A Special Media Policy to promote a culture of innovation

- Dulip Nayanapriya -

The Ministry of Science, Technology and Research together with the Sri Lanka Innovators Commission recently held the first conference at Galadari Hotel to discuss ways in which a new media policy could be built to promote a culture of innovation in Sri Lanka.

The conference was held under the patronage of Minister of Science, Technology and Research, Susil Premajayantha. Sri Lanka faces the challenge of emerging as a developed country by competing successfully in the global market and for this it cannot depend on the traditional exports of garments or foreign employment alone. Countries which have successfully met this challenge have done so by building economic models based on innovations which come out of modern research and findings. As the country is currently discussing various economic growth models based on innovation, the Sri Lanka Innovators Commission has paid special attention to this area. Accordingly steps are being taken to uplift innovators in the country through the identification of a well-planned programme with defined goals. Thereby they will be successful in reaching their aim of establishing local innovations in our society and promoting a culture of innovation.

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The Best Young Scientist in the Third World

Prof Rangika Umesh

The World Science Academy, headquartered in Italy has chosen Sri Lankan scientist Prof Rangika Umesh Halwathura, for the 'Best young scientist in the Third World' award. At present he is the youngest professor in engineering in Sri Lanka. Speaking to BBC Sinhala, he had said that even more than receiving international accolades for his discoveries, he found great honour and happiness in being able to serve the poor people of his country who have funded his education and to be able to bring a smile to their face.

Wednesday the 27th of September 2017

Sri Lankan students receive Special Chinese Scholarships

A ceremony was recently held at the CRI Lanka Confucius Centre auditorium to award Sri Lankan students of the Centre special scholarships to study at Chinese State Universities. Minister of Science, Technology and Research, Susil Premajayantha was the guest of honour at the event.

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14th Governing Council Meeting of the NAM S&T Centre

The Non Aligned Movement (NAM) Science and Technology Centre was established in 1989 and is housed in the Habitat Centre, New Delhi, India. It was originated after the concept paper was submitted to the NAM Heads of State Meeting which was held in Colombo in 1976. From its inception, the NAM S&T Centre has been involved in improving the knowledge and capacity of the scientific community of member countries which is currently 48, Sri Lanka being one of the pioneers. They conduct many international workshops, symposia and training programs around the world.

The Governing Council is usually held every three to four years and the 13th Governing Council Meeting was held in Sandton City, South Africa in September 2013. The Bureau meetings will be held during each Governing Council meeting.

The 14th Governing Council Meeting was held in Putrajaya, Malaysia on 5-6 September with the Chairmanship of Datuk Seri Dr Mohd Azhar Bin Hj, Yahey, Secretary General, Ministry of Science, Technology and Innovation, who became the President of the 14th GC Meeting. Sri Lanka was directed by that number.

Some plastic products are reusable while some are not recyclable. Displaying this icon is a legal requirement and it is the duty of the public to pay attention to it and make use of it.

Although there are many symbolic benefits in polyethylene and plastic products in the market, insufficient understanding about such benefits cause a number of problems to our health as well as that of the environment. Society of the Plastics Industry (SPI) which was established in 1987 had categorized plastic into seven categories. Accordingly, SPI introduced its resin coding system in order to identify the various resins found in plastic bottles and there are seven resin categories which indicate the ability of each plastic product to be recycled. This categorisation helps to select plastic which are less harmful to the health.

If you are using plastic bottles or containers, you should check the icon similar to triangle which is placed at the bottom of every plastic product. There is a number inside that triangle and the ability of the plastic product to be recycled is indicated by that number. Some plastic products are reusable while some are not recyclable. Displaying this icon is a legal requirement and it is the duty of the public to pay attention to it and make use of it.

Prevent harm through knowledge

1. Polyethylene Terephthalate (PET or PETE),

You will often come across this type of polythene and it is often used as food containers as well as water bottles. This type of plastic is transparent and made in such a way that air or moisture does not enter it. These plastic products can be used only once and it is called as polyester as well. If this plastic is used more than once there will be damages to the product. Since it is difficult to repair such damages, there is a possibility of it nurturing this type of poisons.

2. High-density polyethylene (HDPE)

This type of polythene is considered as safe and reusable. Often this type of polythene is used for shopping bags, bottles, cosmetic products, industrial wrapping, films and sheets. HDPE is often recycled and it is a strong plastic category which does not react to heat or cold. Therefore, it is used to produce chairs, tables, benches in parks and dustbins as well.

3. PVC (Polyvinyl Chloride)

The moment you hear PVC you should host the next Governing Council Meeting. At the request of Mr Udaya Seneviratne, Secretary Ministry of Science, Technology and Research, it was decided to hold the 15th Governing Council Meeting in Sri Lanka in 2020. During the meeting time an exhibition of new inventions of Malaysia were displayed. After the meeting, a visit to the Scientific and Industrial Research Institute of Malaysia was organized. The Sri Lankan delegation comprised of Mr Udaya Seneviratne, Secretary Ministry of Science, Technology and Research, Prof Jayantha Wijeratne, Chairman, National Science and Technology Commission, Ms Himali W K Athaudage, Director (International Relations), Ministry of Science, Technology and Research.

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The Research Congress organized by the University of Peradeniya, Post Graduate Institute of Science with the co-organizing Ministry of Science, Technology and Research was held under the patronage of the Minister of Science, Technology and Research, Susil Premajayantha at Earls Regency hotel, Kandy recently. The aim of the Research Congress was to support and strengthen the development of research in the country and to provide a platform for researchers for the dissemination of their findings. The Congress held technical sessions under five main themes. They were geology and environmental sciences, information and communication technology, mathematics and statistics, biological and physical sciences and science education. There were over 150 scientists and experts who presented their papers under each theme at the Research Congress. There were also many presentations on upcoming fields such as nano sciences, nanotechnology and biotechnology.

The key factor in the progress of science is research and its findings which directly contribute towards a country’s economic development and industrialization. Thus it is the aim of the Ministry of Science, Technology and Research to use the latest findings and knowledge disseminated through such conferences for the social and economic development of the country.

The key note address at the opening sessions of the Congress was delivered by Prof John Small of the University of Queens in Canada. Vice Chancellor of the University of Peradeniya, Prof Upul Dissanayake, Additional Secretaries of the Ministry of Science, Technology and Research; H.M.B.C. Herath and Nandani Samarawickrema, officers of the Ministry of Higher Education and Highways and other dignitaries participated in the event.

Dulip Nayanapriya
Ministry Media Unit

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Sri Lankan Students...

Eleven Sri Lankan students received scholarships on this occasion. This includes one scholarship awarded directly by the Government of China and 10 scholarships awarded to students by the Confucius Headquarters located in Hanban, China. The scholarship from the Chinese government was to study hospitality management and is for a period of five years. Of the 10 scholarships awarded by the Confucius Institute, two are for the study of the Chinese for one year and the other 8 are to study Chinese for a period of 5 years and to be trained as Chinese language teachers in the process. CRI Lankan Confucius Headquarters President, Wan Xiathung, Vice President J.J. Amarajeeva and CRI Lanka FM Chief Executive Officer Thiraj Wickramasinghe were present at the event.

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Continued from Page 1
A Culture of Innovation....

The adoption of necessary measures to commercialize innovations, contributes to the strengthening of the country’s economy and thus in order to build an economy based on innovation it is necessary to continuously take steps to help commercialize local innovations. To achieve this we firstly need to build a society which accepts new inventions. For this there should be a relationship built between the inventors and society and the media has the ability to play a prominent role in this endeavour. To make this task easier the first steps of creating a media policy on how a culture of innovation can be promoted and built through a fruitful partnership with the media was the topic of discussion. Here ideas were exchanged with regard to the formulation of a basic framework for a media policy. The conference also took the opportunity to discuss; the entrance of new media, the actions and behaviour of media, the identification of the environment in which the media operates in, the importance of using media broadcasting in the best possible manner to promote a culture of innovation and other related matters. The event also showcased an invention by local inventor Priha Chandrasena who had built a deep cooler machine which is able to keep milk fresh from the time it is milked from the cow to the point of sale. The machine developed with the intervention of the Sri Lanka Inventors Commission for commercialization was handed over to a businessman at the event. Government officers, inventors, representatives of media organizations, journalists and other dignitaries participated in the event.
I am very happy and indeed proud to be here to celebrate the Golden Jubilee of the University of Kelaniya, which marks its 50th anniversary. This event is a momentous occasion for the University to reach great milestones and to commemorate the progress and achievements of the Faculty of Science. The Faculty of Science has been at the forefront of Sri Lankan science for the past five decades, and its contributions have been significant in the fields of academic research, innovation, and technology.

This Golden Jubilee is a wonderful occasion to celebrate the achievements of the Faculty of Science, the University of Kelaniya, and the wider science and technology sector in Sri Lanka. The celebration will include a range of activities such as exhibitions, presentations, and workshops, which will showcase the latest developments in science, technology, and innovation.

The exhibition, which is being held at the Faculty of Science premises, will feature a comprehensive array of exhibits, including displays, posters, videos, and interactive demonstrations. The exhibits will cover a wide range of scientific disciplines, including physics, chemistry, biology, and environmental science. The exhibition will provide a platform for students, researchers, and the general public to explore the latest scientific advancements and learn about the importance of science in our daily lives.

I would like to express my gratitude to all the faculty members, students, and staff who have contributed to the success of the University of Kelaniya. The Faculty of Science has produced many outstanding scientists and researchers who have made significant contributions to the field of science and technology. The University’s commitment to excellence in research and education has enabled it to produce a generation of graduates who are well-equipped to contribute to the development of our country.

The University of Kelaniya has a long and proud history, and I am confident that it will continue to make significant contributions to the advancement of science and technology in Sri Lanka. The University has a strong track record of producing world-class research and has established itself as a leading institution in the region.

I am also pleased to announce that the University of Kelaniya will be hosting a symposium on the future of science and technology in Sri Lanka. The symposium will bring together leading experts from academia, industry, and government to discuss the challenges and opportunities facing the science and technology sector in the country. The symposium will provide a platform for sharing ideas and experiences, and for fostering collaboration between different stakeholders.

I would like to thank all the sponsors of the Golden Jubilee Celebrations, including the Ministry of Science, Technology, and Research, the National Science Foundation, and the National Research Council. Their support has been instrumental in making this event a success.

Finally, I would like to thank all the faculty members, students, and staff of the University of Kelaniya who have worked tirelessly to make this event a reality. Their dedication and hard work have ensured that the Golden Jubilee Celebrations will be a memorable occasion for all those who attend.

I wish the University of Kelaniya continued success in its future endeavors, and I look forward to seeing the many achievements that it will accomplish in the years to come.

W.A.S. Nisansala Kumari
Head, Ministry of Science, Technology, and Research
Sri Lanka’s first rhizobial bio-fertilizer project of the National Institute of Fundamental Studies under the ministry of Science, Technology & Research lead by Prof. A.S. Kulasooriya, has given very promising results in extensive field tests done island wide. A noteworthy achievement this year was a formal request by the Ministry of Agriculture to supply rhizobial inoculants for the extended program of soybean cultivation of the Department of Agriculture to be launched in Yala 2017. The Ministry requested the NIFS to supply the entire requirement of rhizobial inoculants to the department, confirming the confidence it had placed in our product. This project was launched during the current Yala season under the guidance and collaboration of Mr. Buddhika Abeyesinge, Assistant Director of Agriculture and crop leader for soybean and maize. Inoculants produced by the NIFS were applied to field cultivation in Ampara, Anuradhapura, Dehiatattankiya, Galgamuwa, Hasalaka, Jaffna, Kandy, Kurunegala, Matale, Moneragala, Moragaha Kanda, Puttalam, Polonnaruwa, Trincomalee and Vavunia areas covering a total of 4686.5 acres. Among them were a few areas to which soybean cultivations were introduced for the first time.

It is therefore evident that we had an extensive coverage for our inoculants and this project being launched by the organization mandated by the Government for crop production in Sri Lanka, greatly strengthened the authenticity of our product. The following photos illustrate the successful soybean cultivations in some of the locations field tested.

![Excellent growth of soybean under inoculation without any addition of urea](image)

Pod bearing plants

While the cultivations as well as root nodulation due to inoculation were successful in many areas there were instances of crop failure particularly in the North Western Province (Kurunegala District) in areas affected by the severe drought. This drought damaged not only soybean, but all the cultivated crops in these areas. According to our collaborators subsequent periodic rains have enabled some recovery of the soybean crop in certain drought affected locations and successful pod filling has been observed.

Profuse nodulation was observed in well-drained soils of Hasalaka and Ampara. Some plants bore nearly 100 root nodules in certain areas in Hasalaka where this crop has been newly introduced. The Department is keen to continue collaborative research studies with us and an officer from the Field Crops Research Institute at Mahalluppallema had a preliminary round of discussions to conduct a greenhouse experiment during the Maha season to assess the ability of inoculants to overcome drought stress in soybean.

Finally, large scale inoculation was carried out in 8 to 9-acre field areas using farming machinery (Figs 5 & 6) and they have given profuse nodulation (Fig. 7) and excellent re-growth (Fig 8) under inoculation.

Rhizobium Project produce inoculants for Food and Fodder Legumes in Sri Lanka

During the past five years NIFS had also conducted studies to introduce rhizobium inoculants to white clover (Trifolium repens) a common fodder legume used extensively in livestock farms. Having successfully completed basic studies on the isolation, purification and preparation of rhizobial inoculants, field testing was done at Ambewela Farm, Ambewela since 2013. The main objective of these studies was to minimize the regular application of urea fertilizer to these pasture lands located in the pristine highlands which are the water catchment areas for the major rivers of Sri Lanka.

Results from preliminary small plot field trials conducted during the past 3 years, showed that seed inoculation with coir dust based solid inoculants at planting followed by spraying liquid inoculants after each crop harvest produced better growth of clover than those of urea applications (Figs 1 & 2). It was also observed that weed growth under inoculation was much lower than that under urea addition. This can be understood because nodules produced by inoculation provide nitrogen to the targeted host plants whereas nitrogen from urea will be available to all plants including weeds (Figs 3 & 4).

**5. PP (Polypropylene)**

This type of plastic is used to store food items. Items such as straws, margarine cups (big), ice cream containers (big), disposable cups, plates and take away containers are made using this. This type of plastic does not react to hot temperature or low temperature and as a result of that very suitable to store any kind of food. This is a very strong plastic and does not react to most chemicals. It is also a light plastic. This type of plastic is reusable and are recycled too. These are used to produce water bottles (the ones kids take to school), lunch boxes and soft drink bottles.

**6. Polystyrene**

This plastic type can be used to produce redefrom, soft drink containers, yoghurt cups, spoons too and ice cream cups (small). It is a very low weight plastic which is affordable and easy to make. This plastic is also used in the construction industry. It is very difficult to recycle and it could release poison when such plastic are put into microwave as it reacts to the heat.

**7. OTHERS BPA, Polycarbonate and Lexan**

Other type of plastic are polycarbonates. If food or drinks are stored in this plastic type, it could releasing the poisons in the plastic to food or drink. This plastic contains the chemical (Bisphenol A) which has adverse impact on human hormones. Through inclusion of natural ingredients the level of polycarbonate can be reduced and it was made biodegradable. The consumer can easily sort these plastics out and next to its number, the product indicates that it is ‘compostable’. If the product mentions it is either ‘PLA’ or ‘compostable’, the plastic product can be released to the environment without it causing much harm.
International Water Rocket Competition
In Bangalore

The Annual Asian Water Rocket Competition was held in Bangalore, India this year. The Arthur C Clarke Institute of Modern Technology is thus working on the latest technology needed by the Sri Lankan competitors for the competition. Sri Lankan school children have been participating in this competition since 2005 with the Arthur C Clarke Institute of Modern Technology taking a leading role in the endeavour. As a result, in 2005 Sri Lanka won third place in the competition held in Japan. 4th and 5th places in the competition held in Thailand in 2009 and 2nd place in the competition held in Indonesia in 2015. The Water Rocket competition which has the participation of students every year is an international programme, connected to the wider programme launched by the Arthur C Clarke Institute of Modern Technology to promote space technology and astronomy within Sri Lanka. The 2017 National Water Rocket competition was held at the Moratuwa University sports ground recently. Information on the first six winners of the competition are shown below and they have all been granted the opportunity to participate in the international competition in India.

The stars that belong to the Winter Hexagon

<table>
<thead>
<tr>
<th>Star Pattern</th>
<th>Brightest Star</th>
<th>Position of Star According to its Brightness</th>
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<tbody>
<tr>
<td>(Orion)</td>
<td>(Rigel)</td>
<td>7</td>
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<tr>
<td>(Canis major)</td>
<td>(Sirius)</td>
<td>1</td>
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<td>(Canis minor)</td>
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<td>(Gemini)</td>
<td>(Pollux)</td>
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<td>(Auriga)</td>
<td>(Capella)</td>
<td>6</td>
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<tr>
<td>(Taurus)</td>
<td>(Aldebaran)</td>
<td>14</td>
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All participants and teachers leaving for the competition have been sponsored by the Japanese Space Agency (JAXA) and the Indian Space Agency (ISRO) and the Arthur C Clarke Institute of Modern Technology hopes that this time around too the students will bring great honour to the country.

2017 Winners
First Place- Sayuri Warangana Vidyaratne
Mahamaya Girls’ School, Kandy
Second Place- K.G. Yasith Dilara
Welimada Central College
Third Place-
Science Exhibition

Faculty of Science
University of Kelaniya

2nd to 7th October 2017
9.00 am onwards at Faculty premises

University based events:
Robotic battle, Robotic game, Computer gaming competition, Hackathon, Photography competition

School based events:
Chemistry magic show, Astronomy night camp, Drama competition, Robotic competition, Computer gaming competition, Hackathon, Photography competition, Green innovation competition

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