

**Dr. Kalyan B. Goswami**  
Executive Director



Ref. NSAI/2016/019

Date: 21.02.16

To,  
M/s. Mahyco Monsanto Biotech (India) Pvt. Ltd.  
Ahura Centre, 5th Floor  
96 Mahakali Caves Road  
Andheri (East)  
Mumbai – 00 093

For the kind attn.: Mr. Satyender Singh

**Sub: Damage to the cotton crop by Pink Bollworm – Notices received from regulators by our members – certain concerns of the Industry – Reg.**

**Dear Sirs,**

As you are aware, we have been noticing Pink Bollworm (PBW) damage in various cotton hybrids carrying your Bollgard II technology. During 2008 and 2009, similar occurrence happened on all cotton hybrids with Bollgard (first generation) technology. At that point of time, based on your advice, our member seed companies switched over to Bollgard II technology investing heavily into breeding to quickly introgress the two gene technology into their cotton hybrids.

There is a severe damage of PBW in Gujarat this year 2015-16 which is much higher than last year's occurrence. Last year ie., in 2014-15 moderate damages due to PBW were noticed in other States like Maharashtra, Karnataka, Andhra Pradesh, Telangana, Madhya Pradesh etc. However, the damage in 2015-16 crop is much more severe. Many of our members received notices from seed regulators seeking explanation and in certain cases compensation for the losses suffered by farmers. The situation can be even more severe next year as can be seen in case of Gujarat. CICR and many SAUs are asking farmers to practice integrated pest management including chemical interventions for which the farmers will have to invest additional costs.

Our members have taken your views about the situation and submitted the notices issued by the regulators. In your replies, you have stated that the farmers have not grown refugia due to which the buildup of PBW resistance occurred. While it might be true, the fact remains that there is break down of the resistance of the technology which can lead to severe losses of cotton crop to the farmers. While the hybrids of various companies are responsible for various agronomic traits which include yield, fibre quality, drought / disease / sucking pest tolerance etc, the technology is supposed to impart bollworm resistance including resistance to PBW. Therefore, the seed companies are not responsible for the losses due to damage by PBW.

As you are aware, the difference between the first generation Bollgard and second generation Bollgard II is only the additional factor of PBW resistance. Now with this development, there is no additional agronomic value for Bollgard II V/s Bollgard technology which has now become generic. If our member seed companies collect trait value from the farmers, our member companies are liable for claims for compensation due to damage by PBW.

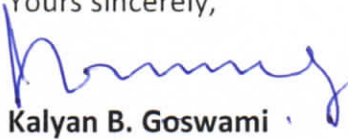
As per the clauses of the technology sub license agreements, the claims of compensation are to be jointly addressed by you and our member companies and in case of award of compensation, it has to be borne in the ratio of 50:50. While, in case of failure of a hybrid, the farmer always have dozens of choices to choose alternates, for technology there are no options. Under such circumstances, it may be important for you to declare that Bollgard II cannot give protection against PBWs due to development of resistance by the insect to the Bollgard II toxin. If such declaration is not made, there can be huge claims of compensation running into substantial amounts which are beyond the financial abilities of our member companies. Even if there is a damage of 2-3 Qtls per acre, the claims can run to Rs. 10,000 – 20,000 per acre V/s. the seed cost of less than Rs. 2,000/- per acre, where the company can hardly make a profit of Rs. 400/- per acre. In case you choose not to declare to the public the fact that the PBW developing resistance to Bollgard II toxin, we request you to take responsibility for any compensation claims that might arise from the cotton crop sown in the year 2016-17.

In view of such a huge disparity between the profitability V/s. the likely claims, we request you to take an immediate view on the subject and come up with your recommendation as soon as possible. Depending on your feedback, we propose to also intimate the regulators the Industry's views with 29<sup>th</sup> February, 2016.

We believe, with your global understanding, product stewardship and responsible corporate behavior, you will agree with our views and come with a quick response in the interest of the technology, goodwill of your company and our member companies and lastly but most importantly the welfare of the farmers.

Thanking you,

Yours sincerely,



**Kalyan B. Goswami**

C.C: Ms. Shilpa Nirula