



We create chemistry

Presentation Agricultural Solutions

Transcript Speech

September 26, 2024

Michael Heinz

Member of the Board of Executive Directors

[Slide 2: Agricultural Solutions – For the love of farming, the biggest job on Earth]

Let's dive right into it. You might wonder why I have this green sticker here. Because the purpose of our business is for the love of farming, the biggest job on Earth. That drives all our people. That sets the direction in the division of Agricultural Solutions, which is led by Livio Tedeschi, who is sitting here in the second row.

This business plays in the Champions League of agriculture. We are not the biggest company, but we are in the Champions League, and we think that we can win in the crop systems that we serve. I'll come to that in a second. But first let's take a look at the regional distribution, which has changed quite a bit since the acquisition of the businesses from Bayer. We have become much stronger in North America and also in South America. We are still very strong in Europe, and we have a significant size in Asia Pacific. You might wonder when you look at that chart that we are not showing our indication sales, which we would normally do at this point. This is obviously available for you if you're interested. But that's not how we look at our business.

We look at and segment our business by crop systems, which you see on the right. The largest crop system for us is the soybean crop system. Why do we call it a soybean crop system? Because we primarily target the soybean farmer. That's his primary crop. But he also farms or rotates into corn and cotton.

The second crop system that we serve is wheat, a wheat farmer who might also rotate into canola or sunflower. Then we have fruits and vegetables and then our rice system. Later on, I will come back to why it is so important to us that everything we do is targeted according to the needs of that farmer in that particular crop. He does not look at it like "I need an insecticide, I need a fungicide, I need an herbicide". He thinks: "I have certain problems in my main crop. Who can help me and who can preserve or increase my yield?" This is what we do on a daily basis, trying to provide these farmers with seeds, traits and crop protection products. And increasingly, also with digital solutions and solving their sustainability issues.

[Slide 3: Agricultural Solutions is a strong earnings contributor and cash generator for BASF]

This is a financial view of our business. Between 2020 and 2023, we generated an average EBITDA before special items of €1.8 billion. This is a high cash-generating business. It generates about 60% of that EBITDA before special items in cash. We have only achieved on average 20% EBITDA before special items margin. Why am I saying "only" 20%? Because of the performance that we had in 2021, with only 16.8%. Then it started to gradually improve in 2022 with the acceleration of our strategy implementation. Last year, we had a stellar performance and a record year, with almost 23% EBITDA before special items margin, also setting the benchmark in the industry.

[Slide 4: Fundamentals remain strong despite the current market adjustment]

Now you will say: Okay, that's all good, but that was the past. Trading in the first half of 2024 was not as stellar as everyone expected, but that is not a BASF issue. That is, an industry-wide topic. It has to do with a couple of reasons. First of all, there was destocking by our distributors. A lot of the distributors, particularly those which are publicly-listed, had not met their targets in 2023. So, they started to really destock on their side.

What we also saw was a huge devaluation of the glyphosate market. For those of you who are familiar with glyphosate: It is the largest total herbicide and has about \$9.5 billion in total market sales. We actually also provide a non-selective herbicide, called glufosinate-ammonium. Obviously, with the devaluation of the glyphosate market, we also saw a devaluation of glufosinate-ammonium.

What we have done is: We took some swift action and decided to close our own manufacturing plants, which are no longer competitive in this environment and will not be competitive going forward. In the future, we will insource this type of raw material and continue to supply the total herbicides market.

We have this adjustment and downcycle in 2024, which is also driven by soft commodity prices, because in this industry there is a direct correlation between soft commodity prices and what the farmer is willing to pay. You see that the soft commodity prices are below their five-year average, so they have come down quite a bit. That also has an impact on this business.

But despite that, the outlook for this business and the drivers of this business are solid and will remain solid. And later I will also continue to talk a bit about that.

[Slide 5: We are well positioned in the agricultural market]

Part of that is really market size. Market size will continue to grow on average about 3% per year, up to \$140 billion by the year 2030. As an integrated agricultural solution provider within the crop systems that we serve – I'm going to repeat that a couple of times because in this business it is largely about focus and the type of focus that we have taken over the last couple of years – we are a provider of seeds and traits, crop protection, sustainable solutions and digital solutions. So, it's about this connected offer within those crop systems. There we believe that we have a lot to offer. I will show that in a second.

With that, when you look at the average EBITDA before special items of €1.8 billion that we generated between 2020 and 2023, we believe we can increase that by around 40%, or in absolute terms by €550 million to €800 million by 2028. We want to be the leader in terms of EBITDA before special items margin. Our ambition is to be above peer average, or about 23%.

[Slide 6: Our holistic approach addresses the needs of farmers in a changing market environment, leading to profitable growth]

I told you a little bit about what we want to achieve, but even more important is: How are we going to achieve that and what are these five pillars of our strategy going forward? We put a sticker on each thing that is new.

Two and a half years ago, we sat down together and took a look at our strategy. Then we decided that we will organize in the future according to crop systems. We will also implement differentiated steering – some of that was already mentioned this morning – and we will focus our activities geographically, which means we will not serve all geographies going forward.

What's not new is innovation. I mean, this is an innovation-driven business. The lifeblood of this business is innovation, innovation, and innovation. And if we are ever incapable of generating innovation, then we have a problem.

But what's new is how we go about our digital type of ecosystem and the digital programs that we offer. Part of our DNA is obviously to continue to focus on improving our gross margins and also constantly look at how we can improve productivity and effectiveness. I will dive into each one of those pillars and provide some additional explanations.

[Slide 7: Crop system steering lets us think like our customers – offering connected solutions to solve farmers' challenges]

Let's come back one more time to this crop system approach. As I said, what we are doing is: We focus on a soybean grower who also rotates into corn or cotton. In the past, we would have approached our research and development activity totally differently. We would have had an active ingredient and then we would have looked at what kind of crops we can use that active ingredient for. Today, we will only develop an active ingredient if it has justification in that lead crop. So, it's a huge change in our R&D setup.

In the past, we were only in crop protection products, but now – through the acquisition of the businesses from Bayer and through our own activities – we have entered seeds and traits. And we'll do that even more in these crop systems. We also drive digital solutions and sustainable solutions for our customers.

[Slide 8: Winning market share by focusing on four strategic crop systems]

This slide provides you with some additional information about those individual crop systems. What is the value of those crop systems in the market? If you take the soybean crop system, it represents about 41% of the total market in 2023. At the bottom, you see our regional distribution. We are strong where it really counts: in North and South America. We are really a strong challenger in this crop system.

Then we have the second column, which is wheat. We are very strong in Europe but also in North America, primarily in Canada. This is because of the strength of our canola franchise, where seven out of the 10 most popular seed systems come from BASF.

Then our fruit and vegetables business, where we are number three globally and where we have started to work much closer with our Nunhems business, which in the past was kind of a separate activity. Last, but not least, rice, which is rather small with sales of only €300 million, but we have some nice innovation coming into that market. So, here we believe we can double our market share by 2030.

[Slide 9: Key trends in the industry drive the need for innovative and connected solutions along the value chain]

I said at the very beginning that the key trends of this industry will drive innovation. This industry is still going to have solid demand going forward. What's not new is population growth. A lot of it continues to be driven by a growing population, whether it's one billion additional people by 2040 or a global population of 10 billion by 2050. Any way you look at it, a growing world population will require higher output on the ag side.

Increasingly, we are seeing labor scarcity and an aging workforce. This is also where some of our digital models come into play, which I will show you in a second. There is ongoing regulatory pressure, which creates higher hurdles for the development of new active ingredients. But at the same time, if you are successful in placing a new active ingredient into the marketplace, then the sphere of your opportunities becomes larger.

To the left here, we have climate change and extreme weather conditions. We are now starting to see diseases in areas where we had never seen these diseases before. In the past – I still remember when I was division head – there was a time when we thought that innovation in crop protection would come to an end, and we started to focus much more on the generic side. We even bought a generic company at that point in time. That was when glyphosate was introduced. But in the meantime, nature obviously has outsmarted us on many occasions in this industry with resistance on fungus, insects, also on weed and grasses. You will constantly need innovation going forward.

[Slide 10: Key trends in the industry drive the need for innovative and connected solutions along the value chain]

This slide shows the innovations that you need in the various crop systems in response to those individual trends.

Whether it is the next wave of farm application effectiveness, where we can make a contribution with our xarvio® franchise. Or whether it is new active ingredients because of continued resistance in fungicides, insecticides and herbicides. Any way you look at it, there is a lot of innovation needed in all those crop segments. Some of them have a larger impact, some of them have a medium impact and some of them have a smaller impact.

If I roll this up and aggregate it even further, then we can make it fairly simple, which is on the next chart.

[Slide 11: Innovation enables us to deliver value for every crop system]

For us, that means new molecules, new seeds and traits, and xarvio® for digital. And then, in any combination of those three, also solving some of the problems you see in the last column, for example, carbon farming, a trend which is starting to develop but is still in its infancy. But you need a lot of tracking and that can only be done with some of our digital solutions in order to play a role here in the future, or in biological solutions or water savings.

[Slide 12: Innovation pipeline]

This looks a little bit like an eye chart. I know: Whenever I come to this type of event, you would immediately like to say: Give me the size of the bubble, give me exactly on what day, in what month or year in what market you're going to introduce these innovations. – That is something which we cannot deliver.

But what we can say is that we have a very rich pipeline in all of those crop systems. If you look at it a little bit closer, then you will see: We have six new active ingredients by 2030, seven additional active ingredients after 2030. And when you look at trait or seed innovation, we also have six innovations coming by 2030 and then another six coming after 2030. If you add it all up, that's about 25 innovations that we are going to launch within that time frame. That is quite sizeable. When I was a division head, we were targeting one active ingredient every other year. And here we are talking about one active ingredient or one new seed and trait variety every year.

[Slide 13: Deep dive: xarvio® digital farming solutions – An advanced product ecosystem to support customer growth]

Let's take a quick deep dive into xarvio®. Some of you might have heard about xarvio®. xarvio® is a franchise that we acquired along with the businesses acquired from Bayer, and this was a standalone type of franchise. It was set up in order to be the SAP of agriculture, but standalone. We also tried to adopt that concept when we acquired the business. But about two or two and a half years ago, we decided we need to take a new and fresh look at how we approach a digital ecosystem within agriculture. Because prior to that, we tried to be everything for everyone. We looked at farm management systems – the SAP in agriculture. We tried to detect any type of disease in any type of crop in any country around the world. And we tried to go directly to the farm gate, not through our distributors.

We then said: We will do this differently. We will work with distribution going forward. We will restrict our innovation to the key countries where it really matters. And we will stop all activities that will not generate value within our connected offer.

So, we came up with these three approaches. What I'm going to tell you might be kind of theoretical for you, but when you go to Limburgerhof later, you will see it live.

On the left side, you have xarvio™ FIELD MANAGER. This is basically a system where we provide information about the biomass of a field to a farmer, which gets updated every third day. The farmer gets the information what to plant,

when to plant, how much to plant. But he still has the right to choose what products to use. This can be connected to a distributor, and a distributor or retailer also provides the products right to the farm gate.

The middle one is much more interesting because the middle one drives share. It is exactly the same as on the left side. However, here it's an outcome-based model. Here we tell the farmer: We provide you the guarantee that your field will be 80% disease-free. But then we get to choose the products, primarily BASF products, and, through the retailer distributor, we also provide the service to apply these products on the farm.

Now you might say: Does that even make sense? – It makes sense. Let's say you have a European farmer who is in livestock, for example, and he has certain fields that he cultivates. He might say, I'm dedicating my focus to my animals, and I'll let someone else take care of the fields. – So, that's the middle section.

Then the right column is SMART MACHINERY. This is still a little bit in its infancy. This is a joint venture that we have with Bosch. Bosch is the world leader in injection nozzles; that comes from their experience with combustion engines. And we obviously have all the agronomic knowledge. What we have here is precision farming. With a spray booth – where you have lightning and cameras which detect the problems in the field – and a tank which is at the end of the tractor, you would only apply the agrochemical where the problem actually exists, so to the weed and not the beneficial type of crop.

This, as I said, is still in its infancy because it's something where the equipment also has to be generated step by step. But this is certainly also an opportunity going forward.

[Slide 14: Deep dive: We support the transformation to direct seeded rice as a sustainable solution]

I spoke about sustainability-related options. We can connect this also with us doubling our sales in rice. If you have ever been to a rice paddy, you know: Rice is normally planted by taking rice from the nursery, planting it on the field and then flooding the field to make sure the rice does not have any problem with weeds or grasses.

We have a couple of non-GMO herbicide-tolerant traits where you can do direct seeding, so you would not have to flood the rice field with water. By doing this, you're obviously improving the production efficiency. You are much more efficient when it comes to water usage. This is the reason why we think that we can also drive share in rice.

[Slide 15: We are connecting our innovation capabilities to transform agriculture]

This is a thing that I'm particularly proud of because it's not only about what you have in your pipeline, or the type of machine you have to come up with new active ingredients. Instead, it's your innovation capability to really transform this into an invention, into an innovation, because an innovation is when the cash register rings. We will be able to start to put these products into the marketplace.

We have a couple of KPIs that you can track easily on your own because this information is also available from our competitors. One example is our above-average R&D efficiency.

What we do here is: We just take a look at the pipeline value, and we divide it by the R&D expenses that the company uses, which gives you a factor. Our factor is 8; the average of our peers is 7.5, which just means that we are getting much more out of our machine.

The middle column is time to registration. I also have here a couple of comparisons: the registration timelines in Europe and in Brazil, where we have also outperformed competitors. Every month earlier we are in the field means additional opportunity and additional gross margin.

Then we have this collaborative culture, where we work with a lot of universities. The result you see here on the right, which is our pipeline value of over €7.5 billion. This is a concept which was introduced in the marketplace when I was president and then also adopted by all of our competitors.

[Slide 16: Differentiated steering will enable Agricultural Solutions to unlock further potential]

At the beginning, Markus spoke about differentiated steering. Why is differentiated steering so important to us? Because, obviously, you're kind of an oddball as an agricultural products division within BASF. I mean, the company is selling bulk chemicals. At the same time we are trying to sell tomato seed. In one tomato seed you can have about 3,000 seedlings, which is a completely different business from running bulk chemicals.

It's also about processes, about the type of systems that we would like to set up to connect ourselves much better to retail and distribution. This is also something that we don't really have in our upstream chemicals. With differentiated steering, we can really structure our systems, our processes, our governance to the needs of this business. Because then we can also compare ourselves with our KPIs in terms of absolute profitability, divisional cash flow and relative profitability versus peers. We want to operate like our peers in the agriculture sector and compare our profitability against our competitors.

[Slide 17: We accelerate the implementation of our strategy]

A lot of this is really standard. I mean, everyone will show you this slide. Over the last couple of years, in 2021 and 2022, the focus was a lot on volume. Then we sat back, took a look and said: No, we will streamline our portfolio, and we will really focus on substantial price increases and on optimizing the cost of goods sold going forward. Obviously, we will continue to look at our portfolio mix and continue to optimize this. Fixed cost management is something that you have to do on an ongoing basis.

The restructuring of the glufosinate-ammonium franchise will still take us a little while. We are closing down our active ingredient manufacturing this year, our formulation site will close next year.

We have rescoped our hybrid wheat R&D program. We have done some cost optimization, also as a result of focusing on crop systems and where we want to play going forward. And we have this new strategy for digital farming solutions that I already spoke about.

[Slide 18: We focus on key geographies]

This is also an important slide because we really focus on key geographies. If you look at the left side, it's about 15 countries that generate around 80% of our gross margin or which provide us with more or less 80% of our market coverage. Within those crop systems, we will develop new active ingredients, new solutions for our farmers. And we will also develop formulations and drive these new business models.

In the past, we would have developed active ingredients for all around the globe. It means we would have tested certain active ingredients in formulations in other countries that are not our Drive countries. We're not going to do that anymore. When you look at the Advance countries which contribute about 10% of our gross margins, those are roughly 20 additional countries. The formulations that we develop for our Drive countries basically also have to work in our Advance countries. There might be a few exceptions. But that is truly the exception because this is really a plug and play.

Then we have about 65 Optimize countries. Those 65 countries only account for 6% market coverage. They still generate around 10% of the gross margin in our overall business, but here we are going to analyze whether we will optimize the setup – basically be much leaner – or ultimately even exit.

[Slide 19: Effective utilization of resources in Agricultural Solutions to ensure profitability targets are met]

How are we utilizing our resources? This slide provides you with some of the information that you always want to see. In research and development, we have spent about 9% to 10% of net sales. This is something which we will continue going forward.

This is a rather R&D-intensive type of industry. On the capex side, you have relatively little money that you need to spend, so here we have annual spending in the low-triple-digit million-euro range.

When it comes to working capital, this is a very working-capital-intensive type of industry. The reason is: Imagine an active ingredient, with a volume of 3,000 metric tons, maybe 5,000 metric tons, that gets produced somewhere in the world and then it gets shipped all around and formulated in various parts of the world, which is not very efficient.

But you need economies of scale, and you cannot have a plant making 500 metric tons of the active ingredient in every region; that doesn't make sense. But this, unfortunately, adds a lot of complexity in dealing with your working capital, too.

However, we believe there are still opportunities to further improve this. For example, by increasing formulation capacity in individual regions and having a lot of idle capacity. This sounds a little bit counterintuitive, but investing in this formulation capacity is not that capital-intensive and it would provide a lot of flexibility.

When you look at M&A transactions, the market is pretty much consolidated amongst the big players, the ones that are playing in the Champions League. There are still every now and then some opportunities; small to medium-sized seed companies or maybe a biological company might become available. That is certainly something that we would continue to take a look at, if it's accretive to our business case.

[Slide 20: Our strategic priorities]

I provided you with these five strategic priorities, and now give you a rough indication where the value creation – meaning this €550 million to €800 million in EBITDA before special items – will come from. This is not coming only from innovation and it's also not coming only from cost savings. It's roughly 40% in those two buckets, roughly 10% through differentiated steering and then roughly 50% from the geographical focus and accelerating and implementing our strategy.

[Slide 21: Our holistic approach addresses the needs of farmers in a changing market environment, leading to profitable growth]

This is the last chart. It sums it all up one more time. These are our five strategic pillars. These are our targets going forward.