MALAYSIAN PALM OIL BOARD

An exclusive report to be distributed with ***THE INDEPENDENT***

Transcript of the interview with

Datuk Dr Mohd. Basri Wahid

Director General

WORLD REPORT: ***You are committed to ensuring the future of the palm oil industry through research and development (R&D). Why is your work so important for the industry's future survival?***

DATUK BASRI: R&D goes into new products and new processes, problems that need to be addressed and solved. Without R&D you cannot ensure that the industry will remain forever. You cannot repeatedly do the same thing over and over again. There must be new dimensions for us to become more versatile. If we are able de develop more products for their marketing, we will cover more needs and can get into more value-added products. That ensures the competitiveness of the industry, and that whatever you produce is good for the health of mankind through nutrients research, such as vitamins A and E. Therefore R&D is very important. Without R&D we cannot be competitive. We cannot have market access. We cannot convince consumers of the quality of our edible and inedible products. It is vital; without R&D the industry would be helpless. Without R&D it is difficult to carry out enforcement activities, because you are unable to back up whichever measures you introduce or are going to implement. The future success of the industry depends on R&D.

WORLD REPORT: ***Apart from nutritional research, what other types of programmes are you currently looking at?***

DATUK BASRI: Nutrition is one of the key core areas because most of palm oil, that is 85%, is food. Therefore, we have no choice but to focus on nutrition. Other areas we want to address are biomedicine utilisation such as anti/ pro branches, drums and planting. Another important area is renewable energy. We have commercialised and exported our biodiesel, but there are many challenges ahead, both overseas and locally, with respect to the full utilisation of this particular technology. We are looking at alternative sources of energy other than biodiesel and we are beginning our R&D in these opportunity areas. Even though it is quite insignificant as a percentage of total energy, if all these different types of renewable energy are added together they can become quite substantial. In terms of megawatts, if you look at localised consumption of energy in a specific area, renewable energy can be a significant contribution because you are less dependent on national supply. It depends on how you view it, but the R&D component must go on.

Of course, the other area is nutrition. There are a number of companies producing vitamins, but there are other compounds that can be extracted from palms that can be developed, such as flavonoids. If we look at nutritional studies, these have a lot of potential with regard to diabetes and cancer. That is another area that we want to develop. Older chemical research is another area where we feel there is a lot more to be done. As we now have our technologies for generating intermediate products, we want to get into ready-to-use areas of consumer products. We want to take out pilot plans to another domain, by bringing in small and medium sized industries (SMIs) to commercialise. We want to link anchor companies that produce intermediate products to the SMIs. We are going to develop this model over the next couple of years and incorporate it into the next Malaysian Plan. By doing so, we can generate more business enterprises, which will help the growth of the palm oil and other related industries. That will lead to job creation, more exports and more local availability of user products pertaining to oil chemicals.

Another important area is biomass. We are looking at furniture and car components, but we have to be more innovative. We have a pilot plan at the biomass technology centre but we have to think of more ways to somehow convert biomass into many other products. There are many products that can be developed for household and industrial use. Therefore, we have to explore this and be more aggressive. Regarding oil chemicals, besides soap and cosmetics, we are also looking at poly-o's, where you can convert palm oil into products with a different degree of hardness, depending on the reaction that is set: one can be as hard as a car bumper, and the other as soft as a pillow. We are looking at an entire range of products that can be generated from poly-o polyurethane. There is a wide range of many other products in oil chemicals that can be developed and turned into business opportunities by setting up factories. Our advantage of course is that we have many pilot plans, probably the most in the country, compared to other institutes. This is our commercialisation approach for all technologies. From that point, we bring it up to a pilot plan, which can vary in size depending on the process and engineering involved.

WORLD REPORT: ***Are you happy with the success index that you have achieved? How many of these projects actually end up having commercial or practical uses that can be put on the market?***

DATUK BASRI: There are major successes if you look at the continuous sterilisation technology that we developed together with another company. The number of companies adopting the technology is quite high; there are about 50, both here and in Indonesia. When the company started it was small, but with that technology it was able to grow. That is one example. Biodiesel has also been quite good, but then of coarse you have a problem of economics. The area of nutrition has also been quite good because of the R&D we do ourselves, as well as by outsourcing to other universities and institutes. With the data collected from all this research, we were able to win over the soybean with palm oil. Now Americans are consuming more palm oil, reaching one million tonnes already. That was quite a significant achievement. Also with respect to palm

mechanisation, the mechanical arm we developed is now produced by three companies. We did the drawing in our own lab, built it ourselves, conducted the productivity trials and commercialised it. There is also a mechanical harvester that was also doing quite well. Overall, one can never be satisfied. You have to continue striving. As many products are adopted, their level of commercialisation depends on the processing that the companies, plantations and mills can adopt to improve their processes. For some, there must be a consultant that offers them services, so in that respect licensing is a form of commercialisation too. Some technologies are for the actual production of products, implying the need to set up factories.

There are different models of commercialisation and ways of getting these technologies adopted. We have examples of all the different commercialisation models. Our current successes are around 20% of the 480 technologies we launched. We reassess those that are not adopted, by going back to the drawing board, seeing what modifications can be made and re-launching them a few months later. If we were to look at Japanese cars 30 years ago, we would see that they were so simple and cheap at that time. But over time, many improvements have been made in terms of design, comfort, luxury and safety. Nothing is that good at a first glance. We believe you have to improve over time. We launch a product once it is ready, after having done technical and economic evaluations. We even go to the extent of doing business evaluations where we examine whether it will bring about positive returns and how soon can you get your money back.

Another strategy is to have our scientists undergo MBA training, to be able to understand business jargon and methodologies to help process technologies for commercialisation. We cannot be commissioning findings to the private sector all the time. A scientist with an MBA will be able to understand both worlds and can therefore try to bridge the findings to commercialisation. You can do the calculations and interpretations and when you talk to the companies that commercialise products, you are on the same wavelength. They want to know the bottom line, and are not very interested in technical details. We go to that extent to try to convince them. There is still a lot more that can be done. In the

future, we need to establish a division that is solely responsible for commercialisation.

WORLD REPORT: If you had to choose, what would be the one or two most important breakthroughs that this team has managed to achieve throughout the years?

DATUK BASRI: I think the first breakthrough would be the water-soluble flavonoids. The quantity that can be extracted from the palm oil fruit is quite high. The potential in terms of market development is quite good because of the positive health attributes of this particular compound. We have been looking at that process of extraction, the bio-actives, toxicology and the effects of these flavonoids against cancer and diabetes, and the results are all very positive. We have a pilot plan and trials, and that should take off quite well. There should be one major breakthrough in the near future – I would say in less than five years.

WORLD REPORT: Is this an area of interest for Malaysians? In the UK there is a huge interest in flavonoids and antioxidants in fighting cancer. It is already hugely well known in the UK.

DATUK BASRI: We have commissioned research in Australia and there is a team there working for us. We work with the Massachusetts Institute of Technology (MIT) in the United States and Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO), as well as a few more collaborators. We believe this has a lot of potential and can contribute to mankind and the world population. The biodiesel industry is relatively problematic because you convert food into fuel, and prices go up due to an increasing demand. Therefore prices go up and you get into a vicious cycle with respect to the price. But in the case of flavonoids, due to its different dimension, it is not price sensitive.

WORLD REPORT: ***You mentioned that you commission hundreds of projects that end up becoming a reality and benefiting the private sector. I can see big companies taking advantage of these, but what about the***

small producers? How do you make sure that smaller producers get access to your investigations, findings and technologies?

DATUK BASRI: There is no problem at all for small producers because we are open. The organisation never excludes them because they are small players or producers, or because they do not have funds or so on. Recently we had a visit from the Women's Business Association in Selangor. They are small but that is not a problem. They looked at the technologies that we have. What we do is identify those that are suitable for them, anything implying capital less than, say, 20 million. Some are even smaller with a capital of only 600,000 or half a million. They can start their business. A real example is the production of santan. Malaysians like to use santan coconut juice and we have the santan equivalent of palm. We do not need any coconut at all and the taste is very much like that of coconut. We have launched this process and there is a small company that wants to commercialise it. The capital needed is only about 600,000. We are not excluding. We are looking for this category of entrepreneurs to adopt our technology rather than the plantations per say. There are certain technologies we offer to the plantations. If they feel that the business is something different from what they are doing now, they will not show much interest because it is too small for them. If you depend on the palm oil alone, the turnover investment is so good that you will not trouble yourself in divesting. At any rate, they are the ones to whom we first offer our technologies.

Every year in June, we hold our technology transfer seminar. Based on my instructions when I chaired the meeting, we invite all interested technology takers, be it from the auto industry, food industry, SMI, whatever. About 500 came this year. We had booths where our officers displayed their results and their sample products. They were able to interact and find out firsthand information from the inventors or researchers themselves. This platform has been quite good for us. For Sabah planters, we also had a smaller forum where we presented our technologies that were of interest to them. We have our set of our own facilities rather than going to hotels. We faithfully hold this every year. In addition to that we offer technologies for services. The services are documented systematically. The beauty of these services is that they can also

be commercialised in the sense that the knowhow can be passed on. Then that company will offer services to the private sector. Of course, there is a royalty arrangement agreement and we have built this into the formula. This is an incentive for the researcher.

WORLD REPORT: ***You briefly mentioned how excessive concentration on biofuels can push prices up. That is a very interesting point because I do not think many people in Europe or outside the industry realise how that can be a huge structural problem. In terms of palm oil prices, what is your opinion about prices today; are they high or low? Are they going up or down? How do you think prices will evolve?***

DATUK BASRI: When it comes to prices, there is no answer because there are so many, many factors that affect supply and demand. You have to look at the world population, climate, diseases, the levy policy of various governments that may increase or decrease, the stock within importing countries and the protection policy of the domestic supply. There are many factors that tend to change so much that you have to really study whether you can predict prices and nobody can. People have been mistaken. In 2008 we had a very high price. That is in line with that you want: high price and high return. But then one has to remember that the plantation people tend to benefit if the price is high and they make a lot of money. However, this creates a lot of problems in the downstream for the crushers, millers and refiners. There is an upstream gain but the downstream sector is negatively affected. They then approach the government and ask for help. Of course the government cannot be rescuing the private sector every time there is a problem. They make the decisions, make a lot of profit, and never come to the government to say, here, have some of it. But when they have problems they come to the government and scream. High prices tend to create more problems but if the price is too low, you have problems with the upstream instead of the downstream. There must be some optimum level, but what do you do to stabilise the price? This is difficult because we export 80-85% and we are therefore subject to the policies of the importing countries, particularly their levies. All of this can have an influence on prices.

Overall as far as palm oil is concerned, the two main exporting countries are Malaysia and Indonesia. If you look at the overall net exporters of vegetable oil, the only three countries: Argentina, Malaysia and Indonesia. The rest of the countries are net importers, even though they produce quite a lot. What that means is that there will always be a demand for palm oil, so it is just a question of whether we can get a good price. If you look at it now, it is not too bad. I think it is still comfortable for everybody. The cost of production is near 1,200 and the price of palm oil is 2,200. We have a margin of what, 1,000? That is a very high margin. Can you tell me any other business that can give you such a high margin? Very few today, especially in agriculture, and especially if you are not going into a big industry.

WORLD REPORT: ***My last question is a green question, as plantations and exploitation of commodities always raise important environmental concerns. The readers of*** **The Independent** ***are very well known for their stance on green issues. What is your opinion on how this is being handled in Malaysia and does the country have enough mechanisms to enforce a progressive, green environmental policy?***

DATUK BASRI: We do have such a prohibition to enforce, it is just a matter of if we want to do it or not. We have the Minister who is the authority in charge of implementing these prohibitions through the Gazette, where it then becomes a law that everybody has to comply with. It is as simple as that. We have the means and legal mechanism to make all of these green measures mandatory. But before we do that, we have to ensure that we have enough technologies and that we have done the necessary R&D. One example is methane trapping. If we trap the methane, then we can easily meet the directive on achieving more than a 35% emission reduction compared to the fossil diesel. We are talking about biodiesel. Also, if we trap the methane, there is a significant reduction of greenhouse gases. The industry overall will prove to be sustainable. That is one example. Then we can initiate the voluntary implementation in terms of installing the methane trapping devices and reactors and turn it into energy. Then you

make it mandatory. And all of the mills will be trapping the methane, converting it to energy, electricity, biogas and so on. They will earn carbon credit as well.

That exercise will be economically viable, environmentally sound, and at the same time if they do not want to do it voluntarily, we can make it mandatory. That power is in the Minister's hands and we can make recommendations but capital investment is required. It is not that much, less than 10 million ringgit. We have to think about the future of the planet and our contribution to Earth. We can show the world that although we are not in Annex 1, it does not matter. The point is that we are being responsible and proving that plantations are environmentally friendly. It is our job to trap the methane at any cost. When it comes to the environment, health or the future, you do not talk about dollars and cents anymore. Once we destroy the Earth we will have nothing left. Let's talk about the safety of the Earth for future generations. Our contribution, as far as the oil palm industry and Malaysia are concerned, is to work towards preventing greenhouse gas emissions. We have identified this from our lab cycle assessment studies along the whole supply chain. This is one major contribution. We have proven that we have the data. Our people must realise that they have a role to play. The country must realise that is has an obligation as well. Even though we are not in Annex 1, we must do it for the sake of the environment and future generations to bring about a reduction in greenhouse gases. It does not matter how small this reduction is.

Then of course we have peat. Proportionally speaking, very little of our oil palm is planted on peat. It is not an issue for Malaysia at all. Peat, if properly managed, should not decompose. Gas emissions will not be large if it is managed properly. Out of 4.5 million hectares, a couple of hundred thousand are on peat. They are regenerative and will be there for a long time, so it should not be an issue for Malaysia. But then this is quite a major issue for non-governmental organisations. But I think if we trap the methane and we address our fertiliser application properly, overall, I think we are green.

WORLD REPORT: ***Thank you for your comments.***