

BIO LIFE

Letter from the Executive Director, Agribusinesses

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Mastitis Management & Milk Production Quality

Bangladesh has been facing some major diseases in the cattle sector in recent years, from which mastitis disease has grown quite epidemically. Mastitis is a major endemic disease of dairy cattle's which is caused by bacteria. This disease causes an inflammation of the mammary gland and udder tissue which is mainly transmitted by contact with the milking machine, through contaminated hands and other equipments. For this reason milk-secreting tissues and various ducts throughout the udder are damaged by bacterial toxins for which cattle's produce watery milk. Now the main concern for which ACI Agribusiness has decided to ensure mastitis management in Bangladesh is because of a research done in US which showed that approximately \$ 2 billion is being wasted per month for this disease.

We have started to promote mastitis awareness programs in rural areas through posters & billboards. The core competence in this field is that our company possesses all necessary equipments & medicine required to cure or prevent this disease. In order to be germs free we have waterlox disinfectant for the cattle's. For diagnosis we have CMT test kit which is introduced for the first time in Bangladesh and if the test results are negative then we provide antibiotics such as ACICEF 3 & Invamox LA. We also try to prevent these cattle's having this disease beforehand by frequently feeding them Gold-zinc medicine. Due to this initiative taken by ACI Agribusiness farmers and chemists are appreciating our purpose & concern mainly due to the new diagnosis kit & quality medicine. They are also satisfied with the positive results the diagnosis & antibiotic are bringing to their lives, as the farmers are getting enough milk production from the cows and the chemists are being able to sell the medicines to the farmers allowing everyone to survive solvently.



Contents

- 3 Innovations and New Products
- 4 Events and Activities
- 7 Agri-tech and Communication
- 9 Readers' Corner

3

The glorious Launching of Innovative Products

As a succession to innovation ACI Animal Health started 2014 by launching few of its innovative products gloriously as per recent market demand.

4

Inaugural Ceremony of Research Collaboration with IBS, Rajshahi University



An Inaugural Ceremony was held on 3 February 2014 at Senate Bhaban, Rajshahi University (RU) in celebration of signing a MoU with the Institute of Biological Sciences (IBS).

5

Partnership Program with iDE & Muslim Aid at Narail

International Development Enterprise (iDE) and Muslim Aid are working together on "Prosher" project. The aim is to develop cultivation knowledge and skills amongst poor farmers about cash generating crop cultivation as a replacement for mono and less profitable crops.



6

The first Field day of the season on Hybrid Maize: Profit at Jhenaidah



Farmers of Jhenaidah are expecting a bumper production of maize this year due to favorable weather condition and necessary technical help from ACI Seed & local agriculture department.

8

Breaking the mold: The success stories of Bangladeshi farmers!

By this time Bangladesh has already discovered genome mapping of Jute and Buffalo, which allows further research to be done in developing potential technologies to combat hunger against food, nutrition and social securities.

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The glorious Launching of Innovative Products

As a succession to innovation ACI Animal Health started 2014 by launching few of its innovative products gloriously as per recent market demand.

In February'14 we have launched few products among which 1 for poultry and 3 for Aqua.

TF Gold Liquid (Fungicidal & Toxin Binder), a preparation of Yeast Extract, Vitamins, Minerals, Probiotics & Acidifiers. This is one of the innovative products of Animal Health which has been launched for the first Time in Bangladesh. TF-Gold Liquid is indicated against infection with Aspergillous, Fusarium, Penicillium & Mycotoxicosis, Aflatoxicosis etc in poultry. It is unique for the following reasons-

1. Yeast Extract of this product acts against mycotoxin.
2. Prevents Mycotoxin.
3. Decrease Disease Rate.
4. Reduce early morbidity and mortality in poultry.
5. Increases performance in broiler.
6. Improves immunity & response to vaccination.

The product is available in 100ml, 500ml and 1Lt.

Perfostim is another innovative product launched under Aqua portfolio; the product is manufactured by Aqua Techna Company of France. It is the composition of Probiotics, Prebiotic Vegetable, Vitamin E and Vitamin C. It is available in 100gm & 500gm Sacchet.

The special features of the product are:

1. Colonization of the digestive tract.
2. Balance of digestive flora.
3. Higher survival rates.

Immutech is also an innovative product under Aqua Portfolio. It is the composition of β -glucan, Mannan Oligosaccharide, Vitamin C, Vitamin E, Prebiotic Vegetable & Selenium. It is available in 500gm and 1kg.

The special features of the product are:

1. Immutech helps to prevent stress or aid recovery after a stress.
2. Immutech will reduce mortality risks.

Third innovative product under Aqua portfolio is Calci-S. It is the composition of Calcium, Phosphorus, Vitamin D3, Vitamin A, Inositol & Betain. It is available in 500gm & 1kg pack.

It is unique for the following reasons-

1. Calcium and Phosphorus: Essential minerals for bone/shell formation.
2. Vitamin D3 & Vitamin A: Uptake, storage and mobilization of Calcium and Phosphorus allowing better assimilation of these essential molt minerals.
3. Vitamin: Substantial component of cell membranes.
4. Betain: Osmoprotectant factor, limiting the phenomenon of osmotic stress particularly important during the critical molting period. Betain is a cellular osmo protector and also a powerful attractant.



Events and Activities

Inaugural Ceremony of Research Collaboration with IBS, Rajshahi University

An Inaugural Ceremony was held on 3 February 2014 at Senate Bhaban, Rajshahi University (RU) in celebration of signing a MoU with the Institute of Biological Sciences (IBS). Prof Muhammad Mizan, Vice Chancellor, Prof. Chowdhury Sarwar Jahan, Pro- Vice Chancellor, Dr. Tanzima Yeasmin, Director of IBS, Dr. F. H. Ansarey, Executive Director and Prof. Lutfur Rahman, Advisor of ACI Agribusinesses, Dr. Shafiqul Aktar, Business Manager of ACI Seed along with distinguished guests were present during the ceremony. ACI Seed exhibited various crop varieties developed in their R&D station in Bogra. Prof. Lutfur Rahman spoke about the importance of such public-private partnerships and gave a presentation on the activities of the Advanced Seed Research & Biotech Center, which is the molecular breeding R&D center of ACI. Prof. M A Bari Miah gave a presentation on the activities of IBS and areas where work can be done together. Through this collaboration both IBS and ASRBC hope to address the various stress related problems faced during crop cultivation.



ACI-IAP-SIDA project successfully hold 8 field days

ACI in collaboration with the Innovation Against Poverty (IAP) Program of the Swedish International Development Cooperation Agency (SIDA) has been funding a project to promote climate smart sustainable agriculture in the coastal belt of Bangladesh. In the 8 project locations, in the districts of Barisal, Borguna, Patuakhali field demonstrations of various vegetables were held past winter and 8 field days were held during February 2014. About 432 visiting farmers witnessed the bountiful produce of indigenous potato variety, tomato, cauliflower, pumpkin and bitter gourd grown from ACI's seed under supervised modern agronomic practices. Local extension officers were also present and spoke highly of demonstrations held. Cultivation of vegetables is not very popular in the coastal belt, but farmers have now shown interest to crop vegetables next season after ACI-IAP-SIDA intervention.



ASRBC organizes Field Day for Indigenous Potato Varieties Research Program

The Advanced Seed Research and Biotech Center (ASRBC) has been carrying out research on developing Indigenous Potato Varieties (IPV) since 2012. Improved high quality seed potatoes produced through positive selection during the research program was used to carry out Advanced Yield Trials (AYT) in 6 locations throughout the country. In one of the locations, Gouripur, Mymensingh, 4 varieties of IPV were cultivated through supervised proper agronomic practices. A field day was held successfully in the presence of 70 farmers and 15 guests, where farmers witnessed and learnt about the benefits of using improved, high quality seeds. The participants were encouraged to see the shape, size and color of the potato tubers. They were also impressed by the yield, which was more than 2-3 times of the average farmer's yield of the area. Out of the 4 varieties, the farmers expressed willingness to procure seeds of ACI-Pakri 1 and ACI-Pakri 2 for next season.



Partnership Program with iDE & Muslim Aid at Narail

International Development Enterprise (iDE) and Muslim Aid are working together on "Prosher" project. The aim is to develop cultivation knowledge and skills amongst poor farmers about cash generating crop cultivation as a replacement for mono and less profitable crops. They are doing following works under the project:

- Formation of groups with 100 farmers in each
- Feasibility study on commercial cultivation of any cash generating crop
- Providing necessary training to the group leaders
- Arranging meeting with private companies and successful local brokers to meet up the pre and post cultivation activities
- Sourcing necessary technical support from local potential people
- Harvest time determination and cultivation
- Ensuring after harvest crop sales.

They have already formed 25 groups consisting 2500 farmers and started cultivation by using ACI Fertilizer. The visible vegetative growth is very satisfactory. Now they are expecting technical support as well as crop marketing from ACI. Recently we visited farmers' field and our demo plot of the project. Our team arranged a discussion and counseling session about the cultivation of cash generating crops with the farmers. The farmers highly appreciated the support from ACI Fertilizer. Now they are hopeful to change their life by producing more profitable crops with the help of balanced nutrients from ACI Fertilizer.



Events and Activities

New addition of the Product Line from ACI Cropex

After supplying fresh fruits & hygienic vegetables in the super shop & local market ACI Cropex has added grains to our product line in February this year. ACI Cropex main concern was providing hygienic vegetables to the consumers through which we have already gained a positive feedback. In February we have supplied different varieties of superior quality rice as a new addition to our product items. ACI Cropex sold vegetables to the super shops for the purpose of selling the vegetables to the customers but now we are providing rice to different companies as part of their lunch/canteen item for their own employees.



The first Field day of the season on Hybrid Maize: Profit at Jhenaidah

Farmers of Jhenaidah are expecting a bumper production of maize this year due to favorable weather condition and necessary technical help from ACI Seed & local agriculture department.

In April 2013 ACI Seed arranged training for the farmers on hybrid maize and also advised them in using good quality seed and fertilizers.

On 29 January, 2014 ACI Seed arranged a demonstration on Md Jalil's field in Kaligonj, Jhenaidah. He got 32 mounds of dry grain in 0.27 acre of land by spending Tk 7000 with the use of Hybrid Maize, from which he expected a profit of Tk. 17000-20000 from the production. Mr. Mukul Hossain, ACI's Dealer of Jhenaidah said the farmers of the district are showing their interest in cultivating the hybrid maize as the variety is more and out yielder than other varieties in this upazilla which is allowing them to gain higher profit. Mr. Dudu Mia from Jessore said that the participating 76% farmers are highly motivated to use the variety in the next year.



ACI Motors Field Force Conference

On 19th February 2014 ACI Motors organized its own field force conference at ACI Centre where the entire sales team, service persons, showroom executives, General Manager of HR and Head of Credit Operations attended the program.

The main highlight of the program was the publication of a book named "Mechanization Handbook of ACI Motors". The book contains the entire firm mechanism solutions, usage, features, benefits and all other related information of the agri machineries provided by ACI Motors. ACI Motors will train its sales & service team regarding the contents of this book; afterwards they will disseminate this knowledge among their customers. ACI Motors was being appreciated of their business success in 2013 which they want to continue through 2014.



Agri-tech and Communication

44 new rice varieties in Asia and Africa

In 2013, the International Rice Research Institute (IRRI) and its partners released 44 new and improved rice varieties, continuing the decades-long mission of using rice science to reduce hunger. Around half of the current global population—or about 3.5 billion people—relies on rice as a source of sustenance and livelihood.

Resilience to climate change is a big thrust of IRRI's work in improving rice varieties that will help farmers produce more rice with the same, or declining, amount of resources. The 44 new types of rice released in 2013 include nine salt-tolerant varieties in the Philippines, three flood-tolerant varieties in South Asia, and six in sub-Saharan Africa.

Of the 44 new and improved rice varieties released in 2013, 21 were in the Philippines, six in Bangladesh, five in Myanmar, three in Nigeria, two in Tanzania, two in India, and one each in Cambodia, Vietnam, Indonesia, Mozambique, and Rwanda.



GeneSeek innovation expands use of GE-EPDs across cattle industry

Cattle producers have made tremendous progress in adding genomic data to expected progeny difference (EPD) information, the yardstick used to estimate genetic merit. GE-EPDs are traditional EPDs integrated with genomics data. A traditional EPD consists of pedigree relationships, the sire's own performance data, such as birth weight, weaning weight, yearly weight, along with data collected from that animal's progeny.

GE-EPDs are traditional EPDs integrated with genomics data. A traditional EPD consists of pedigree relationships, the sire's own performance data, such as birth weight, weaning weight, yearly weight, along with data collected from that animal's progeny. Producers access these tests primarily through their breed associations, which use DNA tests to enhance sire EPDs and register purebred stock. Bauck encourages producers to learn more about how breed associations are employing the emerging technology.



Partnerships for Innovation and Knowledge (PIKA)

USAID provided technical assistance to increase farmer's incomes through the promotion of resource-efficient, demand-driven and market-led agricultural systems. The program collaborated with a variety of private and public partners, which enabled some 240,000 farmers to increase yields 15-to-20 percent and contributed to the uptake of new technologies beyond project areas, while helping dairy, fruit and vegetable producers' access markets that offered higher returns. Additionally, detailed market research helped agribusinesses tailor their products and services to fit the needs of smallholder farmers and to expand businesses by harnessing untapped market opportunities.



Breaking the mold: The success stories of Bangladeshi farmers!

Bangladesh has traditionally followed single cropping strategy growing rice. But with the increased demand for food security, the Ministry of Agriculture has focused in multiple cropping as we have idle land when rice is not being grown. In line, a leading private company has promoted maize and sunflower among farmers in the middle of the rice season, which has a dual positive impact – attaining food security and improving farmer’s economic condition. Planting sunflower has also helped to utilize the coastal regions of the country. After the Aman season, the farming land is generally left unused. That private company has encouraged farming of sunflower and maize and with the help of funds from the European Union is giving financial assistance to farmers. Under this program called: “Crop Intensification for Achieving Food Sufficiency in the Coastal Region of Bangladesh” in Khulna 1,346 acres of land is being used for maize cultivation and 130 acre of land is being used for sunflower cultivation. The farmers are already experiencing success. Once such farmer is Jamir Hossain, he is cultivating sunflower in 1 acre of land. He is expecting a harvest of 35 maunds which will give him 15 maunds of oil valued over 75 thousand taka. After a total cost of 15 thousand taka, he is expecting a net profit of 55 thousand taka.



Dissemination of HYV Technology in Rice Production

Bangladesh has made commendable progress in domestic food grain, especially due to the rice production with rapid dissemination using HYV technology. However, while Bangladesh has experienced steady progress in food availability, the country faces a number of persistent and emerging challenges. The impact of the high-yielding varieties (HYVs) of cereals has received increasing attention along with the growth potential of the technology. This progress has emphasized the destabilizing impact of the technology on food grains production.

“Confined trial’ allowed for genetically modified rice, potato”

The government is reportedly trying to introduce two genetically modified (GM) crop varieties of rice and potato in the country, following the release of four other brinjal varieties which received final approval last month. Among the varieties, Bangladesh Rice Research Institute (BRRI) has planned to introduce a Vitamin A-enriched rice variety named “golden rice” which recently received approval for confined field trial from the National Bio-safety Committee. The golden rice is widely acclaimed for its reported potential to fight Vitamin A deficiency in expecting mothers and children.

On the other hand, Bangladesh Agricultural Research Institute (BARI) has been developing GM potato varieties by inserting pest and weather resistant gene in two local potato varieties – Cardinal and Diamond. Late Blight Disease destroys acres of potato crop when affected, causing severe loss to the farmers. To prevent the loss farmers continuously have to spray pesticides, thus increasing the cost of cultivation.



Readers' Corner



Did you know???



One bushel of **wheat** contains approximately one million individual kernels.
 A 60-pound bushel of **soybeans** yields about 48 pounds of protein-rich meal and 11 pounds of oil.
 Cattle have about **22,000 genes**, and a **whopping 80%** of those are shared with humans. (Another 10% are shared with dogs and rodents.)
 Many **Fish** can taste without even opening their mouths.
 We are about **1cm** taller in the **mornings** than in the **evenings**.



Calorie Chart

Fresh Fruits (Half Cup)	Calories	VITAMIN A (% DV)	VITAMIN C (% DV)	POTASSIUM (% DV)	CALCIUM (% DV)
Cantaloupe	50	80	120	7	2
Strawberries	50	160	0	5	2
Kiwifruit	90	240	2	13	4
Grapefruit	60	100	35	5	4
Orange	80	130	2	7	6
Tangerine	50	45	6	5	4
Pineapple	50	50	2	3	2
Watermelon	80	25	30	8	2
Peach	60	15	6	7	0
Blueberries	84	24	2	3	1
Plums	70	10	8	7	0
Pear	100	10	0	5	2

Question & Answer



Q1. My name is Rohomot Mia and I am a farmer. I live in Gaibandha, which is northern portion of the country. I grow papaya for last five years and recently I am facing a trifling problem of my papaya growth. I have noticed that the plants are getting infertile and fuzzy before the maturity of papaya. Even I am getting very less amount of seeds. So may I have any suitable suggestions regarding this issue?

Rohomot Mia, Gaibandha

Answer: We are really pleased to have your attention on this issue. We understood your problem. It is taking place due to lack of Boron. Firstly, let us clarify you that as you are from north Bengal, so there is deficiency of Boron in the soil. Now let us inform you that what are the symptoms regarding lack of Boron in fruits. It disrupts the photosynthesis process in the absence of boron. It creates a barrier to the growth of root. We would suggest you to use our Boron. Deficiency of Boron decrease 25% of yield. So it will increase the yielding up to 25%. It enables the Nitrogen to vigorous the soil properly. It helps to produce more fruits and flowers. So we suggest you to use our Boron.

***In order to get answer to any of your agriculture related queries, please email us at biolife@aci-bd.com or visit our Facebook page www.facebook.com/aciagribusinesses.

WORD Game

Figure out the vegetables from the box!



N	C	G	L	P	C	P	O	T	A	T	O
Z	V	A	L	V	E	A	U	C	U	A	O
L	M	R	R	Z	V	A	P	A	C	R	O
T	O	W	Y	O	J	B	A	U	A	T	M
O	F	T	C	C	O	R	R	L	R	I	S
K	N	A	M	F	C	I	S	I	R	C	J
I	D	I	C	B	A	N	L	F	O	H	K
O	Q	N	O	X	B	J	E	L	T	O	F
A	C	K	T	N	B	A	Y	O	Z	K	E
Z	V	O	Y	T	A	L	Z	W	D	E	J
Q	T	Q	R	R	G	X	M	E	N	Q	J
J	J	U	M	N	E	V	S	R	V	A	L

***To win exciting prizes take a picture of this page with marked answers and send the picture to biolife@aci-bd.com

Winner & Answer of the previous Word Game!!!

Muhib Salman
ACI Agribusiness

Cranberry	S	P	I	Q	P	A	P	A	Y	A	E	X	F	E	T	F
Honeydew	C	R	A	N	B	E	R	R	Y	W	L	N	Q	T	U	M
Ugli fruit	Y	H	A	U	G	U	A	V	A	B	P	W	T	A	P	S
Strawberry	J	O	M	G	N	S	T	R	A	W	B	E	R	R	Y	C
Gooseberry	S	N	A	L	R	S	L	F	I	F	A	G	G	A	P	K
Coconut	T	E	R	I	G	O	O	S	E	B	E	R	R	Y	I	X
Peach	A	Y	I	F	G	M	M	L	H	A	C	S	P	G	N	S
Pineapple	R	D	N	R	S	A	G	W	A	T	O	M	E	E	F	F
Kumquat	F	E	D	U	R	V	B	A	T	V	C	P	A	M	A	H
	R	W	N	I	K	B	I	R	T	D	O	C	O	P	Y	
	U	E	B	T	J	U	J	Q	D	D	N	V	H	P	P	W
	I	C	P	O	L	T	K	U	M	Q	U	A	T	J	L	S
	T	I	W	H	Q	W	V	S	Q	T	T	Y	R	W	E	L

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