

Bt Cotton & Livestock effects: CSA meets farmers & officials in Adilabad district
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Dear Friends

The Animal Husbandry officials of Adilabad district have to be congratulated for taking cognizance of a serious phenomenon related to livestock illnesses and deaths happening in many places in the district after animals graze on Bt Cotton fields. This follows the inaction of the GEAC [India's apex GM regulatory body] in investigating such a phenomenon reported from earlier years too and in early February this year by CSA. GEAC had asked DBT [Department of Biotechnology] to investigate this last year itself but there are no indications that DBT has taken up any such studies. Last year, Veterinary Biological Research Institute [VBRI] has found that pesticide residues were low on the Bt Cotton samples tested for, but nitrate levels were high.

The following is the translation of an advisory put out to farmers by the Joint Director-Animal Husbandry department through the media on February 20th, 2007, following the incidence of such a phenomenon [the actual media announcement is in telugu].

Media Announcement

It has come to our notice that in several blocks of the district, animals are falling sick after grazing on Bt Cotton fields. After harvesting cotton completely from the fields, there is a long tradition in the district of grazing animals in those cotton fields. However, because Bt Cotton is being grown in large tracts and because of a yet-unidentified toxic material in these plants, it has come to our notice that animals which are grazing on these fields are exhibiting symptoms like shivers, convulsions, running nose, bloat, bloody diarrhea etc., and are dying. Therefore, we appeal to farmers not to graze their animals on Bt Cotton fields. We request farmer brethren to please do approach the nearest veterinary doctor and get treatment, if any animal has grazed on such fields accidentally.

Sd/- M Venkataswamy
Joint Director
Animal Husbandry Dept
Adilabad.

Following the media reports of livestock deaths after grazing on Bt Cotton in Adilabad district, I went to the district on March 6th and 7th 2007, to personally meet with the officials and the farmers who were reporting the problem.

As part of the visit, I went to Kothur village in Tamsi mandal [block] and met with Mr Jalarapu Namdev whose bullock died on the 4th of March; went to Talamadugu village (block headquarters) where I met with Mr Katipalli Dhananjaya Reddy (bullock died a month ago), with Ms Hussain Bee, whose bullock died ten days ago, with Mr Katipalli Srinivas Reddy (whose bullocks received treatment that morning); with Mr Laxminarayan Goud, the Livestock Assistant in the veterinary clinic run by the department of Animal Husbandry in Devapur village of Talamadugu mandal; with Ms Lakshmi w/o Indla Shankar of Pippaldhari village of Adilabad mandal, whose bullock died ten days ago. It was also reported that in Talamadugu village, others who lost their animals in the past one month include Mr Ginnuru Kishtu, Mr Boriga Mallesh, Mr Nalla Bhooma Reddy and Mr Baddam Kishta Reddy A bullock of Mr Beer Sab of Laxmipur village also showed severe toxicity symptoms and was treated by the Livestock Assistant.

I also met:

- *Dr Shravan Kumar Kulkarni, Veterinary Assistant Surgeon in Adilabad in the Dept of Animal Husbandry,
- *Dr M Venkata Swamy, Joint Director-Animal Husbandry, Adilabad district,
- *Mr Sayanna, Joint Director-Agriculture, Adilabad district,
- *Dr Samuel, Programme Coordinator, Krishi Vigyan Kendra, Adilabad district.

Main points from discussions with farmers who lost their animals (in Kothur, Talamadugu and Pippaldhari) as well as dozens of other farmers/shepherds whose animals have been affected in different ways:

- *animals are getting affected in different ways after grazing on Bt Cotton in several places
- *bullocks as well as goats and sheep are reported to be affected

*symptoms include severe bloat, bloody diarrhea, off-feed, convulsions, salivation, respiratory symptoms etc.

*sheep and goats are reported to have running noses, shivering and cough, especially during the night after grazing on Bt Cotton fields during the day

While bloat due to grazing on cotton fields is not an uncommon phenomenon (which is usually sought to be treated by farmers themselves with castor oil in warm water fed to the animals), the severity is high in the affected villages, with the number of animals affected also quite high compared to negligible incidence in the earlier years. Few of the deaths reported could not be treated like in the case of Mr Namdev's bullock in Kothur village while few others died before they could receive medical attention.

Bullocks which died are valued at Rs. 15000/- to 20,000/- each.

Farmers who are correlating the problem to Bt Cotton because the animal has fed on their own Bt Cotton field for a few hours before falling sick fatally (Mr Dhananjaya Reddy and Mr Namdev) have also reported that their pesticide use is quite low compared to previous years since pest incidence has been low this year and that they had sprayed pesticides like Confidor/Pride/Actara (brand names) in the month of August/September for the control of sucking pests and not after that.

Farmers in affected villages are quite sure that this is because of Bt Cotton and deny that it could be because of cotton crop itself. They say that in previous years, before the advent of Bt Cotton, their animals used to graze on cotton during this period and no such phenomenon occurred then.

The main points that emerged from discussions with Dr Shravan Kumar, VAS, Adilabad:

*This "syndrome" has been apparent for about one and a half months now (from January last week)
He estimates that around 200 cases have been reported for treatment so far

*He conducted post-mortem on two bullocks from Talamadugu and sent samples to Veterinary Biological Research Institute [VBRI] for analysis

The symptoms reported are an unusual mix of nervous, respiratory and digestive symptoms; he has been working in the present location for eight years now and this is the first time he has come across such cases. He reported that even though such cases were reported in stray numbers last year too, the department overlooked the syndrome.

It is not yet clear what toxic material in the Bt Cotton plant is responsible but the department is taking up symptomatic treatment for now.

It was found that normal treatment for pesticide poisoning like Atropine or POM2 was not working and there were not just nervous symptoms but other symptoms too

*In post mortem, multiple organ failure was noticed. The peritoneal cavity is found to be filled with blood tinged fluid.

*In large mammals and ruminants, vomiting is abnormal however, one of the fatally affected animals brought to the AHC vomited.

*For the dysentery cases brought for treatment, normal anti-diarrhoeal drugs are not working; they have failed to control the problem.

*From the case histories collected, farmers are reporting grazing on Bt Cotton as the reason

*There is rumen impaction and digestive process is completely disrupted.

He informed that farmers are reporting that goats are not ready to graze on Bt Cotton fields, which is unusual.

In addition to the complexity of symptoms being reported, according to Dr Shravan Kumar, the difference with any such cases from earlier years is that animals are not responding to treatment.

Dr Sanjeeva Reddy posted in Talamadugu village who also conducted a few post mortems reported the following in a telephonic conversation:

Symptoms include bloat, bloody diarrhea with convulsions and respiratory symptoms. Animals go off-feed and also exhibit anorexia for a week after treatment, he informed

*A case in Talamadugu was so acute that it could not be treated

*From around the 27th of February, he has been treated 15 cases per day on an average with these symptoms

*He has been sending material to VBRI for further testing and confirmation

He reported that it is not unusual for animals to have digestive problems due to grazing on cotton but this year, the cases are severe and are high in numbers. In earlier years, animals that were exposed were high and affected were low or almost negligible. However, it was not so

this year. He also speculated that this could be because of excessive feeding also.

Mr Laxmi Narayan Goud, government Livestock Assistant posted in Devapur village reported that at least 15 cases have been brought to him for treatment from Devapur village in February 2007 showing the above symptoms mostly bloat and salivation. He also felt that the effect on sheep was apparent too, with pneumonia and dysentery reported.

Dr M Venkata Swamy, the Joint Director-Animal Husbandry for Adilabad district reported the following:

- *this type of mortality was not present with normal cotton grazing
- *it is with Bt Cotton that such problems are arising, as per discussions with farmers as well as with employees of the department
- *there is a "toxic effect", reasons of which are yet to be confirmed
- *the toxic effect includes shivering, salivation, bloat, dysentery and fatalities too
- *there is haemorrhage apparent with all organs being congested.

The Joint Director Agriculture, Mr Sayanna, speculated that the toxicity could be because of pesticide residues on cotton crop even as he said that sprayings have been very, very low this year due to negligible pest incidence. He also wondered whether this could be because of toxicity in other crops that the animals would have grazed on. He reported that the agriculture department is not doing any investigations of its own on this subject though they are in touch with the animal husbandry department and the commissionerate of agriculture in Hyderabad. He reported that as a precautionary measure, the agriculture department is advising farmers to remove the crop residues in Bt Cotton fields and not to leave them for grazing.

While everyone waits for the findings from the laboratory analysis that VBRI is supposed to be undertaking of animal samples and plant samples to understand the phenomenon of livestock illnesses and death after grazing on Bt Cotton fields, CSA demands the following:

- *that GEAC stop approving any more Bt Cotton hybrids for field trials and commercial cultivation;
- *that it get involved in the investigations and ensure complete scientificity and transparency to the studies.
- *that the state and central governments compensate the farmers whose livelihoods have been adversely affected due to the death of their livestock whether it is pesticide residues or toxicity from Bt Cotton, it is apparent that the government is responsible for inadequate biosafety testing in the first instance.
- *that the companies stop trying to influence the officials who are responding to the situation and investigating further (a team of officials/scientists from some of the companies involved have been holding meetings with the veterinary department officials and making presentations to say that the Bt toxin cannot be responsible for the toxicity phenomenon).

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