

A green way to cut cost

FROM PAGE 1

Aus and Aman.

The tests were done over the last one year at BRRRI's compound and the fertiliser is now on trial at farmers' fields in Barisal, Patuakhali, Rajshahi and Kishoreganj.

Umme Aminur Naher, a BRRRI principal scientific officer (PSO) and mastermind behind the bio-organic fertiliser, told The Daily Star yesterday that the blend has 10 beneficial bacteria.

About 15 percent of it is biochar (charcoal used as a soil amendment) and five percent rock phosphate, she said, adding that the rest was decomposable household vegetable waste.

She said their trials had shown that the use of bio-organic fertiliser did not have any impact on rice yields and was at par with production level achieved through chemical fertiliser usage.

Naher pointed out that the fertiliser would help reduce carbon emissions. Greenhouse gasses are emitted during chemical fertiliser production and its use, she said.

Research revealed that the production of one kg of urea and TSP fertiliser emits about six kg of CO₂ in the air, said the Unesco-ISTIC (International Science, Technology and Innovation

Centre for South-South Cooperation) award-winning scientist.

She said, "We are using the same rock phosphate, which is a key ingredient in TSP, but in our process the beneficial bacteria make the rock phosphate soluble. Other bacteria that we are using help compost waste, fix nitrogen from the air and help the paddy plant grow."

The biochar is produced by burning rice husk, she added.

Neither Naher nor Jatish Chandra Biswas, the head of the BRRRI Soil Science Division, could give a clear idea on the cost of the fertiliser.

They, however, said the cost of production should be much lower than chemical fertilisers as "we are using household wastes, cheap biochar and bacteria and little amount of rock phosphate, which is available in the market for Tk 5 per kg".

They said the fertiliser would add organic matter and beneficial microbes to maintain soil health. Soil quality would increase with direct application of carbon via biochar.

Research findings indicate that application of chemical fertilisers for a long time decreases the populations of free-living nitrogen fixing bacteria,

organisms that solubilise phosphate as well as other beneficial bacteria.

Md Imran Ullah Sarkar and Afsana Jahan are the two other soil scientists of the BRRRI team that developed the fertiliser after several years of research, lab tests and field trials.

Jatish told The Daily Star that to move forward with the product, BRRRI would first make a patent application. Once they had the patent, they would provide interested enterprises with the technology so that the fertiliser reached all farmers in the country.

The decomposing process of the waste, bacteria, biochar and phosphate would generate a considerable amount of biogas and people would be able to tap into it, once it is produced commercially on a large scale, he said.

BRRRI Director General Md Shahjahan Kabir told The Daily Star yesterday that as a first step, BRRRI would soon approach the Gazipur City Corporation to go for bio-organic fertiliser production.

"We are (BRRRI headquarters) located in Gazipur and we will approach the local city authorities to make the best use of the decomposable waste collected each day. That will have a demonstrative effect on other places in the country," said Kabir.

Aman in a separate statement said his country felt the Asean statement was a "misrepresentation of the reality of the situation".

"The statement also omits the Rohingyas as one of the affected communities," he said.

Malaysia urged Myanmar to immediately implement recommendations made in an advisory commission's final report on the Rakhine state, Anifah added.

The Asean statement called the situation in Rakhine a "complex inter-communal issue with deep historical roots", and "strongly urged" all parties to avoid actions that could worsen the situation on the ground.

APRRN URGES INT'L COMMUNITY TO PRESSURE MYANMAR

The Asia Pacific Refugee Rights Network (APRRN), meanwhile, urged the international community to apply all possible measures to pressure Myanmar into halting military operations, protecting civilians and ensuring unfettered humanitarian access to Rakhine State.

In a statement by APRRN Programme Coordinator Evan Jones, the Thailand-based rights body demanded implementation of all recommendations of the Rakhine Advisory Commission led by Kofi Annan.

"Nations cannot stand aside and watch hundreds of thousands of people

being forcibly displaced, thousands indiscriminately killed, in a government-sponsored operation amounting to ethnic cleansing," it said.

It also urged the international community to rally around Bangladesh that is under extreme pressure in the face of this humanitarian emergency.

HRW SLAMS INDIA

Human Rights Watch has slammed India for "mistreating" the Rohingya refugees.

It referred to Indian Home Minister Rajnath Singh who said in a recent tweet that his government is "not violating any international law" if it deports Rohingya refugees as India is not a signatory to the 1951 Refugee Convention.

"If India had not signed the Convention against torture, would Indian authorities have carte blanche to torture and ill-treat anyone in custody?" said Bill Frelick, HRW's refugee rights programme director in a statement on Sunday.

Indian government says it is worried about the entry of refugees with links to Rohingya militants. "If that's the case, they should produce evidence and prosecute individual suspects," Frelick said.

"When your neighbour flees his burning house, you are not at liberty to push him back into the flames because

Asaduzzaman Mia told journalists yesterday.

"I want to make it clear that there is no lack of security in the city," he said at Dhakeshwari Temple while inspecting security arrangement there.

Puja mandaps were brought under camera surveillance. People will have to go through archways to enter major puja mandaps, he said and advised people not to carry handbags, vanity bags, packets, metal objects and any sharp items including knives to temples and mandaps.

After a meeting of the cabinet committed on law and order at the home ministry at the secretariat on Sunday, Industries Minister Amir Hossain Amu said law enforcers took all necessary measures so that the Hindu community could celebrate their biggest religious festival peacefully.

The police headquarters instructed people not to upload any contradictory, objectionable and provocative videos or posts on the social media centering on Durga Puja in order to retain social peace.

Citizens have been asked as well to inform the law enforcing agency if anyone is found to be spreading contradictory messages to foil social harmony.

Meanwhile, Ain o Salish Kendra yesterday expressed deep concern over the incidents of idols of the goddesses being desecrated in different parts of the country and that in most of the cases the culprits remain untraced.

In a press release, the rights body urged the government to take necessary security measures to stop the recurrence of such incidents and urged people to remain alert.

the Abe express," he said.

POLITICAL VACUUM

The winner of the expected snap election faces a daunting in-tray of challenges ranging from an unprecedented crisis with North Korea to reviving the once world-beating Japanese economy.

The North Korea crisis appears to have given the hawkish Abe a welcome boost in the polls following a series of scandals, including allegations he improperly favoured a friend in a business deal.

Despite a recent run of growth, the election winner will also have to contend with a sluggish economy, as the heavily indebted country grapples with a low birth rate and a shrinking labour force.

"Can we continue letting (the existing lawmakers) handle politics?"

But Jeff Kingston, director of Asian Studies at Temple University in Japan, said there was "no opposition worthy of the name in Japan".

The LDP is a giant among dwarves. It would take a major scandal to derail

Koike's Tomin First no Kai (Tokyo Residents First) party humiliated Abe and the LDP in local elections in July, but analysts say the new grouping has not had time to lay a national founda-

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Nevertheless, one fifth of those polled said they were still undecided, potentially opening the door for gains by a new party formed by the popular mayor of Tokyo Yuriko Koike which will field dozens of candidates.

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