

INDIAN FARMERS' LIVES COME CHEAP FOR GOVERNMENTS & INDUSTRY

FACT-FINDING REPORT ON PESTICIDE POISONINGS IN YAVATMAL DISTRICT, MAHARASHTRA¹

The following is the report of a fact finding team that tried to probe further into the recent unfortunate and preventable episode of dozens of deaths and hundreds of hospitalisations of farmers² in Vidarbha region of Maharashtra due to PESTICIDE POISONING. This report is mainly from the team's field visit to Yavatmal and it appears that the situation seen there can be surmised to some extent for the situation in other districts too.

Fact-finding visit dates: 9th and 10th October 2017

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Visit covered:

- Kalamb and Aarni blocks of Yavatmal district, to meet with families of 3 dead victims of pesticide poisonings and 3 hospitalised cases. (Cases of death: Gajanan Fulmali of Sawargaon village, Kalamb; Devidas Madavi of Kalamb; Deepak Shamrao Madavi of Sendhursani village, Aarni block. Cases of hospitalisations, after discharge: Shrikant Nikhare, Mangesh Shravan Thakre and Manoj Pundlikrao Sarade).
- Kalamb Police Station
- Two pesticide dealers (one in Yavatmal - Sudhir bhau Sarode of Metikheda Krishi Sewa Kendra and another in Jawada – Suresh Jillewar of Balaji Krishi Kendra)
- Vasantnao Naik Medical College & Hospital, Yavatmal (specifically, the Head of the Department of Medicine Dr B S Yelke)
- Agriculture Department officials, incl. R S Patil, Deputy Director.

The following has been gleaned about the situation so far:

- More than 34 persons have died so far in Vidarbha region, with Yavatmal district alone reporting 18 deaths and other districts like Wardha, Akola, Nagpur, Buldana and Amravati also reporting cases of deaths and hospitalisations. Last year, there were 6 deaths and 176 pesticide poisoning survivors treated in Yavatmal Hospital.
- At the time of writing this report, at least 49 persons are still fighting for their lives in various hospitals³.
- In Yavatmal, 11 deaths took place in the district hospital, while 7 other deaths occurred in various rural hospitals. From July 2017, 438 inhalation-poisoning related patients have been admitted to the district hospital, including 23 patients who were present in the hospital at the time of the fact finding visit. 3 are on ventilators.

¹ Some photos from the fact finding visit are available at: <https://photos.app.goo.gl/upv0zhAdn0vRXOXJ2>

² as per India's National Policy for Farmers 2007, this term includes Farm Workers

³ <http://www.hindustantimes.com/mumbai-news/pesticide-poisoning-deaths-in-maharashtra-49-farmers-fight-for-their-lives/story-Qc3CZF7fMMn45cybkzw9r0.html>

- In the month of September 2017, it is seen that 36% of the cases admitted under the Department of Medicine in the Yavatmal Medical College Hospital are related to pesticide poisonings, both inhalation and ingestion related (out of 1278 patients, 274 were affected by inhalation poisoning and 158 by ingestion poisoning). This should be a matter of great alarm to everyone.
- It is only after the reports in September, that other reports of pesticide poisoning incidents from the month of July itself as well as the fact that such incidents happen regularly, as seen in earlier years, came to light.
- A Special Investigation Team has been created by the state government of Maharashtra only in the month of October 2017⁴, after an initial order for a High Level Panel probe into the matter in the month of September 2017 headed by Additional Chief Secretary (Home) Sudheer Srivastava.
- The National Human Rights Commission (NHRC) in India, taking *suo motu* notice of the matter, has issued a notice to the Government of India as well as the state government of Maharashtra on 9th October 2017⁵. NHRC pointed out that the possibility of safe use of pesticides is low in the given socio-economic conditions of the users, where they relied on the government agencies which took a 'callous and negligent attitude'. It sought to know within 4 weeks what were the steps taken to prevent the recurrence of such incidents. It asked for the best treatment for the affected persons from the Maharashtra government at no cost. It further asked for details of the compensation paid to the victims in addition to information on action taken against guilty officers. "The Commission also expects the details of the ex-gratia relief paid to the victims and rehabilitation of the aggrieved families along with the policy perspective on the issue", said a Press Release from NHRC.
- Earlier, a PIL has been filed with the Nagpur Bench of the Mumbai High Court, which saw the Court send notices to the state agriculture secretary, agriculture commissioner and Yavatmal collector directing them to file their replies before October 30.

OUR FACT FINDING REPORT FINDINGS

Details of Farmers / Labours who died in Yavatmal district from July 2017, due to poisoning while sparing chemical insecticides (as supplied by the Agriculture Department)

Sr.	Name of Farmer/ Labour	Village	Block	Farmer / Labour	Name of farmer where the affected farmer/labour was working	Crop name	Name of chemical used for spraying	Type of spray pump	Date of Death
1	Mr. Devidas Ramaji Madavi	Polyach a Maroti	Kalamb	Labour	Amar Vithhalrao Gurnule	Soya	Profex Super*	Regular Sprayer	19.08.2017
2	Mr. Gajanan Fulmali	Sawarga on	Kalamb	Farmer	In own farm	Cotton / Pigeonpea	Phoskill**, Acephate	Regular Sprayer	01.10.2017

⁴ <https://timesofindia.indiatimes.com/city/mumbai/sit-to-probe-35-vidarbha-pesticide-deaths-fir-filed-against-agro-firm/articleshow/61028959.cms>

⁵ <http://nhrc.nic.in/dispArchive.asp?fno=34372>; <https://scroll.in/latest/853523/human-rights-body-says-governments-callous-attitude-led-to-pesticide-deaths-in-maharashtra>

3	Mr. Ramesh Yeranna Chirawar	Kuli Parwa	Ghatanji	Labour	In own farm taken on lease from renuka tample comitte	Cotton	Profex Super, Monocil****, Acephate	Regular Sprayer	13.09.2017
4	Mr. Bandu Chandrabhan Sonule	Manoli	Ghatanji	Labour	Shankar Ramkrishna Chaudhari	Cotton	Polo****, Steamreach tonic(?)	Power Sprayer	23.09.2017
5	Mr. Santosh Uttam Rathod	Palodi	Arni	Farmer	In own farm	Cotton	Profex Super	Power Sprayer	29.08.2017
6	Mr. Dipak Shamrao Madavi	Sendursani	Arni	Labour	babasaheb Wankhade	Cotton	Metosystox	Power Sprayer	31.08.2017
7	Mr. Ravi Dulsing Rathod	Sevadas Nagar	Darwha	Labour	Charan Fakira Jadhav	Cotton	Acephate, Mono	Regular Sprayer	26.09.2017
8	Mr. Dashrath Shyama Chavhan	Naygaon	Darwha	Farmer	In own farm	Cotton	Police*****	Regular Sprayer	24.08.2017
9	Mr. Sushil Thawra Chavhan	Umari ljarah	Darwha	Farmer	Putalibai Thawra Chavhan	Cotton	Police	Regular Sprayer	07.09.2017
10	Mr. Shekh yub Shekh Mohammad	Dehani Kalgaon	Digras	Labour	Shekh Sattar Shekh Noor	Cotton	Phoskill, Laser	Power Sprayer	04.09.2017
11	Mr. Kailash Vithhal Pendor	Nimni Mukutban	Zari Jamni	Farmer	Bhaurao Bajirao Kinnake	Cotton	Monocil, Acephate	Power Sprayer	06.09.2017
12	Mr. Vasant Keshaw Chidam	Maregaon	Maregaon	Labour	Namdev Hepat	Cotton	Mono, Acephate, Profenophos	Power Sprayer	08.09.2017
13	Mr. Shankar Nagoji Aglawe	Pisgaon	Maregaon	Farmer	In own farm	Cotton	Profex Super, Monocil	Power Sprayer	30.09.2017
14	Mr. Diwakar Tulshiram Dhagi	Ghodadara	Maregaon	Farmer	In own farm	Cotton	Acephate, Profenophos, Monocrotophos	Power Sprayer	10.09.2017
15	Mr. Shankar Vitthal Gedam	Takli	Maregaon	Farmer	Babanrao Dumre	Cotton	Acephate, Monocrotophos	Power Sprayer	17.09.2017
16	Mr. Vitthal Devanna Porvekar	Pahapal	Kelapur	Farmer	In won farm	Cotton	Profex Super, Monocil	Power Sprayer	16.09.2017

17	Mr. Pradip Bhaurao Soyam	Tembhi	Kelapur	Labour	In own farm	Cotton	Acephate, Profenophos, Monocrotophos	Power Sprayer	28.09.2017
18	Mr. Dattatray Gajanan Tekam	Amlok	Wani	Farmer	Janardan Sudri	Cotton	Acephate, Monocrotophos	Power Sprayer	01.10.2017

* Profex Super: Profenophos + Cypermethrin; **Phoskill: Monocrotophos ; *** Monocil: Monocrotophos; **** Polo: Diafenthurion; *****Police: Fipronil + Imidacloprid

- **MIXTURE OR COMBINATION PESTICIDES BEING USED:**

In all cases of pesticide poisoning deaths in Yavatmal, combinations or mixtures of pesticides had been used. Farmers explain it away by saying that there are multiple issues that they want to deal with in one go, given that multiple spraying sessions will involve time and costs for them. For instance, on the cotton crop, they find sucking pests as well as bollworm infestation this year, and they also want to boost the growth of the crop by adding a growth promoter or make the crop look better by the use of a chemical like monocrotophos. If they go with multiple rounds of spraying to deal with each problem individually, it will involve additional costs as well as time, which they cannot afford, they reason out. They also reported that they have been doing this for many years now. We came across a death case where three different pesticides have been mixed and sprayed. It is also apparent that farmers are using higher dosages than recommended by the extension department or pesticide companies.

In some cases, we found that the farmers were given this advice by pesticide dealers, but in some others, it is the farmers themselves who are coming up with mixtures of 2 or 3 different chemicals. What is well known and reinforced from the fact finding visit is that regulation at the farmer level, which is end-use regulation, is simply not possible. Farmers are feeling desperate about saving their infested crops and about recovering their substantial investments on each season and therefore, resorting to various misadventures. It is apparent that blaming the victim is not the right thing to do, though a full blame game is on, including accusations of drug and alcohol abuse amongst pesticide sprayers.

There is also the additional matter of pesticide companies coming up with “combination” pesticides, and the central regulator allowing such pesticides, which is discussed in further detail later on in this report.

- **RIGHT TO LIFE, THE DESIRE & STRUGGLE TO LEAD A DIGNIFIED LIFE:**

Pesticide poisonings are clearly a violation of the Right to Life, a fundamental human right. In only 6 of the 18 death cases in Yavatmal district, the victim was spraying in his own agricultural field. In all the remaining cases, it was mostly agricultural workers (who might or might not have some land of their own) who were killed by the pesticide poisoning. In eight cases, they were dependent on only agricultural labour work of the deadly kind that they undertook on the fateful day of spraying. The families we met include dalit and adivasi families with fatal poisonings.

This then brings out another tragic aspect to the whole episode – that here were workers who want to live in a dignified fashion and were struggling for the same, and ended up getting killed, unlike

those pesticide poisonings that take place through intentional ingestion of the poison where desperate farmers are killing themselves due to lack of viability in their farm enterprise. Some of the poisoning victims that we met were quite young and it is tragic that their lives ended abruptly.

We found that pesticide spraying wage rates are similar to wages for other agricultural operations. In many cases, the sprayers, if they work in other farmers' fields, do not even know what chemicals are being sprayed in what dosage, and whether it is safe or unsafe for them. In several cases, we saw young men who worked for several days in succession spraying different chemicals. In one instance, we came across a poisoned person who had also worked for two shifts a day, in an attempt to earn around Rs. 500/- in a day's work. These agricultural workers find that in a scenario where they experience employment opportunities coming down, the two peak pesticide-spraying months each year are to be used to the optimum extent possible. This makes them accept all opportunities of spraying that are available to them.

In Aarni Block, we found that the pesticide spraying wages are piece-rate, based on number of tanks that are sprayed. Here, when it comes to hired (Chinese) power sprayers that are used by these workers, they have to share their wages with the sprayer-owners (who spend around Rs. 5500/- in buying a sprayer each). At Rs. 25/- per tank sprayed, Rs. 15/- goes to the worker and Rs. 10/- to the sprayer owner.

It is clear that the current situation ends up exploiting the desperate socio-economic living conditions of agricultural workers and farmers. Lives of these citizens are cheap, it appears, for both governments and the pesticides industry.

- **FAILURE OF ADMINISTRATION & TOTAL COMPLACENCY ABOUT THE LACK OF SAFETY OF PESTICIDES:**

It is only in the month of October 2017 that blood samples of affected persons (5 samples) have been sent to Pune for forensic testing from Yavatmal (no forensic testing took place of any samples of the dead victims so far). It is only now that 7 FIRs have been lodged mainly against pesticide dealers but also two pesticide companies (these are Gharda Chemicals and United Phosphorus Limited, as per the agriculture department officials we met though Syngenta is also mentioned in some media reports). It is only now that 5 pesticide dealers' licenses have been suspended and it is only now that 24 pesticide samples have been sent to Pune based on the specific pesticides implicated in each death case, as reported by the affected families and villagers. It is only in the first week of October 2017, at the end of a pesticides spraying season that the agriculture department is putting up posters on "safe use" of pesticides.

It is clear that no department has ever taken cognisance of the matter of pesticide poisoning in any way despite years of experience of acute poisoning both through ingestion and inhalation in the district of Yavatmal.

The agriculture department, if it thinks that it can nail particular pesticide dealers and companies through the samples that have been picked up for testing, is missing out on the fact that individual samples might pass the testing but nothing can be done about the potential dangers from combinations and mixtures of pesticides. Experience from 2009-10 to 2015-16 where Insecticides

Inspectors who do part-time work on this front in the department, shows that only 24 samples “failed” the testing out of around 875 samples collected and analysed (2.7%).

The Medical College and Hospital, though they have been observing and recording inhalation poisonings for many years now, have not developed better surveillance systems or alerting other agencies/departments to the phenomenon so that preventive measures can be taken.

The Police never swung into action before now, even though they are now trying to file FIRs against dealers and companies. It is clear that upto now, they did not consider that they have any role in this kind of a phenomenon.

It does not appear that the health department in a district like Yavatmal thinks of pesticide poisonings at such a large scale as a public health problem, nor is it probably equipped to deal with a potential problem that it is staring at, in the form of large scale illegal cultivation of Glyphosate/Herbicide Tolerant cotton, given that WHO has classified Glyphosate as a potential human carcinogen, and that there are known and documented adverse health impacts of Glyphosate.

It is also apparent that the district administration has failed to take cognisance of the problem at all.

Further, what is clear is that it is not just the Yavatmal district administration but many districts in the region which have not taken cognisance of the problem of pesticide poisoning.

The state government is clearly at fault too, for not revoking licences of deadly pesticides that have been contributing to the problem. It is time that Maharashtra government took a leaf out of the regulatory decision taken by Kerala government for instance, of not licensing the sales of certain hazardous pesticides, or even the decision of Sikkim which does not allow sales of any synthetic pesticides.

The Government of India, which got away so far without being blamed, is squarely responsible too, for allowing the production, sale and use of many deadly pesticides in India, for no sound scientific reason, ignoring safety and sustainability concerns. The fact finding team is convinced that there can be no safe use of these pesticides, that there exists no regulatory mechanisms as well as capabilities/commitment and therefore, the only plausible workable solution is to remove toxic pesticides from the scene.

Going beyond district administrations, it is clear that there is a general impression of safety and complacency that has been allowed to be spread about pesticides. This is obviously not borne out in experience. Human beings, including farm community members are obviously being adversely impacted, with their very Right to Life being violated. Aggressive marketing is allowed of products which are essentially poisons. Credit sales, that too at exorbitant interest rates, appears to be a norm. The pesticides industry has organised itself around incentives and gifts to dealers and farmers, apart from other marketing tactics including billboards, posters, wall writings etc. Media images including public sector broadcasts that involve pesticide spraying show images of farmers and farm workers who are not wearing any protective gear, creating an illusion that this is safe, nor are such programmes showing the adverse impacts of pesticides.

- **ALL THE REASONS PROFERRED SO FAR DO NOT ADDRESS THE ROOT PROBLEM:**

It is not just cotton but also soybean crop that has been sprayed by victims who are dead from pesticide poisoning, though given that most area is covered by cotton, it is indeed the case that in a vast majority of cases, it is after pesticide exposure in cotton crop spraying that these deaths and hospitalisations took place.

In our fact finding visits which involved a drive of at least 275 kilometers along roads that have been sown with cotton crop, with the team members getting down to assess the height of the crop, it is not true that cotton crop is everywhere or even mostly over-grown this season. It is also something that villagers disagree with – the crop growth is just around 4 feet or so in many fields, and villagers say that it is not very different from other seasons in the past. Therefore, higher plant growth being explained away as a one-off occurrence of this season, which led to fumes being inhaled by the sprayer as they come back onto his face as he seeks to douse the entire plant with the chemical, is also not a reasonable explanation.

While the Chief Minister announced a ban on Chinese made, battery operated power sprayers which indeed appear to be dangerous in terms of the inhalation poisoning potential that they present, in six of the 18 cases of death, including 2 of the 3 we visited, old-style hand operated pesticide sprayers were used.

While some announcements are being made about free distribution of ‘safe use kits’ like gloves and masks, in at least two cases visited by this fact finding team, such safety measures including a helmet and overalls were used, but the poisoning still occurred.

It is not one pesticide, or even one lot of one brand that is implicated here. It is numerous kinds of pesticides, numerous pesticides/brands of various companies that have been recorded to be responsible for the deaths so far. Organophosphate, phenylpyrazole, synthetic pyrethroid pesticide in a combination product, carbamates in a combination product, and a neo-nicotinoid pesticide in a combination product are all implicated in these poisoning cases. These include Acephate, Monocrotophos, Diafenthurion, Profenophos, combination formulations of Profenophos + Cypermethrin and Fipronil + Imidacloprid. While the agriculture department does not list this in an information table it shared with us, in the case of Deepak Shamrao Madavi, the farmer’s bill and his testimony to us tells us that a brand called Saaf was used, which is a combination of Carbendazim + Mancozeb. The brands listed of the above pesticides implicate several pesticide companies including United Phosphorus Limited (UPL), Gharda Chemicals, Syngenta, Nagarjuna Agrochem etc.

- **ANUPAM VERMA COMMITTEE MISSES RESPONSIBLE & REQUISITE RECOMMENDATIONS:**

The Government of India set up a Review Committee headed by Dr Anupam Verma to look into the continuation of 66 pesticides in India which have been banned or (severely) restricted elsewhere in the world. However, it is seen that the GoI does not even update itself on the number of pesticides that are getting banned in other countries. For instance, glyphosate has been banned in a few countries elsewhere, but has not been reviewed by the Anupam Verma Committee.

Importantly, many of the pesticides involved in the current spate of pesticide poisonings have been reviewed by the Anupam Verma Committee, but unfortunately, the Committee recommended for

the continuation of pesticides like Monocrotophos, Acephate, Chlorpyrifos etc. and asked for another review to be taken up in 2018, on 27 pesticides out of the 66 that they had just reviewed!

This brings us to an important point about the accountability that needs to be fixed on both Government of India as well as the Anupam Verma Committee (which also faces the allegations of being guided by the pesticide industry representatives in its functioning) with regard to India continuing with many deadly pesticides that have been banned or restricted elsewhere.

- **NO SURVEILLANCE OR DATA SYSTEMS STILL IN PLACE:**

The fact finding team found yet again (as seen in other such instances in the past) that there are no surveillance systems put into place to monitor the occurrence of the phenomenon of pesticide poisoning. There are no data systems being maintained within the government hospitals, that too into ready databases related to ingestion, accidental and inhalation poisoning, which particular pesticides are implicated, under which spraying conditions etc. While it is well appreciated that when a poisoned patient is brought into a hospital, the first attempt would be to save the precious life of the affected person, it is easy enough to build data systems that capture the required details at a later stage. However, this kind of a system has not been put into place anywhere in the country.

- **RELIEF & REHABILITATION MEASURES:**

The fact finding team finds it condemnable that the Government of Maharashtra has announced an ex-gratia amount of just Rs. 2 lakhs for each life lost to pesticide poisoning, while in the case of the Mumbai railway bridge stampede, 10 lakh rupees has been announced. Furthermore, there has been no support extended to medical treatment costs incurred by some of the affected persons, including ones who got to be treated in private hospitals given the shortage of ventilators on certain given days in the government hospital. Even for those who got treated in the government hospital, there were medical expenses incurred by the family when they had to purchase some medicines from outside. This ranged from Rs. 3000/- to upto Rs. 42,000/- in the cases that this fact finding team visited. It appears that several of the affected will also incur continuing treatment costs, including for impaired vision.

It is also important to think about rehabilitation of the families which have lost a breadwinner in the family. For instance, Prateeksha Gajanan Fulmali who is the eldest child of Gajanan Fulmali of Sawargaon village needs to be provided with a job by the government given that she is educated. Education support for the surviving children also has to be extended to support the family and to ensure that children are not withdrawn from education opportunities.

While the government does this in the immediate run, it is important to make the pesticide industry to pay up for this relief and rehabilitation support.

- **ARE THE REAL CULPRITS BEING CAUGHT?:**

Once the pesticide poisoning instances started to be highlighted in the local and national media, and once pressure started building on the state government, a big blame game began. Each agency/department started to point fingers at the other, but most importantly, put the blame on “ignorant” farmers, failing to recognise that farmers are the victims of the situation.

At this point of time, accountability is being sought to be fixed on pesticide dealers and a few companies whose branded pesticides are implicated in deaths of farmers/farm workers. Even here, not all the dealers and companies have been acted upon either and it is unclear what reasoning is being adopted for action being taken. If a full survey of all poisoning cases (not just deaths) is done, other pesticides, dealers and companies will be in the net too.

In the FIRs filed, vague clauses of an ineffective piece of legislation are being invoked. Insecticides Act 1968's Section 29 (c) (i) and (ii) are the clauses mentioned in the FIRs that the fact finding team came across. It is seen that these clauses are no deterrent at all, since they talk about 2 years imprisonment OR fine that may extend to Rs.2000/- or both and a meagre compounding of the penalty in the case of repeated offence/contravention.

IPC 304 A (causing death by negligence) is the other clause being used in these cases. This IPC clause says that *whoever causes the death of any person by doing any rash or negligent act not amounting to culpable homicide, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.* Once again it is seen that this clause may not be effective as a deterrent!

However, it appears that this ("causing death by negligence") is something that needs to be used on the governments themselves and not only dealers, who mostly peddle whatever poison the manufacturers package and distribute to them.

While pesticide dealers are culpable to an extent for wrong advisories they may have been giving, the pesticide manufacturers, the pesticide regulators, the health and agriculture departments and state and central governments are culpable too!

The fact finding team asserts that real culprit is the poison that has been allowed to be registered, manufactured, sold and used. The only far reaching way by which the current problem can be tackled is by eliminating these toxins.

- **NOT THE FIRST TIME IN YAVATMAL OR IN INDIA, CLEARLY DEMONSTRATING THAT SAFE USE OF THESE POISONS IS NOT POSSIBLE:**

One of the members of the fact finding team has been involved in investigating such instances in the past too, and this fact finding team would like to point out that acute pesticides poisoning, from inhalation or even accidental poisoning of the kind that Bihar witnessed in a mid-day meal poisoning tragedy, has become fairly routine, and this is an entirely unacceptable matter.

To the fact finding team, it is very apparent that Yavatmal is not a one-off a situation, though media coverage of the episode has made it into a public debate, as it very well should be. An extract of a report called "Serving Death" is being annexed to this report as an illustration⁶.

- **FAILURE OF MODERN AGRI-TECHNOLOGIES IS APPARENT:**

The rampant use of pesticides, including unapproved, illegal and 'unsafe' use, is clearly an indication not of the success of pesticides or GM (genetically modified) seeds as a technology, but a failure of these technologies. These technologies provide reductionist solutions of farmers having to deal with

⁶ <http://indiaforsafefood.in/wp-content/uploads/PDF/ServingDeath.pdf>

each pest and disease individually, and in the case of Bt cotton, it is seen that both secondary pests and target pest infestation has been quite high to the extent of 8-9 pesticide sprays taken up by farmers met. The desperation of using higher doses than recommended or mixtures being adopted is also an indicator of the failure of these technologies. Farmers who had sown illegally sold herbicide tolerant GM cotton are the ones who reported that their crops have the highest infestation of bollworm and other pests.

In fact, there is much neglect apparent with regard to seed, soil health, agronomic practices and micro-climate for agro-ecological approaches.

- **POST-MODERN SCIENCE OF PEST MANAGEMENT COMPLETELY MISSING FROM THE TRAGIC SCENE:**

In the villages and with our conversation with agriculture department officials, we found that there is a complete lack of awareness, experience and promotion of post-modern science of pest management which does not need either synthetic pesticides or genetically modified seeds to control pests and diseases on a crop. Agro-ecology and organic farming is irresponsibly missing from the scene in a scenario which is severely afflicted with acute agrarian crisis already. It is an unpardonable lacuna from the establishment that farmers are not trying out agro-ecology at a larger scale on the ground, including through proper handholding and marketing support systems from the government. This clearly shows that there is no political will around pulling farmers out of the current agrarian crisis. Added to this is a situation where regulatory failures around stopping illegal spread of seeds and illegal use of pesticides are apparent. The state government has to address this situation immediately, if it wants any medium and long term solutions to emerge from this crisis situation.

- **SERIOUS FAILURES IN PESTICIDES REGULATION:**

There is a massive regulatory failure in terms of being able to control the end use of pesticides – there is also a failure in being able to regulate how pesticides are sold and marketed. Pesticide dealers and their recommendations/advisories to farmers, especially in the absence of an effective public extension system, are not monitored or regulated. There are also numerous, larger issues with the way pesticides regulatory system and the Insecticides Act 1968.

While some dealers appear to be indeed guilty of advising on wrong combinations, it is apparent that this is not something that can be controlled or regulated, unless each dealer's shop has video surveillance which records the oral advices being given by the dealers to farmers approaching them!

We found out in the small sample of people that we interacted with during the course of the fact finding, that equal numbers of farmers are using both cash as well as credit facilities for purchase of pesticides. The credit sales also has an exorbitant 3% interest rate.

In all the cases visited, a mixture of pesticides have been used. A particular pesticide called "Police" (brand of Gharda Chemicals) is implicated in a couple of cases of deaths, which is supposed to be a mixture of Fipronil and Imidacloprid. While the state government is talking about how this pesticide which is supposed to be used on Sugarcane only is being sold for cotton crop usage, there appears to be another illegality with regard to this pesticide that it has not even been approved by cibrc as a "combination pesticide" (www.cibrc.nic.in/pesticides.doc). While Gharda Chemicals representative

contacted by us affirmed that this has been registered by the central regulator, the regulator's own updated information as on 30th June 2017 does not make a mention of this pesticide. The other pesticide implicated, which is Profex Super (brand name of Nagarjuna Agrichem Limited⁷) which is a combination of Profenophos and Cypermethrin also does not feature in the list of Approved Formulations of Combination Pesticides of Central Insecticides Board and Registration Committee (CIBRC) of Government of India. Similar is the case with Polo of Syngenta⁸.

What is also unclear is whether combination pesticides are put through biosafety evaluation at least to the same extent as individual pesticides, which in itself is a highly inadequate regime ridden with many lacunae. From a perusal of the minutes of the meetings of the Registration Committee, it does not appear to be a process that fulfils the objective of the statute (Insecticides Act).

OUR CONCLUSIONS & DEMANDS

It appears that the lives of farm workers and farmers are of no value at all in this country. Their Right to Life (and Livelihood), which is a fundamental right guaranteed by the Constitution of India is being violated routinely with no accountability fixed on the government and concerned agencies for such violation.

No surveillance and data systems exist, including hospital based surveillance, to monitor pesticide poisonings, that too separately for occupational poisoning (inhalation), accidental poisoning and intentional poisoning (ingestion by oral route).

It is worth noting that this is not the first time that such an episode is unfolding with regard to pesticide poisoning, and this seems to be a recurring feature that has been ignored callously by the administration.

There is a systemic failure in anticipating the situation and controlling a highly preventable and unconscionable situation. There is total lack of coordination and communication between different departments that should have acted to prevent such poisonings. There is also a pathetic lack of adoption of frontier, post-modern science of pest management which shuns the use of hazardous technologies and adopts an agro-ecological approach.

It is also clear that the failure to prevent this situation lies at all levels of the government, including with the Government of India for having continued with bannable pesticides.

Farmers and their use of hazardous technologies is getting more and more desperate in the country – this is apparent with pesticides and GM seeds and the rampant misuse, with regulators and others turning a blind eye to the developing/unfolding problem.

It is clear that end use regulation is not going to be possible since there is no existing mechanism or possible mechanism by which the use of the pesticide by the buyer, after the product leaves the retailer, can be monitored and regulated. The complacency that was apparent everywhere with dangerous mixtures of pesticides is clearly alarming.

⁷ <http://www.store.farmguru.in/products/agro-chemicals-crop-protection-insecticidespesticides/nagarjuna-agrichem/nagarjuna-insecticide-profex-super/pid-10132492.aspx>

⁸ <https://www4.syngenta.com/what-we-do/crops-and-products/brands>

While we are discussing acute pesticide poisoning at this point of time, the fact finding team can clearly anticipate chronic health and environmental problems that are bound to emerge sooner or later, especially with the illegal use of herbicide tolerant GM cotton.

Given all the above, the fact finding team demands the following:

1. A full survey needs to be taken up by the Government of all the poisoning cases (not just of death), and past data should also be analysed by culling out inhalation poisoning cases in the hospital records of Vidarbha districts. This should help the government to understand the scale of the problem, the chemicals involved, the particular conditions which caused this unfortunate episode to unfold etc.
2. This should also be used to extend full and free medical treatment for all the affected persons, as well as comprehensive rehabilitation of the families as per the need.
3. Further, data systems should be created to capture the problem in all its dimensions at least from now on.
4. Government of India should ban immediately all those pesticides that are implicated in the poisoning cases here, as well as those pesticides that have been banned or elsewhere, to begin with. There are no scientific or moral grounds on which this cannot, or will not be done.
5. Government of Maharashtra should immediately revoke and stop licenses of sales of these pesticides in the state, like Kerala government has done, without waiting for a ban decision from the government of India. This is very much possible at the state government level.
6. Government of Maharashtra should immediately invest on, and promote large scale agro-ecological approaches to pest management, and lend the required capacities and confidence to farmers to adopt the same. It should take the active help of practising organic farmers in the state and elsewhere for the same.
7. Government of Maharashtra should immediately enhance the ex-gratia amount to Rs. 10 lakhs at least per family which had lost a breadwinner to pesticide poisoning, and also rehabilitate all the affected. It should reimburse full treatment costs for all affected. These monies should subsequently be collected from the pesticide companies for having caused the problem in the first instance.

ANNEXURES:

1. EXTRACT FROM “SERVING DEATH?”, A REPORT BY INDIA FOR SAFE FOOD, ON THE FIRST ANNIVERSARY OF CHHAPRA MID DAY MEAL POISONING IN BIHAR (JULY 15TH 2014)

Chapter 1 **WARNING BELLS TOLLING LONG AND HARD**

In common parlance, pesticide poisoning is mostly understood in the context of acute poisoning, since the effect is immediate and the cause triggering it can be traced back to a given pesticide. However, it needs to be reiterated that the toxic effects of pesticides are also long term, not apparent immediately and manifesting themselves in a more complex fashion. The reason for focusing on acute toxicity incidents is only illustrative.

This section deals with acute toxicity of pesticides, including of adults, to largely point out that despite the cause and effect phenomenon apparent, the issue has not been dealt with by the Indian government in any seriousness it deserves (including the regulators and the various review committees set up from time to time).

We bring to you the serious deficiencies in lack of surveillance over pesticide poisoning, the numerous instances which have highlighted the dangers in continuing with deadly pesticides in India both in terms of **occupational poisoning** of agricultural workers and farmers, as well as **accidental poisoning** due to negligent handling of pesticides and their containers. While this whole issue is eminently “actionable” in terms of the government protecting the very right to life of tens of thousands of citizens, the continued apathy and inaction are unconscionable. This section seeks to break the myth around ‘safe use of pesticides’, so that the nation can work towards real and safe alternatives.

Information related to poisoning cases from across India, mostly from the last decade, is presented here to highlight how widely prevalent these poisoning instances are, and to point out that the Chhapra incident had its warning bells tolling quite early on, but ignored consistently. It is important to note that several of these instances involved children being poisoned, and what’s more, mid-day meals being contaminated, leading to poisoning!

1.1. PESTICIDE POISONINGS IN INDIA

It is ironical that the very need for regulation emerged out of a major accident in 1958 in Kerala that took 53 lives – in this instance, wheat flour meant for human consumption was contaminated with parathion. It was after this tragedy that India brought in an Insecticides Act for regulating pesticides. However, years later, India continues to witness major incidents of pesticide poisonings and it appears that no lessons are being learnt and no fundamental regulatory changes being made.

The Insecticides Act 1968 expressly says that it is an Act to regulate the import, manufacture, sale, transport, distribution and use of insecticides **“with a view to prevent risk to human beings or animals, and for matters connected therewith”**(our emphasis).

However, in its design as well as implementation, this objective of preventing risk to human beings or animals seems to have been neglected, going by the number of pesticide poisoning cases that have come to light just in the recent past (we are not even talking of chronic poisoning here). Perhaps the main reason for this neglect is the fact that the Agriculture Ministry, which is a promotional body, seeks to regulate pesticides in India, while the Health Ministry has never caught up with its food safety mandate, even though the Insecticides Act mandated the health ministry with its enforcement

initially (in 1970, the enforcement of Act was transferred to the Ministry of Agriculture in the year 1970 by the Ministry of Health and Family Planning for reasons not clear; this could be because regulatory focus shifted to efficacy and quality testing rather than safety testing of pesticides, due to the advent of Green Revolution around that time).

Government of India has occasionally presented information on the floor of the Parliament, in response to questions on pesticide poisoning, based on what the state governments would have provided as information during "pre-season (agricultural seasons of Kharif and Rabi) conferences".

STATEMENT SHOWING THE NUMBER OF PESTICIDE POISONING CASES

2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	Apr09-Sept09
6506	8315	9391	4776	7090	13137	11506	5962	9806	4302

Source: Compiled from Parliament responses to LS QNo. 2014 dated 9/3/2010, QNo. 454, dated 7/7/2009 and LS QNo. 1245, dated 1/8/2005

Out of the above cases, deaths at the all-India level were reported to be (as part of the same responses to the above-referred questions): 1155 (2003-04); 2135 (2004-05); 2341 (2005-06), 2989 (2006-07), 693 (2007-08) and 1470 (2008-09). The usual qualifier to such information is that the "poisoning may be suicidal / homicidal / accidental / occupational".

The data presented by the Agriculture Ministry throws up two issues glaringly:

There is gross under-reporting of the extent of poisonings. How do we know this? The Government of India has another source of recording deaths due to pesticide poisoning – that is through the National Crime Records Bureau (NCRB) of the Ministry of Home Affairs. The annual reports of the Bureau titled "Accidental Deaths and Suicides in India" have a clear table (Table 2.9) on 'Incidence of suicides categorized according to means adopted'. Category 6 (i) here is suicides by consuming insecticides. As per data put out by these reports, the following is the number of suicides by means of consuming insecticides: 23311 (2004); 22316 (2005); 22947 (2006); 24125 (2007); 23805 (2008).

While these are clearly cases of pesticide poisoning deaths, the number of deaths reported by the Agriculture Ministry due to pesticide poisoning cases not just of suicides, but homicides, accidents and occupational deaths are at least ten fold lesser than what the NCRB is reporting just for suicides! The NCRB also presents deaths from accidental poisoning but none under the clear heading of "insecticide or pesticide poisoning" – therefore, we are not drawing from that data here. For information, we present data from Table 1.7. Category 13 (Poisoning) and (i) Food Poisoning/accidental intake of insecticides: 8049 (2004); 7390 (2005); 8043 (2006); 8425 (2007) and 7829 (2008). In 2013, the figure was 7550 deaths in this category.

There is also a clear indication that no data is being collected systematically and separately from various hospitals and other locations on occupational and accidental poisonings and deaths due to pesticides, as opposed to intentional poisonings (as seen in a Parliamentary response cited in the subsequent section). This means that the extent of prevalence of such occupational and accidental poisoning and particular pesticides responsible for the same (at least in terms of their acute toxicity) have not been sought to be identified and acted upon.

While this is the case with official data (or lack of it), there have been several instances over the years when media or civil society groups have reported occupational/accidental pesticide poisonings. Each such report was a warning bell ignored by the government and in particular, the regulators.

1.2. OCCUPATIONAL POISONING: GOVERNMENT DATA & RESPONSE

A Lok Sabha Unstarred Question (Question No. 987), on 20/08/2007 to a specific question on "whether the government maintains data relating to farmers and agricultural workers whose health was affected on account of use of pesticides due to inhaling/exposure and poisoning etc.", saw the then Minister of State, Ministry of Agriculture, Government of India (Mr Kantilal Bhuria) reply, "as per Section 26 of the Insecticides Act 1968, State Governments maintain data regarding effects of pesticides on the health of farmers and agricultural workers". The said Section 26 states the following: "26. Notification of Poisoning: The State Government may, by notification in the Official Gazette, require any person or class of persons specified therein to report all occurrences of poisoning (through the use of handling of any insecticide) coming within his or their cognizance to such officer as may be specified in the said notification". In response to this specific question, the Minister gave the following information, as the number of occupational poisoning cases due to pesticides, on account of inhalation/exposure/poisoning while using pesticides in agricultural operations (during period 2001-02 to 2005-06). "Haryana: 65; Kerala: 2; Punjab: 21; Rajasthan: 8; Uttar Pradesh: 56. Other States have not reported any occupational poisoning". This is one of those rare instances when occupational poisoning cases have been reported thus officially. Extrapolating from other information available including the inconsistencies with the response of another agriculture minister in 2002, this appears to be gross under-reporting.

For a Lok Sabha question on "Agricultural Labourers Affected Due to Chemical Pesticides" posed on 13/05/2002 (Unstarred Question No. 6848), the then Minister of State for Agriculture in Government of India (Mr Hukumdeo Narayan Yadav) gave the following reply: "*As per the report from the Government of Andhra Pradesh, 51 cases of pesticide poisoning involving 13 deaths due to exposure to pesticides have been reported during September and October, 2001. Some deaths due to pesticides poisoning have been reported from a few other States also.*

*The Registration Committee constituted under the Insecticides Act, 1968 registers the pesticides only after satisfying itself regarding their efficacy and safety to human being, animals and the environment. If the pesticides are used as per the prescribed directions, they do not pose any harm to human beings, animals and the environment. Further Government is promoting Integrated Pest Management (IPM) to reduce consumption of chemical pesticides. Farmers are provided training on safe and judicious use of pesticides by organizing farmers field schools. Training is also imparted to medical doctors on diagnosis and effective management of pesticide poisoning cases. **No in-depth health monitoring study is contemplated in this regard by the Ministry of Agriculture**". (emphasis ours)*

In 2002, a fact-finding report in January 2002, led by Toxics Link and Community Health Cell, entitled 'Killing Fields of Warangal: Farmer Deaths Due to Exposure to Pesticides in Warangal District', estimated that there could have been more than 1,000 people exposed in Warangal alone in the period between August and December 2001. The Andhra Pradesh Rythu Sangam, a farmers union in the state of Andhra Pradesh, also documented the widespread poisoning that year.

A similar question on the Warangal incidence of pesticide poisoning and death was posed in the Rajya Sabha too (Starred Question No. 745, dated 17/05/2002, titled "Deaths due to *pesticide exposure*"). In this case, the then Minister for Agriculture replied by saying that a "few incidents of hospitalization" were reported. The blame was put on 'repeated use of high doses and improper methods of spraying of pesticides under high temperature'. As part of this reply, the Minister also gave details of deaths from other states during 2000-01, totaling 1638 from 9 states.

The Warangal incidents led to another Rajya Sabha question asked on the same day (Unstarred Question 5410) in which the Minister revealed that number of deaths due to pesticides poisoning in 1998-99 from 9 states were 1658, in 1999-2000 were 1818 and in 2000-01 were 1638. Moreover, the note under the reply, saying "other states have either not reported the figures or there were no deaths" is a matter of concern, showcasing again the fact that there is no mechanism for even estimating the prevalence of pesticides-related poisonings in the country, that too occupational or accidental.

1.3. OCCUPATIONAL POISONING: CIVIL SOCIETY DOCUMENTATION

In 2004, the Centre for Sustainable Agriculture (CSA), Secunderabad, and Modern Architects for Rural India (MARI), Warangal, documented a number of acute unintentional poisoning cases that were admitted at a few hospitals in Warangal⁹. The study obtained information on the number of hospitalizations due to pesticide inhalation (unintentional), as opposed to pesticide ingestion (intentional). Data from one district hospital and six area hospitals revealed that 202 people had suffered unintentional poisoning in just a few months during that year (2004). This could well be a case of under-reporting, as many people do not even get admitted to a hospital, or get into private hospitals, given the medico-legal complications involved. Eight deaths due to pesticide inhalation were also reported in this effort. The two organizations, which documented these cases, also admit that this report does not capture the full picture of the entire district nor the whole year. This report called "Killing and Poisoning Pests or Human Beings?" emphasized that "safe use of pesticides" is a myth in the Indian conditions. The report captures that due to various reasons like poverty, illiteracy and lack of awareness, feudal relationships, tropical and hot use conditions, safe use of pesticides in the Indian conditions is just not possible. For instance, the advice to not spray against the wind – for an agricultural worker who is assigned a task of finishing the spraying of pesticide on a given patch of land within a given wage, the luxury of walking back to the initial line so that he/she can align her/himself to the wind direction does not exist. Similarly, there is an instance when a farmer did not reveal the deadly nature of a given pesticide to the sprayer and actually poured into another container, for fear of finding no hired labour to spray the pesticide. The hot, sweaty conditions of work do not allow for protective gear to be worn comfortably – in fact, in some instances, masks have aggravated the situation of poisoning.

Another study published in 2004, with findings from Karnataka, Andhra Pradesh, Maharashtra and Punjab found that a majority of respondents reported acute poisoning symptoms while handling and spraying pesticides. The commonly implicated pesticides are: phorate, phosphamidon, monocrotophos, dichlorovos, oxydemeton methyl, edifenphos, chlorpyrifos, quinalphos, imidacloprid, triazophos, cypermethrin, fenvalerate, alphamethrin, dimethoate, endosulfan, acephate and malathion¹⁰.

⁹ Kuruganti Kavitha (2005): Killing and poisoning pests or human beings?-Acute poisoning of pesticide users through pesticide exposure/inhalation, MARI (Warangal), CSA (Secunderabad) and CWS (Secunderabad)

¹⁰Shetty PK (2004): Socio-ecological implications of pesticide use in India. Economic & Political Weekly, Dec 4, pp 5261-67

In 2009, a Punjab based civil society group called Kheti Virasat Mission collected some information on inhalation poisonings from the civil hospital of Bathinda under Right To Information Act through one of their volunteers (this is unpublished data, but obtained through RTI). The data revealed that in 2004, 10 deaths due to pesticides inhalation; in 2005, 17 deaths; in 2006, 15 deaths; in 2007, 11 deaths and in 2008, 12 deaths were recorded in the government Civil Hospitals of just this district. Information on the victims who died due to poisoning was provided in sixteen cases from district Sangrur to the RTI application. It is apparent that the poisoning cases would be much higher. Further investigations and reconstruction of some of these poisonings by meeting villagers and family members implicated pesticides like Glyphosate, Monocrotophos, Endosulfan etc.

In 2011, from just one revenue division (Adoni) of Kurnool district in Andhra Pradesh, 20 deaths were reported from pesticide spraying, over a 4-month period (July to October). 149 cases were admitted to hospitals with pesticide poisoning¹¹. An exploratory health study on shopkeepers selling pesticides in Uttar Pradesh in India found that retail traders exposed to pesticides had significantly higher relative risk for sickness related to cardio-vascular, genitourinary, respiratory, nervous and dermal systems as compared to controls, because of multiple exposures to pesticides and poor safety culture at work place¹².

1.4. ACCIDENTAL POISONING, INCLUDING OF CHILDREN

While occupational hazard could be due to inhalation, there are also accidental poisonings (acute toxicity) of people who come to be poisoned, without even working in the field of agriculture.¹³ We present a few such cases here from the past decade or so.

In July 2002, 32 school children less than 12 years of age, developed symptoms of severe acute poisoning in the village of Karinjakunnu in Kottathara Panchayat of Wayanad district in Kerala and had to be rushed to a nearby hospital for immediate treatment, where some of them were discharged after only 3 days¹⁴. These children were affected by Phorate used on a banana plantation, close to their school. The farmer who used the pesticide was found to have used 12 times more than the recommended dosage in this case. Unfortunately, not going by the dosage recommendations is not uncommon.

In July 2006, a group of school students and other villagers in a village in Phillaur, Jalandhar district of Punjab were affected. In village Salkiana, students in a school had to be rushed to a hospital when they started complaining of breathlessness and started falling unconscious. The reason was discovered to be phorate, used in a nearby sugarcane field¹⁵.

In September 2010, a wire service news report carried in various media channels reported that over 100 students had fallen ill in Borboruah tea garden in Dibrugarh district in Assam, due to food poisoning¹⁶ – these were primary school students who complained of giddiness and started vomiting after they ate their mid-day meal. It was reported that the food prepared in the school was contaminated with some pesticides that were being sprayed by the tea garden workers close to the school kitchen. The uncanny similarity of a mid-day meal being possibly accidentally poisoned in this instance with the Chhapra incident, is noteworthy.

Before this, in response to a Rajya Sabha Starred Question (No. 345, dated 18/4/2005), the then Minister for Human Resource Development informed the House that over the years, there have

11 "PramathathePramaadam", Eenaadu (telugu) news report from Kurnool, 2011

12 Kesavachandran C, Pathak MK, Fareed M, Bihari V, Mathur N, Srivastava AK (2013): Health risks of employees working in pesticide retail shops – an exploratory study. Indian J Occup Environ Med. 2009 December; 13(3): 121-6

13 For the sake of this report, we are making a distinction between Occupational Poisoning and Accidental Poisoning, though inhalation by way of one's occupation gets classified as accidental poisoning too

14 Usha Jayakumar's report in Pesticides News No. 57, September 2002, page 19, available at <http://www.pan-uk.org/pestnews/Issue/pn57/pn57p19b.htm>

15 http://www.downtoearth.org.in/node/8353?quicktabs_1=0

16 <http://www.deccanherald.com/content/100071/over-100-students-taken-ill.html>

indeed been reports during 2002-2005 of children falling ill after eating mid-day meals. While providing details on information received till then, the Minister informed that in West Bengal, 30 children fell ill due to pesticides spread in the agricultural field adjacent to the school, which had caused food poisoning.

Responding to one of the related questions on standards laid down for mid-day meals by the government, the Minister could only clarify the calories and protein requirements in each meal, in addition to a vague principle that "it should be hygienic and wholesome". This is however not the same as safe food, as the instances narrated here show very clearly.

While these are some examples of mass poisonings that too of school children, regular reports of accidental poisonings keep appearing in the media. For instance, on May 22nd 2011, a 3-year old child of Kauni village in Muktsar district is reported to have been admitted in a hospital after he consumed some pesticide-laced eatable in the house. A Times of India report points out that almost all farmers use empty pesticide containers in the kitchen of their houses for storage of various eatables. In October 2011, a boy of Safdipur village is reported to have died after drinking pesticides-mixed water from the water tank of his farmhouse.

Some academic studies have also focused on childhood accidental poisoning, using hospital records. One such study from the Sunderbans region of West Bengal reports that out of 1056 admissions of children in a hospital with accidental poisoning during 1999-2001, organophosphorus poisoning was the commonest¹⁷.

Another study, from a tertiary care centre in North India during July 2004 and July 2006, once again based on hospital records of pediatric emergency room and poisonings, found that insecticides were amongst the top three agents most frequently implicated¹⁸ (even in a situation where the majority of the patients resided in urban areas).

1.5. RE-USE OF PESTICIDE CONTAINERS & HAZARDS THEREIN

The unsafe use of pesticides is not limited just to the use in the fields, but to the pesticide containers. There is widespread prevalence of re-use of pesticide containers for storage of food, oils and water.

An Economist article in 2007 stated that a report put out by the Punjab Government had findings of a survey suggesting that three quarters of the respondents put pesticide containers to domestic use¹⁹.

A study in Maharashtra's Kolhapur district in 2010 found that 33% of the respondents washed the used pesticide containers and re-used them for various purposes. Even when it comes to storage of pesticides, an overwhelming majority did not keep the pesticides in safe locations²⁰. This study documented a large number of accidental poisoning cases from the study villages (chlorpyrifos, endosulfan, zinc phosphate etc., are implicated). There are a wide number of civil society and media reports, many anecdotal, which indicate that reuse of pesticide containers is a widespread practice in different parts of India.

Meanwhile, the International Code of Conduct on the Distribution and Use of Pesticides obliges the pesticides industry to use containers that are not attractive for subsequent reuse and promoting

17 Chowdhury AN, Banerjee S, Brahma A, Biswas MK (2008): A study on mortality and morbidity pattern of acute childhood poisoning cases admitted in block primary health centres of Sunderban, West Bengal. *Indian J Public Health*. 52(1): 40-2

18 Kohli U, Kuttiaat VS, Lodha R, Kabra SK (2008): Profile of childhood poisoning at a tertiary care centre in North India. *Indian J Pediatr*. Aug; 75(8): 791-4

19 Chemical Generation: Punjabis are poisoning themselves. Sept. 24th 2007, *The Economist*.

20 Dhare Amar M, JavadekarPrachee P, Jagtap Mahesh P (2010): Modern agricultural practices: a dilemma of farmer & farm worker's health in cash crop zone in Maharashtra state. *Bhatler College Journal of Multidisciplinary Studies*, 1 (1).

programmes to discourage their reuse, where effective container collection systems are not in place (5.2.3.5)²¹. However, the implementation of this voluntary code presents a different picture.

We showcase all the above to point out that 'safe use of pesticides' is a myth; that pesticide poisonings of different kinds are rampant in the country; that there is no systematic surveillance of even acute poisoning cases in the country, including occupational and accidental, specifically classified as such (chronic poisoning of course goes unacknowledged); that there is no mechanism by which the government is able to regulate even basic matters like pesticides containers and their reuse, and the hazards contained therein, or the end-use conditions of pesticides as seen in the numerous poisoning incidents of school children, mentioned here, also due to pesticide drift. All of this creates strong grounds for FAO's recommendation and reiteration that hazardous pesticides should be phased out in a country like India. The government should heed this.

²¹ FAO (2005). International code of conduct on the distribution and use of pesticides. Revised Version. Adopted by the 123rd Session of FAO Council in November 2002. Food And Agriculture Organisation, Rome