

## "Sustainability is part of all our projects"

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The study was conducted by TNS Global. This study is the third in its series following studies in North America (USA and Canada) and China. The study was conducted across 12 cities in India and highlights interesting trends especially in comparison with China and other countries.

On the sidelines of the launch of this report on India's confidence in green and bio-based products, recently in Hyderabad, Mr Balvinder Singh Kalsi, president, DuPont South Asia and ASEAN and Mr Vikram Prabhu, regional business director, Asia Pacific, DuPont Industrial Biosciences shared their thoughts with BioSpectrum on the role of sustainability and DuPont's Industrial biosciences thrust. This is a fairly new market for the company. It forms one of the three pillars on which DuPont operates, the others being agriscience and advanced materials. Excerpts:

#### **What do you think of the industrial bioscience market in India? How does it compare with the rest of Asia?**

**Mr Vikram Prabhu:** Industrial biosciences, frankly, is still a fairly young market all across the globe. India is not that far behind. We are very excited about the zero effect-zero defect campaign that the Prime Minister has launched. It is connected to industrial biosciences. It not only provides solutions of value to the customer, which are also very sustainable and good for the environment. There are some very unique aspects to India but there are some commonalities with other regions as well. It is a fascinating time. It is about getting the technology to the local customers and understanding their needs and wants.

The next five years, I think will see more progress than that has been seen in the last 15 years. Part of it is timing -- the receptivity -- but there is another aspect, which has come out clearly in the survey we did with TNS. It is that the youth of India have a very high knowledge of green and bio-based products. India is a very young country as compared to US or China. We have a very young population.

There is a fantastic energy and pull from them. With this kind of pull, given a choice between a traditional product and a bio-based one, they are choosing the bio-based one. The choice is clear, it is better for the environment and they don't mind paying a premium price for the same.

**How do you look at sustainability and does DuPont have any major projects wherein sustainability plays a major role?**

**Mr Kalsi:** Sustainability is a major part of all we do. We do not look at sustainability from a project point of view. It is just a day-to-day thing. You will find it in all the businesses we do, be it the crop care business, in which products that were used at 500 gm to a liter per acre are now being replaced by green products that can be used across eight acres. These are products that are safe for the beneficiary. They cost less and for the first time we have been given the green triangle certification. Going on to our seed business, we are working on seeds that are resistant to harsh weather conditions and those which can withstand drought conditions. We have a knowledge center here in Hyderabad. It is certified from an overall environmental aspect. For us, it is green in everything we do.

**Mr Prabhu:** Our business is fundamentally sustainable. Every product we make has a component of sustainability. It can take different forms. We could have a product to help a customer use less water. We could have a product which enables a customer run a process to use less energy. It can have a product that allows customer create less effluents that pollute the water less. And we have products that use biobase material like starch, which is a renewable product. It reduces greenhouse gases. And so we have products going into personal care. For example, what is important here is with prolonged usage, what is the effect the products will have on the skin of a baby or the mother, especially if they contain products like mercury in them. We look at sustainability in terms of what it enables the consumers to do.

**What is the support from the government like? Are there any measures that need to be taken?**

**Mr Kalsi:** All of us wants the government to do much more. Take any country, we want the government to be easier, more supportive. That they understand the changing trends and some of the requirements. And the government is becoming more and more receptive to some of the things, though this varies from segment to segment and industry to industry that we operate in. In some cases, it is much more entrenched where the government understands and is supportive. In other areas there are technologies which the companies themselves are bringing in. It is an education process for all of us. You know we have to educate and pass on the knowledge and once all are on the same wavelength, it will become better and supportive.

**Mr Prabhu:** You will see a quote in our presentation later from the Ministry of Science and Technology. We are engaged in a dialogue and it is important to understand that a decision should be science-based. The regulatory policy, over all, should reflect the desires of our people. If we look at the survey, it is very clear that to address what the society wants, needs, and desires for, we need to have a very scientific regulatory environment. We need to have a process that is clear, and this is true anywhere in the world. And we are very excited. If you look at the "Make in India" campaign, launched by the Prime Minister, biotechnology is on the list of very important industries. We are very encouraged that the current government is thinking of all the aspects and is a part of the zero effect-zero defect. If you can have that then the regulatory piece is quite easy. I am very excited about the concept.

**What do you think of the BRAI regulatory bill?**

**Mr Kalsi:** We will be very supportive of something like that. We have too many different agencies, departments and committees. Once you have a regulatory bill, it at least puts in a framework so we understand under which we have to work. Rules should be clearer, and everybody needs to understand what the rules are. There tends to be a lot of confusion when there are different departments, committees under the government.

**What are the trends in biotechnology that are worth looking out for?**

**Mr Prabhu:** In industrial biotech, there are three trends to look for. First, just the efficiency. I think in industrial biotech, it allows us the ability to bring tremendous efficiency at low costs and so also in a safe way. In general, you are replacing a chemical, a harsh process with something that is natural. Most of the enzymes, we use are things that occur naturally. Efficiency is the first key trend and it's going to be a big trend for creating value in the society. Precision is another. Enzymes are precise. They can be targeted. For example, it could be an enzyme targeting the framework of a collar. It not only makes it look good but extends the life span of a shirt. The third would be integrated science. It is about how we can enhance all the investment in science lasting hundreds of years and boost that up, for example, you go to a textile mill today; it is a very manual, laborious, and energy-intensive process. Take an enzyme and create changes between the engineering process and an enzyme between an old and new science can create a new capability.

**Mr Kalsi:** On the broader side, for changes in the field of biotechnology, it is more about usage. Take the agriculture business for instance. Drought resistant varieties that retain moisture for a longer time and still give good yields would be beneficial. Another case could be to take agricultural waste and convert them to sugars and using enzymes turn them to polymers. Today, we have engineering polymers that go into automotive industry. They start from agricultural waste instead of petroleum products. This trend will only continue to pick up, extend into biomedical and other sectors. There is a huge amount of opportunity this side. There is a revolution sweeping the world. In a bio-based economy, how do you take biotech and natural resources and bring them into the main stream. It is not necessarily this or that. It is not about what happens if the petroleum industry does not exist anymore but more about how newer, better products can be used instead of the petroleum

products.