

Genetically modified crops Points to ponder before introduction

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It is well accepted that agriculture is the backbone of Bangladesh economy and whatever our economic growth that comes mainly from our agriculture sector. Truly speaking the farmers' community plays major role in our economic development. We must pay credit to our farmers for our survival and development. Our government should be very attentive for organising agricultural research and management and also for looking after the interests of our hardworking farmers. On one hand because of rapid urbanisation our cultivable land is decreasing day by day. On the other hand, the demand for food is increasing rapidly for population growth. We must have to frame and execute a long-term agriculture programme considering our farmers' right, population growth and decrease of agricultural land.

It is regrettable that our farmers though contribute much to our national development, majority of them are deprived of minimum facilities. Many of them do not even get sufficient food. Their children lag behind in education for many limitations. Though much is told about their rights in seminars and symposia, the real picture is quite different. Still our farmers do not get the real price of their agricultural products, whereas, they pay high price for different agricultural inputs.

If we analyse the agricultural production of our country it is clearly revealed that in the last three and half decades after independence our agricultural production has increased significantly. Particularly in case of cereal crops like rice and wheat the production has increased 2-3 times. And this has been possible because of introduction of high yielding crop varieties, improvement of crop management system, creation of irrigation facilities etc. Our farmers accepted these improved varieties and technologies without any hesitation or raising any question. In this process many of our traditional cultivars have either been lost or have become rare. There has also been damage to our biodiversity in the process of adoption of advanced agro-techniques.

In the context of feeding increased population there was no other alternative. But recently a very serious question has arisen surrounding the introduction of crop varieties developed through high biotechnology such as genetic engineering. In the last two years many a writing supporting as well as opposing introduction of such crop varieties appeared in different daily newspapers. For the sake of our

We shall have to take decision regarding GM crops only in the interest of our farmers and not in the interest of any multinational company or some 'experts'. With these considerations government can take people's opinion and involve the scientists of different central and peripheral universities and research institutes. Even the opinion of Bangladeshi scientists working in this area in developed countries can be taken for such a debatable issue.



hard working farmers and also for national development it is urgently needed to discuss the positive and negative impacts of introduction of such genetically engineered crop varieties in a broad forum.

The development of recombinant DNA technology i.e. genetic engineering is very remarkable in the history of modern biological science. With the adoption of well-planned and highly controlled research only within one decade there has been a tremendous development of this technology and its contribution to human welfare was highly recognised. In the mean time this technology has proved very effective and established in medicine sector. The application of genetic engineering in the improvement of crops though started in early 1980s some positive results came into light only in mid 1990's. But the use of foreign genes in the genetic improvement of food crops particularly raised many questions in different countries. Because human food is a very sensitive issue. The raised questions are (i) if a crop variety is evolved by introducing genes of other wild microbes or animals, will these genes have any negative impact on human body or (ii) will these genes via crop plants will create hazardous condition in environment or (iii) are the transferred genes are acceptable to common people?

Even under such a situation some crop varieties have been evolved. Bt cotton containing Bt gene from *Bacillus thuringiensis*, Flavr Savr tomato developed through antisense RNA technology and golden rice carrying vit-A gene

of daffodil flower are good examples of such crop varieties. Such crop varieties are known as GM (Genetically Modified) crops. A serious debate has been going on the future prospect of introduction of such GM crops in Bangladesh. It is pertinent to mention here that no such crop variety has so far been evolved in our country and yet no organised and integrated facilities could be created in any institute of our country for evolving such GM variety. And probably because of these limitations GM debate has taken such a shape.

If any crop variety plays a significant role in the advancement of our agriculture and such variety is proved to have no hazardous effect then it is quite logical to accept such variety. But if it is tried to introduce any crop variety whose evaluation technologies are not available in our country or has no significant impact on boosting food production or will go against the interest of our farmers' community that can never be introduced. In a section of press it has been published that Bangladesh has taken step to introduce GM crops particularly Golden Rice.

In fact in late 2003, the International Rice Research Institute (IRRI) in collaboration with Bangladesh Rice Research Institute arranged Petra fair in Dhaka and there details about the genetically engineered golden rice carrying vit-A related genes of western wild flower daffodil was explained. It was also said that such genes have been introduced with BR-29, the widely cultivated rice variety of Bangladesh. In addition to good the yield ability of BR-29, this GM rice variety is claimed to



produce vit-A in its seeds, which can provide vit-A to poor people, who do not take sufficient vegetables. Several questions have arisen surrounding introduction of Golden Rice to our agriculture. First, is there any controlled system to evaluate any GM crops in our country? If not then how can we accept such variety? The second question, is there any full-fledged laboratory in our country to evaluate such GM variety? If not, then how can we take decision about the advantages of such variety in our own perspective? Moreover, so far the report goes, there is no organised, integrated laboratory in Bangladesh where GM variety can be developed. Then how can we reorient this variety in our own perspective? Another important question: are we going to introduce such variety through any multinational company like SYNGENTA?

In the present perspective most of the above questions will remain unanswered or have no satisfactory answers. Whereas before introduction of high-tech based GM crops a threadbare analysis of such variety is a prerequisite and such analytical facility is yet to be developed in our country. It is pertinent to mention here that no question arose in the past when we introduced many a crop variety developed through conventional breeding technology. Because in such crop varieties no foreign gene was introduced about which there was any doubt of having bad effect on environment or human body. It is, therefore, imperative that after creation of proper evaluation system in our country and through proper analysis in our own perspec-

tive we should take decision about the introduction of GM crops into our agriculture. It is not wise to introduce such crop varieties based on so-called experts opinion or on the direction of multinational companies.

According to some reports a number of multinational companies have already patented Golden Rice as Colgene company patented Flavr Savr tomato. On the part of our poor farmers will it be possible to purchase seeds of cereal crops like Golden rice and wheat for cultivation?

In the present perspectives the farmers need to invest a lot for purchasing high cost inputs and the use of patented seeds will be another burden on them. We must be careful in this area. Here I like to mention some examples related to patent. Tamarind has been used in our subcontinent as spice and medicine since long. Interestingly in 1995 the grinded tamarind was patented in USA as herbal medicine for healing up injuries. In this way USA established her right on tamarind. Of course, because of serious objection by CSIR, India the tamarind patent was withdrawn from USA in 1997. Similar type of problem has arisen in case of Nim oil and Basmati rice. So we should be very careful in relation to patent plant materials.

I have been associated with teaching and research in this field of plant science for the last 25 years. Obviously I am not against the advancement and applications of such technology in our agriculture. But in the interest of our poor farmers and environmental safety I shall

appeal for logical and judicious decision regarding introduction of GM crops to our agriculture. In my opinion the following points must be considered in relation to GM crops.

(i) Before analysis and evaluation of any GM crop in our country in our own perspective, it should not be introduced to our agriculture.

(ii) If necessary, every aspect of such crop should be analysed very critically under very controlled condition. For example, in case of Golden rice its nutrition quality, yield potential and adaptation ability must be analysed under controlled condition to justify the claim.

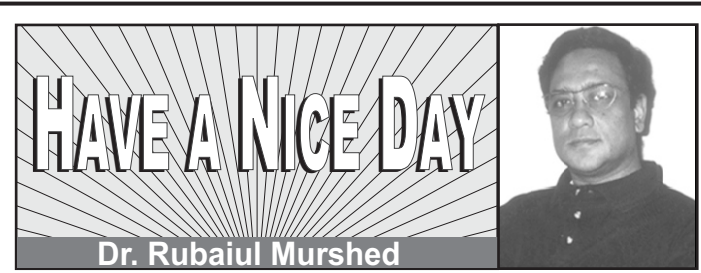
(iii) Evaluation of the acceptability of introduced foreign gene (from ethical point) by our people.

(iv) Proper evaluation to see whether such variety has any bad effect on environment.

(v) No patented cereal crop seeds should be allowed to be introduced to our agriculture. Seeds must be produced and distributed by our national institutes.

We shall have to take decision regarding GM crops only in the interest of our farmers and not in the interest of any multinational company or some 'experts'. With these considerations government can take people's opinion and involve the scientists of different central and peripheral universities and research institutes. Even the opinion of Bangladeshi scientists working in this area in developed countries can be taken for such a debatable issue. I believe our decision makers will look into the matter very critically before we jump for GM crops.

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Dr. Rubaiul Murshed

All health information to keep you up to date

D for diabetes

YOUR blood sugar is high if it stays over 200 mg/dl (using a serum-based glucose monitor). It is also known as Hyperglycaemia (HG). Hyperglycaemia means -- the level of sugar in the blood is above normal or above the blood sugar range you have been given as right for you. If your blood sugar level keeps staying high in a row, you may also develop diabetic ketoacidosis and you need to call your doctor or go to the local diabetes centre or hospital. And wherever you are, when you are very sick try to check also for ketones in your urine. Ketones are measured as 'negative, small, moderate or large'.

The beginning of high blood sugar is generally slow. It varies from person to person and on roots of the cause. The cause could be eating too much than is in your diet plan, the blood sugar will be higher in a few hours. If the reason is infection or illness, it will usually take several hours to days before the blood sugars are high. Hyperglycaemia may be as well due to injury/ surgery or even emotional stress. Another important cause is 'taking less insulin and/or oral agent than you need'.

Common symptoms of HG are: Dry mouth, extreme thirst, dry flushed skin, need to urinate frequently, urination during the night, weight loss, increased appetite, tiredness, blurred vision.

Symptoms of HG can be severe if the blood sugars become very high/are high for a long time, like the same as those listed above plus -- difficulty in breathing, dizziness when you stand up, rapid weight loss, increased drowsiness and/or confusion, nausea, vomiting, upset stomach, pain in abdomen, unconsciousness or coma.

But bear in mind, there may be few or no symptoms of high blood sugar. Seven tips for high blood sugar persons:

1. If your blood sugars are above your target range, test four times a day before meals and at bedtime. You may need to test your urine for ketones also.
2. Drink plenty of water and do what your doctor instructs you to do.
3. Look for patterns in blood sugars. If blood sugar is high call your doctor for an insulin dose adjustment.
4. If ketones are moderate to large, consult a specialist or visit the nearest diabetic centre or hospital.
5. Follow the diet plan prescribed by a dietician or a doctor or both of them. If blood sugar remains high after following the diet plan, consult with them again or you can call someone else for a second opinion.
6. If the patient becomes very sick the priority is to get him/her to hospital or a standard clinic first.
7. If symptoms of high blood sugar stay high for two or three days, consult a diabetic hospital doctor or an endocrinologist.

President Bush's ME policy Silverlining in the dark cloud?

Apparently ignoring the opinion of the Jews about Mahmoud Abbas, President Bush endorsed his leadership of the Palestinians. It is hoped that Bush administration would continue to keep up pressure on both Israel and Palestinian Authority to establish a viable and integrated independent Palestine state.

MOHAMMAD AMJAD HOSSAIN

THE initiative taken by Russian President Vladimir Putin for holding international conference on Palestine problem and Israeli espionage on the United States might have inspired President Bush to push ahead the stalled Middle East peace process. President Bush's new-found somewhat aggressive posture to resolve the decades-long conflict has caused surprise in both camps: Israeli and Palestinian. Palestinian authority President Mahmoud Abbas has had not only an audience with President Bush at the White House on May 26 to discuss about the possibility to revive peace process in Israel occupied Arab territories, but also received a warm embrace. This is for the first time the President of Palestinian Authority was received by President Bush in his five years of Presidency while Palestinian President's counterpart Israeli Prime Minister Ariel Sharon has had the opportunity for the eleventh time by now.

Ariel Sharon was in Washington DC on a private visit while Mahmoud Abbas was received by President Bush. Ariel Sharon's intended visit was to seek Jews' support for his plan on withdrawal of settlers from Gaza strip. Ariel Sharon declared at the conference of American-Israeli Public Affairs Committee in Washington DC two days before the arrival of Mahmoud Abbas that President Bush assured there was no possibility of entering Palestinian refugees into Israel and that major settlements of Israelis would remain part of Israel in any peace deal. This clearly shows the stand taken by President Bush in connivance with Israeli Prime Minister. American-Israeli Public Affairs Committee is one of the powerful lobbies in the United States for Israel.

The gesture of President Bush towards Abbas is contrary to the treatment meted out to deceased Yassir Arafat, who was never received by President Bush. Instead, President Bush reiterated what Ariel Sharon had to say about Yassir Arafat that he was an obstructer to peace process. President Bush went even to the extent of making an appeal to Palestinians to dump Yassir Arafat. President Bush at the press conference declared his pledge of fifty million dollars to improve the quality of lives of Palestinians in Gaza strip following the withdrawal of Jewish settlers. This announcement came after the meeting with Mahmoud Abbas at the White House. The pledge of the financial assistance appears to be the deviation from the commitments that he made. President Bush pledged \$ 350 million dollars for democratisation and improving the infrastructures and the lives of Palestinians. But Congress approved \$ 200 million only for the Palestinian cause.

However, this is for the first time US administration is handing over the



aid directly to PLO authority. In the past such assistance was channelled through non-government organisations. The meagre amount of aid assurance can be seen in the context of a series of vilification campaign advertisements in the press by the Jew community in the United States against offering financial assistance to 'corrupt' Palestinian authority. These advertisements also spoke against the President elect of the Palestinian authority Mahmoud Abbas. In an editorial the Washington Times of May 26, 2005, the day Mahmoud Abbas met with President Bush, even cautioned President Bush to remind Mr. Abbas that he would be making a grave mistake if he emulated Mr Arafat.

President Bush in his comments at the press conference urged upon the Palestinian Authority to reform the security services, stop corruption, reform justice system and revive economy of the Palestinians while he made an appeal to Israeli authorities to stop settlement expansion in the occupied territories; demolish unauthorised outposts. He said that Israel should not act the way that contravenes road map obligations. He urged upon the Israeli authorities to return to the position that Israel held on September 28, 2000 and added that the state of scattered territory would not work for an independent Palestinian State. The President also warned Israel not to undertake such activity which would prejudice final status negotiations with regard to Gaza, West Bank and Jerusalem. President Bush further said that any changes to the armistice lines of 1949 must be mutually agreed to. These are the only points in his comments that deserve attention. The coining of words like Jerusalem and armistice lines of 1949 carries far and wide implication. According to the Washington Post of May 27, in the diplomacy of the Middle East where every word carries meaning, both Israelis and Palestinians were struck by two new formulations offered by Bush.

As of now President Bush ignored the Israeli policy of blatant human rights violations which Israel military

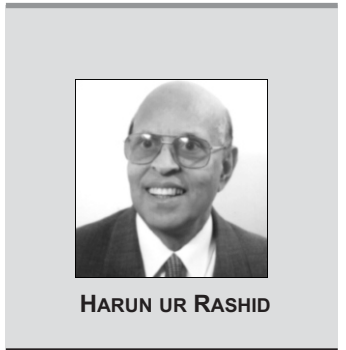
occupation has carried against the Palestinians. Palestinian Authority President Mahmoud Abbas expected some kind of written assurance from Bush administration for the establishment of an independent Palestinian state to demonstrate to his people the genuineness of the desire of Bush administration towards peaceful resolution of the conflict, but he failed to have that kind of assurances.

In an interview Palestinian Foreign Minister Dr. Nasser Al-Kidwa said that Mahmoud Abbas was assured by President Bush that his vision was to establish a viable and integrated Palestine State and any changes in the borders of the Hudna (truce) in 1949 should be applied according to Palestinian-Israeli agreement.

Bush administration is so obsessed with strong Jewish lobby in Washington that it is simply impossible for the administration to put pressure on the leadership in Israel, although some liberal leaning commentators in the United States hold the opinion that welcoming Palestinian leader at the White House and offering him money despite objections, including from the Congress, it signals positive attitude towards resolving Middle East problem. Another commentator is of the view that President Bush counts on Palestinian President Mahmoud Abbas for establishing democracy in the Palestinian held territory, which will be followed by other Arab countries. That will fulfil President Bush's clarion call for 'establishing democracy around the world', which becomes the cornerstone of his second term foreign policy. Apparently ignoring the opinion of the Jews about Mahmoud Abbas, President Bush endorsed his leadership of the Palestinians. It is hoped that Bush administration would continue to keep up pressure on both Israel and Palestinian Authority to establish a viable and integrated independent Palestine state.

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Why did the French reject the EU Constitutional Treaty?



HARUN UR RASHID

particular when his authority in Britain has been much diminished after the British election in early May.

Possible reasons

The question is why did the French people say emphatically "no" to the EU Treaty? There are many possible reasons and some of them deserve mention.

First, when the European Union was expanded to 25 European countries (embracing former Com-

mies of Eastern Europe with the stronger economies of nations of the European Union. Now the people are asserting their right to give "bloody nose" to their leaders for their decision.

Second, free-market economy, espoused by the Brussels politicians, has been viewed by many French people as going too far without social protection. Unemployment is very high in France (10.2%) and this has been cited as a key factor by 46 per cent of no

voters, according to a TNS-Sofres poll for *Le Monde*.

Third, basically it is the weak economy in France that has led people to reject the EU Treaty. The rejection of the Treaty has sent a message to the Brussels politicians that they stop expansion of the European Union to include Bulgaria and Romania by 2007 when the overall economy in France, Germany and Italy are weak.

Fourth, there is a view that rejection is largely an anti-Muslim vote, an emphatic rejection of policies of the Chirac administration. A *Tribune* newspaper poll revealed the huge referendum divide between the haves and have-nots in France, with two-thirds of voters earning 1000 euros (\$1640 a month) voting no, compared with almost three-quarters of their wealthier compatriots who votes yes. The former French Prime Minister Raffarin earned his unpopularity after he wound back the 35-hour week and tried in vain to cancel one of France's record number of annual public holidays -- Pentacost Monday.

Finally, the no vote is a rejection of the US's influence in Brussels to integrate Western Europe with former Communist countries, such as Latvia, Estonia, Lithuania, Poland, Romania and Bulgaria. The strategy of the US is to weaken Russia's influence in the former Communist countries and many of the newly members of the European Union have enthusiastically supported the Iraqi war. That led to US Defence Secretary Rumsfeld refer to France and Germany who opposed the war as "old Europe", much to annoyance of the people of France and Germany.

Conclusion

The no vote has been a political "tsunami" for the enlarged European Union. Liberal economic policies with free-market economy without "human face" have brought soaring unemployment and inflation. The introduction of euros had increased the prices of almost every consumer item. The have-nots in France did not gain from the expansion of the European Union.

It seems that European leaders including the French President have moved much ahead of people in conjuring up the political and economic edifice of the European Union. Conventional wisdom holds that leaders must think ahead of people but only so far ahead that the shift in opinion among people required is achievable. It seems that this aspect of political wisdom has been ignored in the past.

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munist Eastern European nations), people of founding nations of European Union were not consulted and were not given the opportunity to voice their views on the proposed expansion. Many of the French people did not approve the large-scale expansion of the European Union from 15 to 25 in 2004 within such a short period. The elected leaders assumed that they had the authority to integrate weaker econo-

my, according to a TNS-Sofres poll for *Le Monde*.

Furthermore many people believe that outlets of many French companies have been shifting to former Eastern European countries where cheap labour is abundantly available. The agricultural subsidy given to the newly admitted countries has hurt the French farmers. Mobility of cheap labour from the newly member-countries to France

particularly in France. Furthermore many French people think that if Turkey with 80 million population (99% are Muslims) joins the European Union, it will be the largest populous country after Germany and will change the Christian character of the Union. The rejection has provided a clear signal not to embrace Turkey within the fold of the European Union.

Fifth, the no vote appears to be

With two days, desperate President Chirac reshuffled his cabinet and appointed 51-year old intellectual Dominique de Villepan as the Prime Minister, replacing the unpopular French Minister Jean-Pierre Raffarin. During the Iraq's war, Villepan came into prominence as French Foreign Minister for his impassioned opposition to the war, and for his articulation of the reasons for opposing the war. He was Interior Minister prior to becoming Prime Minister. He has never been elected to a significant political office and was a former diplomat. He is a smooth insider within the administration. He has penchant for writing poetry and wrote a biography of Napoleon.

One of the immediate implications of the rejection by French people is that British Prime Minister Tony Blair has now refused to commit himself to a referendum in Britain, as proposed earlier. Furthermore the chaos caused by the rejection put Blair, who takes up the EU Presidency in July, in a hot seat,