- Yield is the major market

Source: BASF Plant Science

# Strategy Plant Biotechnology – The Trait Technology Partner

## Our goal:

- Plant biotechnology generates significant and continuous earnings for BASF

## Our strategy: The Trait Technology Partner

- We develop the best traits for the best seeds
- Keep the technology leadership in traits
- Invest in product/trait (co-)development up to market introduction
- Establish long-term partnerships for market access

## Our market focus:

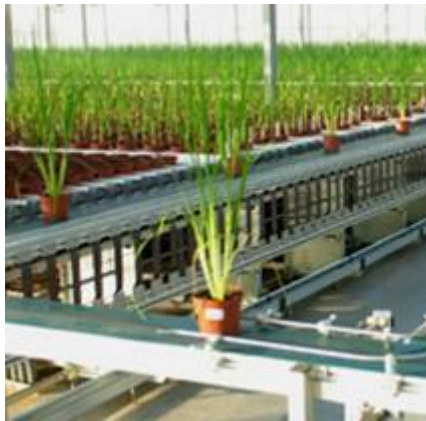
- Main focus on agronomic and feed markets
- Selectively pursuing opportunities in the food and industrial markets



# The BASF approach to gene discovery

Unique technology platform for developing the best traits

## Yield increase in crops

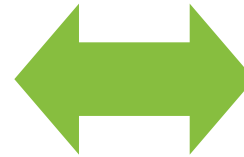


Look  
at plant



BASF Plant Science

Look  
inside



Unique platform to identify and understand the gene functions of plants  
Combines phenotypic screening with metabolic profiling determining gene function  
High throughput of 5,000-10,000 genes tested per year

# Broad pipeline of lead genes for generating the best traits

## Higher seed yield



control

BASF

## Larger seeds



control

BASF

## Larger panicles



control

BASF

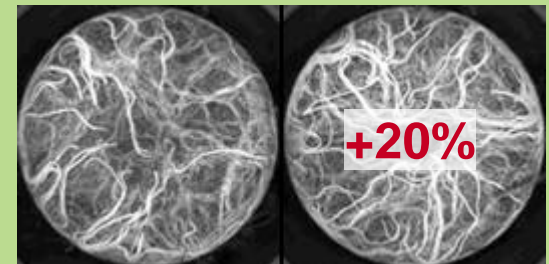
## Increased biomass



control

BASF

## Increased root biomass

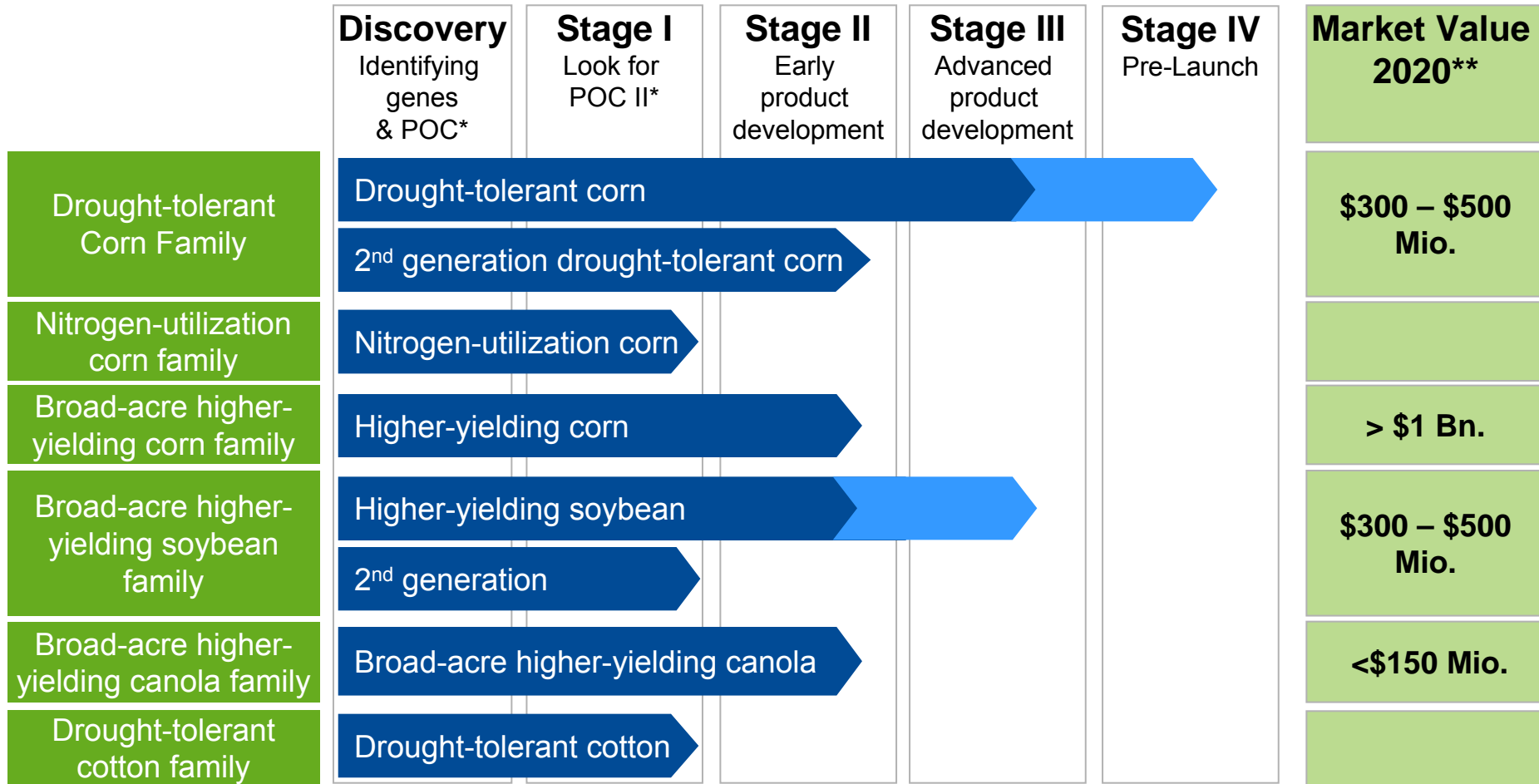


control

BASF

# BASF Monsanto collaboration

Joint pipeline: Market value > \$2 billion



\* POC = 'Proof of Concept' in model crop / POC II: 'Proof of Concept in Target Crop'

\*\* Valuation reflects annual gross sales value of trait in 2020 (~farm gate level) for initial country of launch only

Markets

Strategy

R&D

Cooperations

Outlook



# Sharing of profits generated by yield & stress traits commercialized

## Higher yielding corn 1 example

### 1) Incremental yield

Yield increment target	Average yield per acre	Commodity price	Potential yield value
6-10%	150 bu <sup>1</sup>	\$3/bu <sup>2</sup>	\$27-\$45/acre

### 2) Replacement costs

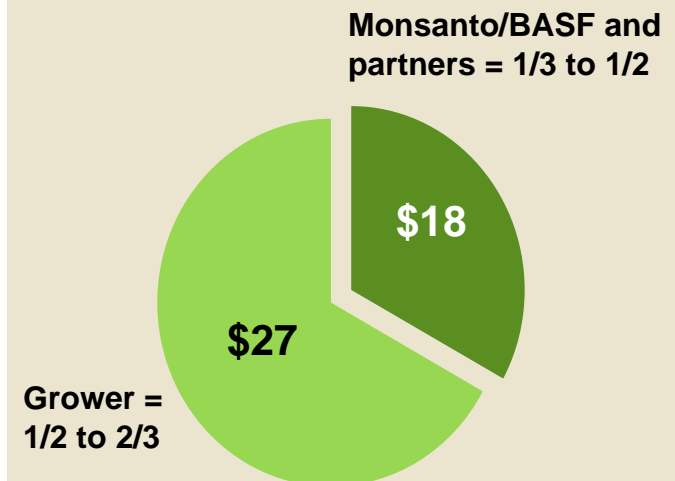
Crop input replaced	Average U.S. cost	Opportunity
N/A for this example		

### 3) Other

Peace of mind

Potential for reduced crop insurance

Total value created  
\$27-\$45/acre,  
say \$45 for example



1. Average yield per acre for corn in the U.S. was 151 bushels in 2007, as per the USDA; rounded to 150 bu/acre for example.

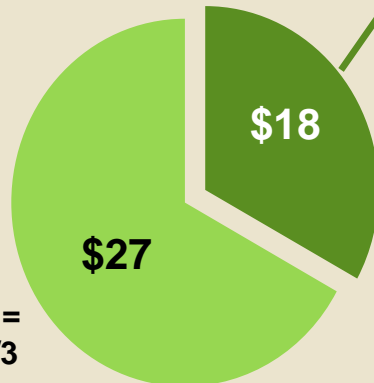
2. Conservative price assumption.

# Sharing of profits generated by yield & stress traits commercialized

## Higher yielding corn 1 example

Total value created  
\$27-\$45/acre,  
say \$45 for example

Monsanto/BASF and  
partners = 1/3 to 1/2



Grower =  
1/2 to 2/3

Retail trait price per acre	\$18.00
x Volume (Acre opportunity – U.S.) <sup>1</sup>	55M
Gross trait sales peak potential in the U.S.	\$990M
Less: Share to channel (retail or licensed)	
Net sales for trait	
Less: COGS for trait (royalties, etc.)	
Gross profit for trait	
Less: S,G & A (marketing, corporate costs)	
Less: R & D	
Less: Working capital charges	
= Residual trait value	
x 60% = Monsanto portion	
x 40%= BASF portion	

1. Assumes 90M acres of corn in U.S. multiplied by Monsanto's current branded and licensed U.S. corn share

# BASF Monsanto collaboration

## Drought-tolerant corn



**control**



**optimized**

- **Target:** 6-10% yield improvement in water-stress environments
- Pre-launch phase (IV)
- **Value:**
  - Launch-country acres-family: 55 million\*
  - 2020 value: \$300-\$500 million\*\*
- First regulatory submissions completed
- Market launch: 2012 onward

\* Acre opportunity reflects acres where technology fits at Monsanto's current 2008 market share in respective crops.

\*\* 2020 value reflects gross sales opportunity in launch country in year 2020.

# BASF CTC collaboration

## Higher-yielding and stress-tolerant sugar cane

- **Target:**
  - 25% more yield compared to today
  - Traits: improved yield and drought tolerance
  - Joint development of BASF and Centro de Tecnologia Canavieira (CTC) in Brazil
  - BASF provides genes and regulatory support; CTC provides varieties, transformation and development
  - Value shared between farmers, CTC, and BASF
- **Advantages:**
  - Significant higher yield
  - Drought tolerance secures yields
- **Centro de Tecnologia Canavieira (CTC):**
  - The leading Brazilian sugar cane breeder; CTC varieties cover around 45 % of the Brazilian sugarcane market
  - CTC is owned by sugar mills (164) and farmers (12.000)



# BASF Embrapa collaboration

## Herbicide-tolerant soybeans for South America



Ministério da  
Agricultura, Pecuária  
e Abastecimento



**control**



**optimized**

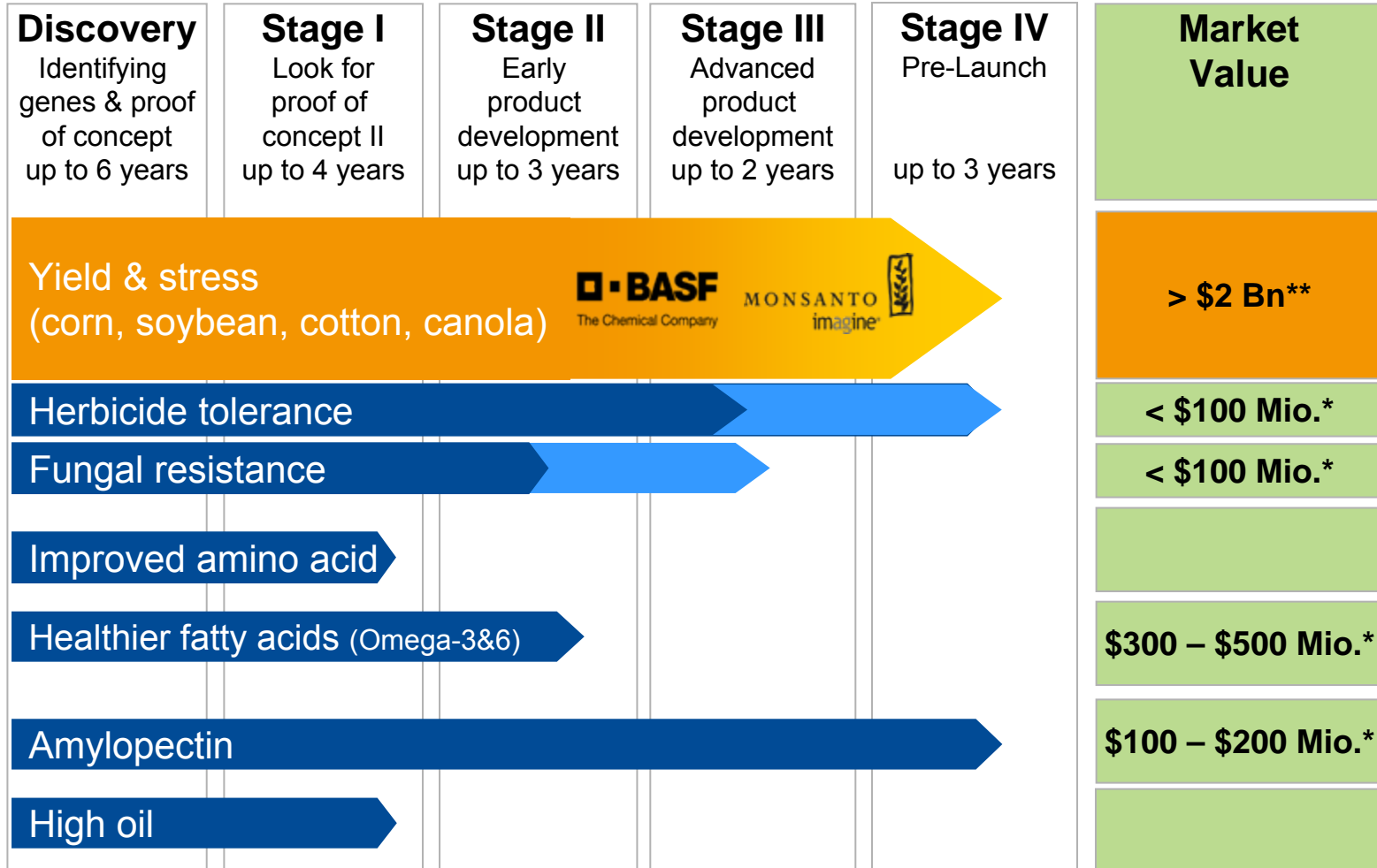
- Easy and efficient weed control system for soy beans
- Joint development with Embrapa (public agricultural research corp. in Brazil)
- Market launch 2011 onwards
- Sales potential: <\$100 Mio

### Advantages:

- Convenience for farmers
- Less inputs
- Maximizes farmers income

# Strong development pipeline

Total market value > \$2.5 billion



\* Value generated through the plant biotech trait across the respective value chain; \*\* Valuation reflects annual gross sales value of trait in 2020 (~farm gate level) for initial country of launch only

Markets

Strategy

R&D

Cooperations

Outlook

# Outlook

## Percentage of sales 2008



### Chemicals

18%

Inorganics

Petrochemicals

Intermediates



### Plastics\*

15%

Performance  
Polymers

Polyurethanes



### Performance Products\*\*

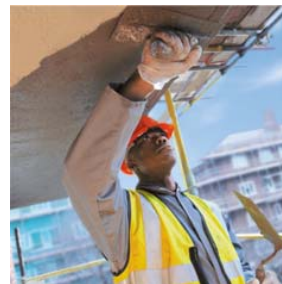
13%

Dispersions &  
Pigments

Care  
Chemicals

Paper  
Chemicals

Performance  
Chemicals



### Functional Solutions

15%

Catalysts

Construction  
Chemicals

Coatings



### Agricultural Solutions

5%

Crop  
Protection

Plant  
Biotechnology



### Oil & Gas

23%

Exploration &  
Production  
and  
Natural Gas  
Trading

\* Styrenics are reported under 'Other' following the transfer of the Specialty Plastics and Foams business units to the Performance Polymers division as of January 1, 2008; \*\* Performance Products segment as of April 1, 2009 (not including Ciba)

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The Chemical Company

# Agricultural Solutions

## Performance Q2 / H1 2009

Million €	Q2 2009	Q2 2008	Δ%	H1 2009	H1 2008	Δ%*
Sales	1,175	1,159	1	2,320	2,105	10
EBITDA**	416	422	(1)	808	728	11
EBIT**	367	363	1	711	622	14
Assets (as of Jun. 30)	-	-	-	5,118	4,631	11

\* sales change at constant exchange rates and continued portfolio in H1 2009: +5%  
(volumes -2%, prices +7%, portfolio +1%, currencies +4%)

\*\* before special items

# Agricultural Solutions

## Sales by indication

Million €	H1 2009	H1 2008	Δ%	Δ% (CER)*
Fungicides	1,127	1,022	11	8
Herbicides	815	722	13	8
Insecticides / Others	378	361	5	(8)
<b>Total</b>	<b>2,320</b>	<b>2,105</b>	<b>10</b>	<b>5</b>

\*constant exchange rates and continued portfolio

# Agricultural Solutions

## Sales by region

Million €	H1 2009	H1 2008	Δ%	Δ% (CER)*
Europe	1,081	1,077	0	4
North America	742	584	27	11
South America, Africa, Middle East	263	263	0	(8)
Asia Pacific	234	181	29	14
<b>Total</b>	<b>2,320</b>	<b>2,105</b>	<b>10</b>	<b>5</b>

\*constant exchange rates and continued portfolio