

CHAPTER III

PESTICIDES AND GOOD AGRICULTURE PRACTICES

PESTICIDES REGULATIONS

3.1 Pesticides regulations are governed in India under following Acts/Rules:

1. The Insecticides Act, 1968 and Rules, 1971
2. The Environment (Protection) Act, 1986
3. Hazardous Waste (Management & Handling) Rules, 1989
4. Water (Prevention & Control of Pollution) Act, 1974
5. Air (Prevention & Control of Pollution) Act, 1981
6. Prevention of Food Adulteration Act, 1954
7. The Factories Act, 1948
8. Bureau of Indian Standards Act

3.2 The Committee have been informed that pesticides Consumption in some of the major countries, is as follows:

USA	:	7.0 Kg/ha
Europe	:	2.5 Kg/ha
Taiwan	:	17 Kg/ha
Japan	:	12 Kg/ha
Korea	:	6.6 Kg/ha
India	:	0.5 Kg/ha

3.3 From the above it is noted that in India pesticide consumption is far less *vis-a-vis* other countries. However, we have the problem of pesticide residue in food products which mainly percolate from fruit and agriculture crops wherein pesticides are used to kill pests. Giving reasons for more pesticide residue in food products in India *vis-a-vis* other countries, representative of CSE during her evidence before the Committee stated that other countries were using degradable pesticides. Pesticides used by them are not persistent. However in India due to more use of persistent pesticide, their residues remain in food products.

3.4 Due to problem of persistence of pesticide residues in food and agricultural products, as also lack of awareness on the part of farmers with regard to judicious use of pesticides, the Committee called for detailed information from the Ministry of Agriculture, Central Insecticides

Board and Registration Committee, which are the Government agencies entrusted with the task of registration, regulation and usage of pesticides in the country. Their representatives were also called before the Committee to tender their oral evidence on the subject.

3.5 As per a note furnished to the Committee by the Ministry of Agriculture pesticides mainly enter into food products due to following reasons:

- (i) Indiscriminate use of chemical pesticides
- (ii) Non-observance of prescribed waiting periods
- (iii) Use of sub-standard pesticides
- (iv) Wrong advice and supply of pesticides to the farmers by pesticide dealers
- (v) Continuance of DDT and other uses of pesticides in Public Health Programmes
- (vi) Effluents from pesticides manufacturing units
- (vii) Wrong disposal of left over pesticides and cleaning of plant protection equipments
- (viii) Pre-marketing pesticides
- (ix) treatment of fruits and vegetables

USE AND REGULATION OF INSECTICIDES AND PESTICIDES

3.6 The Ministry of Agriculture regulates the manufacture, sale, import, export and use of pesticides through the 'Insecticides Act, 1968' and the rules framed thereunder. Central Insecticides Board (CIB) constituted under Section 4 of the Act advises Central and State Governments on technical matters. The Registration Committee (RC) constituted under Section 5 of the Act approves the use of pesticides and new formulations to tackle the pest problem in various crops. The monitoring of pesticides residue levels in food comes under the purview of Union Ministry of Health and Family Welfare.

INSECTICIDES ACT, 1968

3.7 The Insecticides Act, 1968 regulates import, manufacture, sale, transport and distribution and use of insecticide, with a view to prevent risk to human beings or animals and the matters connected therewith. This Act was passed by the Parliament in the Nineteenth year of Republic of India and came into force on 01.03.1971.

CENTRAL INSECTICIDES BOARD (CIB)

3.8 A Central Insecticide Board (CIB) has been constituted under Section 4 of the Insecticides Act, 1968 to advise Central Government and State Governments on technical matters viz.:

- (i) Safety measures necessary to prevent risk to human beings or animals in manufacture, sale, storage, distribution and use;
- (ii) Assess suitability for aerial application;
- (iii) Specify shelf-life;
- (iv) Advise residue tolerance limit and waiting period;
- (v) Suggest colorization;

- (vi) Recommend inclusion of chemicals/substances in the Schedule or insecticide;
- (vii) Other functions incidental to these matters.

3.9 Director General of Health Services, Ministry of Health and Family Welfare is *ex-officio* Chairman of CIB. Board consists of 28 members, out of which 16 are *ex-officio* and 12 are nominated members.

REGISTRATION COMMITTEE (RC)

3.10 A Registration Committee (RC) has been constituted under Section 5 of the Insecticides Act, 1968 to register insecticides after scrutinizing formulae, verifying claims of efficacy and safety to human beings and animals, specify the precautions against poisoning and any other function incidental to these matters. To assess efficacy of the insecticides and their safety to human beings and animals, the RC has evolved exhaustive guidelines/data requirements which *inter-alia* includes residue in crops on which the insecticides are intended to be used. The onus lies with the importers/manufacturers to generate data relating to the insecticides for which registration are sought.

3.11 The Committee were informed that so far 181 pesticides have been registered for regular use in the country.

MRL

3.12 While the Registration Committee (RC) registers pesticides for their usage, their MRL in food and commodities are prescribed by the Ministry of Health and Family Welfare under PFA (Act), 1954 and rules framed thereunder. MRL is established taking into account the toxicological data of the pesticide as well as the trials on crops under good agricultural practices.

3.13 During evidence the Committee asked as to whether MRL for all the 181 pesticides that have been registered for regular use in the country have been fixed. In reply, a representative of the Ministry of Agriculture during his evidence before the Committee stated:—

“When the Insecticides Act came into being, there were certain pesticides that were already in use and they were called ‘deemed to be registered’ pesticides. The basic problem relates to deemed to be registered pesticides where data has not yet been fully given by the industry.”

3.14 On fixing of MRLs, DGHS during his evidence stated:

“Sir, for 71 pesticides, tolerance limits have already been notified under PFA. For 50 pesticides, they are already finalised and the draft notification has been issued by the Ministry of Health and Family Welfare. So, it makes 121. Then, there are 27 pesticides which do not require fixation of tolerance limits. 32 pesticides are still left where tolerance limits are to be fixed, of which, for 24 pesticides, data has been submitted to the Ministry of Health and for 8 pesticides, it was suggested by Department of Agriculture and Cooperation that the CODEX norms may be accepted for the time being because the data is not available and it is being collected. This gives the complete picture of the pesticides about MRL fixation.

Sir, therefore at present, only 32 pesticides are there for which MRLs have to be fixed. Data for 24 pesticides has been submitted and they mostly relate to deem to be registered pesticides.”

3.15 Asked further to give the reasons for not fixing MRLs for all the 181 pesticides registered for regular use in the country, DGHS stated as under:

“Sir, 27 pesticides do not have to have MRLs. Out of total 181 pesticides, I have mentioned the status of 121 pesticides. Seventy-one pesticides have been notified. For 50 pesticides, action has already been completed and time for submission of comments on notification is over. Only two objections have been received. Out of rest 62, 27 pesticides do not require to have MRLs and rest are only 35. Sir, I may also read the minutes of the meeting taken by Secretary (Agriculture), where Joint Secretary of Health Ministry was also there. They have decided and I may quote : “It has been further decided that the review of the MRLs for 71 pesticides may be undertaken at a later stage when MRLs for all the registered pesticides have been fixed.” So, it is a continuous process.”

3.16 Asked by the Committee as to whether any pesticide had been registered without fixing MRL, in reply, representative of the Ministry of Health and Family Welfare further stated:—

“The Agriculture Secretary took a meeting in June, 2003 where the Joint Secretary of the Department of Health was also present. They analysed the laid down guidelines It was decided that henceforth unless the RC fixes a Maximum Residue Limit, they would not register the pesticide.”

3.17 Expressing concern over registration of some of the pesticides without fixing MRLs, Committee asked as to what were the reasons for registering pesticides without fixing MRL, in reply, representative of the Ministry of Health and Family Welfare stated:—

“Sir, now we have said that the Registration Committee will not register it. It was clarified that the registration should be approved—after MRL has been calculated and finalised—by the Registration Committee. This is the decision that was arrived at in the meeting taken by the Secretary, Agriculture.”

3.18 When the Committee asked as to whether amendment in the Insecticides Act, 1968 was required to further strengthen it so that no pesticide is registered by notification or rule but only by law, in reply, representative of the Ministry of Agriculture stated:—

“.... Basically, we have already got powers with us.”

3.19 Asked further as to why these powers were not used, the representative of the Ministry of Agriculture stated:

“Sir, once this issue of MRL came up, we have fixed some guidelines for this. But if you feel that it should be strengthened by law, then it can be amended.”

3.20 In a subsequent note furnished to the Committee, the Ministry of Agriculture stated that proposals for Amendments to the Insecticides Act, 1968 were being finalised. Some of the main amendments proposed to the Act were stated to be as under:

1. Misbranded pesticides in the existing Act are being reclassified as misbranded, substandard and spurious.
2. Increasing the punishment and making graded punishment commensurate with the gravity of offence.

3. BIS certification being made mandatory condition for grant of final certificate of registration of the product.
4. Provision for cancellation/suspension of Registration Certificates by Registration Committee.
5. Provision of qualified person to be kept at distribution/retail points.
6. Exempting the retailers from the requirement of licence for sale of household insecticides.

The basic purpose behind these proposals is to ensure stringent punishment for offenders under the Act and that farmers in the country get quality pesticides.”

DEEMED PESTICIDES

3.21 Asked as to why MRLs of deemed pesticides has not been fixed so far, representative of Ministry of Agriculture stated:

“I have said earlier that in 1968, actually, the Act came into being. In 1971 we have started registration. Prior to that, already there were some pesticides being used in the country. So, that is why, they were given what is called the deemed registration status. I think, the data, probably, at that time was not complete. Many of them are already phased out. We would like to actually verify which one is still existing or being widely used.”

3.22 Asked to explain the reasons for not mentioning waiting period in case of deemed pesticides, the Ministry of Agriculture in their note stated:

“Presently 181 pesticides stand approved for use in the country. Out of these 71 pesticides belonging to deemed registered category are used in the country. Waiting periods for some pesticides are not mentioned on the leaflets due to non-availability of data on residues on the crops against which the products are approved. To overcome the gaps, the Registration Committee has constituted an Expert Group to examine total data available with the pesticide industry and the Registration Committee Secretariat to recommend the waiting period. Report of the Expert Group is awaited.”

BANNED PESTICIDES

3.23 The Committee asked about the use of banned pesticides and the extent of their usage, in reply, the representative of the Ministry of Agriculture stated:

“We have to get the information about it. This information probably we have to collect from the States.”

3.24 Pointing out that residues of certain pesticides like DDT, Lindane, which are totally banned for use in agriculture programmes and permitted for restricted use in health programme only, were being found in food and vegetables products, the Committee asked the reasons for the same. In reply, a representative of the Ministry of Agriculture stated:

“Sir, DDT and BHC are both banned. There is an order that mentions that only 10,000 metric tonnes of DDT are to be permitted under the malaria programme.

In the past two years or three years only 3,000 metric tonnes to 5,000 metric tonnes have really been used under the malaria programme. So, that is the reason for the pesticide residue being found in the samples. The Health Ministry is administering it, but ultimately the health departments of the State Government have to implement it. We cannot really rule out whether any pesticide from the health programmes might be getting leaked for use in agriculture though we have no proof of it."

3.25 Elaborating further on causes of presence of pesticides being used in health programmes, in food items and steps taken for their judicious usage, DGHS during evidence stated:

"BHC is banned for public health use. If there is some residue which is detected in the food, it obviously means that it has not decayed and it is persisting. Regarding DDT, its use in public health is permitted by the WHO. It is the cheapest insecticide for public health problems. In the early 1950s, malarial deaths used to be almost a million in the country. Then, drastically, it came down to near zero during 1965. In spite of the population becoming triple, the number of cases reported is only two million as of now. CoS has mandated that the use could be up to 10,000 metric tonnes. There is a Committee under the Health Secretary's Chairmanship which, every year, gives a mandate. It has always been less than 10,000; it may be around 8,000 or 6,000. Every year, they assess the situation and they decide. There are certain guidelines, I will just read it out.

'That the residual spraying for malaria is done strictly for indoors. The spraying is confined to inner walls with fixed doses. The spraymen are trained to apply correct doses without allowing any slippage, and the equipment delivering the spray are also properly calibrated. The insecticide is never directed against any water body. It stays on the walls for 12 weeks. Due to rains and sunlight, it is supposed to disappear very quickly.'

These are the guidelines for DDT use in public health and it is being monitored by a Committee under the Chairmanship of the Secretary (Health) on a year to year basis."

3.26 The Committee pointed out that in Kasargod area in Kerala, certain pesticides were being used indiscriminately which had caused a lot of health problems to the habitants of that area, leading to public agitation also the Committee asked as to what steps had been taken to stop indiscriminate/injudicious use of pesticides. In reply, DGHS during evidence stated:

"We have reviewed and made a study of the entire data. There were about three other pesticides which were commonly used in that area. This was the first point we have noted.

The second thing is that this was happening and whatever health related thing was projected was only from one place although the use of Endo-Sulphan is there in many other plantation (PCK) areas. The health record also says that whatever deficiencies they have pointed out being due to Endo-Sulphan is not correct and we are looking into it."

3.27 The representatives of Ministry of Agriculture further elaborated on the issue of use of Endo-Sulphan in Kasargod, Kerala as under:

"Sir, first of all I would like to inform the august Committee here that the Registration Committee mentioned by my colleague had appointed an expert committee to look into this report and that committee submitted its report to the Government (Department of Agriculture and Cooperation). This Committee included scientists from ICAR, scientists

from All India Institute of Medical Sciences and scientists from other institutes. They submitted a report. They said that the problems of health were localised and opined that the said health problems did not bear any linkage with the use of Endo-sulphan. But still, taking precautions, the Government of India has ordered that Endo-sulphan will not be used in these PCK plantations in that area. Also, those blocks will observe a pesticide holiday for five years and in this period no kind of pesticide will be used in those villages. This is what we have decided and the decision of Government of India has been communicated to the Government of Kerala.

The aerial spraying of any pesticide is not allowed generally... Government of India specifically gives permission for undertaking aerial spraying. We have also taken a decision that henceforth aerial spraying of Endo-sulphan will be totally banned. Nobody will henceforth be allowed to undertake any kind of aerial spraying of Endo-sulphan. These are the three major decisions that we have already taken. We have communicated these decisions to the Government of Kerala. The matter is still in the High Court, which had earlier banned the use of Endo-sulphan pending a decision by the Government of India on the Report of Expert Group."

GOOD AGRICULTURAL PRACTICES

3.28 Asked to indicate the efforts being made by the Ministry of Agriculture to educate farmers for judiciously using the pesticides and adopting good agricultural practices, a representative of the Ministry of Agriculture during his evidence before the Committee stated:

"We have already taken some steps to minimise pesticides residues. We are strictly enforcing the provisions of Insecticides Act, 1968 and we have also started educating farmers about ill effects of pesticides, need-based use of chemical pesticides, use of recommended dosage, correct application techniques, observance of prescribed waiting period, practices of Integrated Pest Management (IPM) and benefits of organic farming.

Integrated Pest Management is an eco-friendly approach for pest management encompassing cultural, mechanical, biological methods and need-based use of chemical pesticides with preference to use of biopesticides, biocontrol agents and indigenous innovation potential.

Now, I would like to highlight on Government of India's efforts on Integrated Pest Management. Since the 8th Plan, we have established 26 Central IPM centres. Six new Centres are being planned in six States during the Tenth Plan. Farmer's Field Schools are being conducted. Season Long Training in major crops is being undertaken for master trainers. Grant-in-aid is provided to State Governments for establishment of State Bio-control Laboratories. Twenty-nine such laboratories have been established. We are also undertaking awareness campaign through public media. Government of India has also prepared IPM packages. Fifty one crops have been covered so far with the help of ICAR. We have sent these packages to all the State Governments for implementation.

In short, the impact of IPM in two decades has been the reduction in consumption of chemical pesticides from 65,462 MT during 1994-95. It has come down to 47, 020 MT during 2001-02. Similarly, there has been an increase in use of bio-pesticides from 219 MT during 1996-97 to 902 MT during 2001-02.

Pesticides consumption has been substantially reduced in rice and cotton which are main pesticide-consuming crops. But pesticides sustain food production and control vector borne diseases. Hence, the pesticides are social need. IPM cannot entirely replace the use of pesticides. Therefore, the Ministry of Agriculture through ICAR started an All-India Coordinated Research Project on Pesticide Residues way back in 1984-85.

The aims of the project were to develop protocols for safe use of pesticides by recommending "good agricultural practices" based on multinational "supervised field trials"; to recommend waiting period/pre-harvest interval so that the residues in the food commodities remain well within the prescribed safe limits; and monitoring of pesticide residues in agricultural produce."

3.29 The Committee asked further as to whether the Ministry of Agriculture had initiated any national monitoring programmes to regulate the proper usage of pesticides. In reply, a representative of the Ministry of Agriculture stated:

"We have a network of residual management particularly in the raw part, not in water or in the process. But from agriculture point of view, we have a very huge programme, an All India Coordinated Residual Management Programme. I think, the network is already existing there."

USE OF BIOPESTICIDES

3.30 As per a note furnished to the Committee consumption of biopesticide out of total consumption of pesticides in India during the last three years was as under:

	Pesticide in MTs	Biopesticide	% of biopesticide
1990-00	46,195	874	1.89%
2000-01	43,584	683	1.56%
2001-02	47,929	902	1.88%

3.31 Noting that biopesticide formed only a meagre percentage of total pesticides used in the country, the Committee asked as to what further steps were being taken to encourage use of bio-pesticides. In reply, Ministry of Agriculture in their note furnished to the Committee stated:

"The concerted efforts at the central and state level to popularize IPM approach among the farmers has created significant awareness in favour of biopesticides/bioagents. Moreover, the IPM is an inherent and important component of various schemes viz., Technology Mission on Cotton (TMC), Technology Mission on Oilseeds and Pulses (TMOP), Technology Mission on Integrated Horticultural Development for NE, J & K, Himachal Pradesh, Uttaranchal, Technology Mission on Coconut Development etc. besides the scheme "Strengthening and Modernisation of Pest Management" approach in India being implemented by the Directorate of PPQ&S, DAC. The steps taken to encourage the use of biopesticides/bioagents are summarized as under:

- (i) The guidelines for registration of biopesticides have been simplified.
- (ii) Farmers, local entrepreneurs, NGOs have been encouraged for production of the same with assistance of ICAR (KVK) and Department of Biotechnology (DBT).

- (iii) Central assistance as grants-in-aid provided to PDBC (ICAR) for research, development and production of biocontrol agents.
- (iv) Grants-in-aid provided to the States/UTs for infrastructural development for production of biocontrol agents and biopesticides by establishing SBCLs.
- (v) The Farmer's Field Schools (FFSs), training-cum-demonstration are playing major role in the promotion and popularization of biopesticides and biocontrol agents among the users.
- (vi) Commercialization of biopesticides is allowed during the validity of provisional registration for 2 years which is also extendable for another 2 years when the applicants have made efforts to generate data to obtain regular registration under Section 9(3).
- (vii) The Government is also promoting organic farming in the country which emphasises enhanced use of bio-fertilizers and biopesticides, besides advocating greater use of organic manures, compost and vermi compost as substitutes for chemical pesticides and fertilizers."

3.32 Giving details of steps being taken by the Ministry of Agriculture to promote organic farming and reduce conventional farming methods, the Ministry further stated in their note:

"To safeguard against ill-effects of indiscriminate use of chemical fertilizers and pesticides the Government has envisaged two major initiatives, first being organic farming through Integrated Nutrient Management and the other being the Integrated Pest Management Approach.

For promotion of organic farming, the Government has taken the following initiatives:

- (i) A Centrally sponsored scheme on 'Balanced and integrated use of fertilizers' was formulated in the 8th Plan and continued in the 9th Plan under which 21 compost production plants were established in different States during 1993-1998. Further assistance was given to various State Governments for setting up of 9 mechanized compost plants for increasing production of organic nutrients. The said scheme has now been subsumed in the Macro Management Scheme since October, 2000.
- (ii) A National Project on Development and Use of bio-fertilizers has been established with a view to enhance production and distribution of bio-fertilizers, quality control of bio-fertilizers and propagation of the use of bio-fertilizers through demonstrations and farmer fairs. Under this scheme Government has assisted 83 units with a amount of Rs. 11.07 crores. As a result, there are 122 bio-fertilizers production units in the country with annual production capacity of 18,500 metric tonnes. The estimated production is 10,000 metric tonnes.
- (iii) The Ministry of Agriculture had constituted a task force on organic farming to suggest measures to promote organic farming in the country in the year 2000. Most of the recommendations of the task force have been accepted and as a result the Department of Agriculture and Cooperation has formulated a National Project on Organic Farming with an outlay of Rs. 99.58 crores, the main components of which includes setting up of a National Institute of Organic Farming, capacity building for promotion of organic farming, support to commercial compost production units, training programmes and field demonstrations as well as market development.

- (iv) Apart from the above initiatives, the Ministry of Commerce, Government of India has launched the National Programme for Organic Production (NPOP) and also notified accreditation agencies in the country apart from setting up of National Standards, Accreditation Criteria, Certification/Inspection Procedure and the Organic Logo. The above initiatives have been taken by the Ministry of Commerce to promote production and export of organic products."

PERSISTENT AND HAZARDOUS PESTICIDES

3.33 Asked as to whether any regular monitoring programme to phase out pesticides which are persistent and hazardous had been started. In reply, Ministry of Agriculture in a note furnished to Committee stated:—

"The persistent and hazardous pesticides are phased out by the Government after their use and ill effects associated therewith are reviewed by the Expert Committee duly constituted for the purpose."

3.34 Pointing out that present efforts for inculcating the habit of judicious use of pesticides, and preventing the use of banned/restricted pesticides for agricultural purposes was not delivering the desired results, the Committee asked as to what further efforts were being contemplated by the Ministry. In reply, a representative of the Ministry of Agriculture stated as under:

"This is done through either Doordarshan or Radio campaigns in regional languages. We are now taking up organic farming also on a very large scale. Basically we are also targeting the farmer. Once we left everything to the farmers. But he has to be educated. Sometimes, he finds that it is a very effective way and he would like to have one or two sprays more. To check on such things is very difficult. Even for the State Departments of Agriculture, which are monitoring this, it is very difficult to check it. Therefore, we are trying to educate."

PESTICIDE RESIDUES IN IMPORTED FOOD PRODUCTS

3.35 During evidence Committee asked about the mechanism for testing and monitoring the quality of imported food products. In reply, a representative of the Ministry of Agriculture stated:

"Any agricultural produce, plant and plant material coming into the country is tested for presence of pests/diseases in our quarantine stations. We have 29 quarantine stations already established."

3.36 When the Committee pointed out that above checks were done for biological reasons, the representative of the Ministry of Agriculture stated:

"For residues there is nothing, Sir."

3.37 The Committee pointed out that grapes being exported by farmers from our country were being rejected due to high pesticide residues and asked what were the proposals for setting up residue checking labs for the benefit of farmers in grape growing area. In reply, a representative of the Ministry of Agriculture stated:

"We already have labs but they are not enough now..."

3.38 The Committee were informed that a farmer has to pay Rs. 4,000 to Rs. 5,000 to get pesticide residues checked in his products from Government labs.

3.39 During their deposition before the Committee representative of CSE informed that a lot of Tea consignments exported to Germany and Europe were being rejected. Giving reasons for rejection of tea consignment, representative of CSE stated:

“One of the key issues for the rejection of the tea consignments was that pesticides that we detected in the tea, say, in Germany, there were no MRLs set for those pesticides in India even. Therefore, what Germans very clearly said that these are illegal even in your law, which is why, if you look at all the discussions that are taking place in the Tea Board today who are really working to define what is allowed in tea. Therefore, it is not how much is allowed, but also what is allowed and then educating the farmers to say only this is allowed.”

CONCLUSIONS/RECOMMENDATIONS

3.40 The health and environmental problems arising from pesticide use in developing countries have received wide spread recognition. The Food and Agriculture Organisation (FAO) of United Nations has adopted the International Code of Conduct on the Distribution and Use of Pesticides (the FAO Code) to address the issues. The earlier code has been amended to include a section on Prior Informed Consent (PIC) to enable governments to prohibit imports of certain hazardous pesticides. Many of the organochlorine pesticides are included in the Persistent Organic Pollutant (POP) category and are to be phased out gradually.

3.41 Pesticides sustain food production and control vector born diseases. They are vital for crop production and instrumental in continuous increase in food production. The consumption of pesticide in India is one of the lowest in the world. India uses a low amount of 0.5 kg/hectare pesticide compared to 7.0 kg/hectare by USA, 2.5 kg/hectare by Europe, 12 kg/hectare by Japan and 6.6 kg/hectare by Korea. However, despite the low consumption of pesticides, India has more problem of pesticide residues *vis-a-vis* other countries and these have entered into food products and underground water because of non-prescribed use of chemical pesticides, wrong advice and supply of pesticides to farmers by vested interests, non observance of prescribed waiting period, pre-marketing pesticide treatments during storage and transport, use of sub-standard pesticides, effluents from pesticide manufacturing units, continued use of persistent pesticides for public health programmes; lack of awareness and lack of aggressive educational programmes for farmers/consumers.

3.42 Ministry of Agriculture regulates the manufacture, sale, import, export and use of pesticides through the ‘Insecticide Act, 1968’ and the rules framed thereunder. Central Insecticide Board (CIB) constituted under Section 4 of the Act advises Central and State Government on technical matters. The Registration Committee (RC) constituted under Section 5 of the Act approves the use of pesticides and new formulations to tackle the pest problem in various crops. The monitoring of pesticide residues levels in food comes under the purview of Union Ministry of Health and Family Welfare.

3.43 While the Registration Committee (RC) registers pesticides for their usage, the MRLs in food commodities are prescribed by Ministry of Health and Family Welfare under the PFA (Act), 1954 and rules framed thereunder. The maximum residue limit (MRL) for pesticide is the maximum concentration of a residue (expressed in mg per kg) which is legally permitted in food commodities. MRL is established taking into account the toxicological data of the pesticide as well as that of the residues on crops under Good Agricultural Practices (GAP).

3.44 At present 181 pesticides are registered in the country. The Committee, note with dismay that out of 181 pesticides, MRLs for 71 pesticides only have been fixed under the PFA Act, 1954.

3.45 Out of these thirty-two pesticides are still left for which MRL is yet to be fixed. Of these 32 pesticides, registration data for 24 pesticide is stated to have already been submitted by the Registration Committee to the Ministry of Health & Family Welfare. The Committee desire that MRLs for these 24 pesticides may be fixed without any further delay. As regards 8 pesticides, the Committee take serious note that no data is available and therefore CODEX norms are being adopted for the time being. The Committee, therefore, desire that the Registration Committee should call for the data from manufacturers in due course of time and furnish the same to Ministry of Health & Family Welfare so that MRLs for these can also be fixed without further delay.

3.46 The Committee were anguished to note that pesticides were being registered by the Registration Committee even when no MRLs had been fixed. It is only after the CSE came out with their report on presence of certain pesticides in the bottled water in the month of February, 2003, that a decision was taken by the Ministry of Agriculture in the meeting chaired by Secretary, Agriculture in June 2003 to discontinue this practice. The Committee desire that this should now be strictly enforced. In order to rule out any possibility of registering the pesticide by way of notification/rule, the Committee recommend that Insecticide Act 1968 should be suitably amended by inserting a suitable clause in this regard.

3.47 The Committee also desire that a review of existing MRLs of the pesticides may be made at regular intervals, in the light of scientific developments and revision of ADI, if any. There is scope to exceed acceptable daily intake (ADI) if high MRLs have been set because ADI is a safety milestone and should not be allowed to be breached and the basic purpose of setting realistic MRLs is to ensure that we remain well within allocated ADI for that pesticide.

3.48 The pesticides which were being used before 1971 *i.e.* prior to coming into force of the Insecticide Act, 1968 and rules 1971 were included as "deemed as registered pesticides". The Committee note that many of the MRLs of the "deemed registered pesticides" have not been fixed so far. The reasons given by the Ministry of Agriculture, for not fixing MRLs for deemed pesticides, that at that time, their usage data was not complete, is not convincing as the Committee feel that even if this data at that time was not complete or available, Registration Committee should have asked the manufacturers of these pesticides to supply the data and fix their MRLs. Though many of the deemed pesticides are already phased out, the Committee desire that MRLs of deemed pesticides which are still in use may be fixed without any further delay.

3.49 The Committee note that waiting period for deemed pesticides are not mentioned on the leaflets due to non-availability of the residue data on the crops in which the products are applied. To overcome the gap, the Registration Committee has constituted an expert group to examine data available with the pesticide industry and the Registration Committee so as to recommend the waiting period. The Committee desire that in the light of recommendations of expert group regarding waiting period, steps may be taken to ensure that the same is invariably mentioned on the leaflets. Farmers should also be educated to observe the prescribed waiting period.

3.50 The Committee note that residues of certain pesticides like DDT, Lindane, which are totally banned for use in Agriculture and permitted for restricted use in health programmes only, have been found in food and vegetable products. Also due to aerial spray of Endosulphan in

Kasargod area in Kerala, the inhabitants suffered health problems. The Committee have been informed that use of Endosulphan has since been banned in that area.

3.51 The Committee also find that neither the Ministry of Agriculture nor Ministry of Health & Family Welfare have any data about the usage of banned pesticides in the States since inception. The Committee wonder as to how the Ministry of Agriculture which have made claims before the Committee towards Integrated Pest Control Programme are monitoring the very use of pesticides in the absence of such vital data. It does speak volumes about the apathetic attitude of the various functionaries. The Committee however desire that Ministry of Health and Family Welfare in coordination with the Ministry of Agriculture should impress upon the State Governments the imperative need of strictly adhering to the guidelines for usage of DDT, Lindane and other restricted pesticides for health programmes only. The farmers too need to be educated properly in this regard.

3.52 The Committee desire that strict punishment may be provided to the offenders who are found selling banned/restricted pesticides. It has been noted that steps have already been taken by the Ministry of Agriculture by making provision in the Insecticide Act, 1968. The Committee desire that proposal for the amendment to the Act may be expedited so that the farmers in the country get quality pesticides.

3.53 To educate the farmers about ill-effects of the pesticides, need-based use of chemical pesticides and correct application techniques, an integrated pest management programme has also been started by the Government. Integrated Pest Management (IPM) is an eco-friendly approach for pest management that encompasses cultural, mechanical, biological methods and need based use of chemical pesticides with preference to the use of bio-pesticides, bio-control agents and indigenous innovation potential. Ministry of Agriculture has established 26 Central IPM Centres during VIII plan in states and one UT. Six new IPM centres were established in 6 states during Xth Plan. These centres are supposed to conduct Farmers Field Schools (FFSs); Season Long Training (SLT) in major crops; provide grants for establishment of State Bio-Control Laboratories (SBCLs); undertake awareness campaign through public media and prepare and distribute IPM Packages of Practices.

3.54 The impact of IPM is reported to have presumably led to reduction in consumption of chemical pesticides from 65,462 MT during 1994-95 to 47,020 MT during 2001-02. There is a marginal increase in the trend towards use of bio-pesticides from 219 MT during 1996-97 to 902 MT during 2001-02.

3.55 As integrated pest management programme cannot replace the use of pesticides, the Ministry of Agriculture through ICAR has also started an All-India Coordinated Research Project on Pesticide Residues in 1984-85. This programme is aimed to develop protocols for safe use of pesticides by recommending good agricultural practices, based on multi-locational supervised field trials. It is supposed to advise on proper waiting period and pre-harvest intervals so that the residues in the food commodities remain well within the prescribed safe limits (MRLs). Another major thrust has been on monitoring pesticide residues in agricultural produce through 17 co-operative centres. As this programme is confined to monitoring of pesticide residues in raw agricultural produce only its impact has not been fully forthcoming.

3.56 No agency regularly monitors pesticide residues in market samples or undertakes diet basket surveys to assess actual exposure of consumers from pesticide residues in food or water and project health risk, if any. Such activity comes under the purview of Ministry of Health but

no comprehensive regular monitoring programme is being conducted in the country. The Committee feel that such monitoring of food commodities requires to be done extensively and on yearly basis.

3.57 The Committee desire that steps to encourage the use of bio-pesticide, production of bio-control agent and promoting organic farming etc. need to be taken more vigorously.

3.58 The Committee find that the presence of pesticide residues in some cases could have an effect on our exports. The major hurdle which an average farmer faces on this account is firstly that there are inadequate testing facilities which are presently available in the country and secondly the charges for the same are exorbitant ranging from Rs. 4000—Rs. 5000 per sample. The necessity and importance of setting up more laboratories have already been highlighted by the Committee elsewhere in the Report. The Committee however once again reiterate that the existing infrastructure of laboratories may further be strengthened and the services may be offered to the farmers at affordable rates.

MINISTRY OF HEALTH AND FAMILY WELFARE
(Department of Health)

NOTIFICATION

New Delhi, the 26th August, 2003

G.S.R. 685(E).—The following draft of certain rules further to amend the Prevention of Food Adulteration Rules 1955, which the Central Government, without consultation of the Central Committee for Food Standards, proposed to make, in exercise of the powers conferred by the proviso to Sub-section (1) of section 23 of the Prevention of Food Adulteration Act, 1954, (37 of 1954), is hereby published as required by said Sub-section for the information of all persons likely to be affected thereby, and notice is hereby given that the draft rules will be taken into consideration on or after the expiry of a period of thirty days from the date on which copies of the Gazette of India in which this notification is published are made available to the public;

Objections or suggestions, if any may be addressed to the Secretary, Ministry of Health and Family Welfare Government of India, Nirman Bhavan, New Delhi-110011.

The objections and suggestions which may be received from any person with respect to the said draft rules before the expiry of the period so specified will be considered by the Central Government;

DRAFT RULES

(1) These rules may be called the Prevention of Food Adulteration (..... Amendment) Rules, 2003.

(2) They shall come into force on the day of their final publication in the Official Gazette.

2. In the Prevention of Food Adulteration Rules, 1955, in Appendix 'B', (hereinafter referred to as the said Rules)

(I) In rule 22, of the said rules, in the Table,—

(a) against serial number of 14 relating to carbonated water, in column 2 for the entries "600 ml", the entries "1000ml" shall be substituted.

(b) against serial number 27, relating to fruit juice/fruit drink/fruit squash, in column 2, for the entries "400ml" the entries "1000ml" shall be substituted.

(II) In rules 57, of the said rules, in sub rule 2, in the table,—

(a) against serial number 1 relating to lead, in columns 2 and 3, for item (i) and entries relating thereto, the following shall be substituted, namely,—

1	2	3
	Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind	0.01

(b) against serial number 2 relating to copper,—

(i) in columns 2 and 3, for item (i) and entries relating thereto, the following shall be substituted, namely,—

1	2	3
	(i) Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	0.05
	Pulp and Pulp products of any fruit	5.0
	Toddy	5.0

(ii) in columns 2 and 3 item (ii-b) and entries relating thereto shall be omitted.

(c) against serial number 3 arsenic,—

(i) in columns 2 and 3, for item (ii) and entries relating thereto, the following shall be substituted, namely,—

1	2	3
	Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	0.05
	Pulp and Pulp products of any fruit	0.2

(ii) in columns 2 and 3, the item (ii-c) and entries relating thereto shall be omitted.

(d) against serial number 4 relating to tin in columns 2 and 3, for item (i-aa) and entries relating thereto, the following shall be substituted, namely,—

1	2	3
	(i-aa) Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	250
	Jam, Jellies and Marmalades, Pulp and products of any fruit.	250

(e) against serial number 5 relating to zinc, in columns 2 and 3,—

(a) for item (i) and entries relating thereto, the following shall be substituted, namely,—

1	2	3
	(i) Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	5.0
	Pulp and products of any fruit.	5.0
	Other fruits and vegetables products	50.0

(b) item (iii) and entries relating thereto shall be omitted.

(f) against serial number 6 relating to cadmium, in columns 2 and 3 after item (ii) and entries relating thereto, the following shall be inserted, namely,—

1	2	3
	(ii-a) Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	0.01

(g) against serial number 7 relating to mercury in columns 2 and 3 for the existing entries, the following shall be substituted, namely,—

1	2	3
	(i) Fish	0.5
	(ii) Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	0.001
	(iii) Other foods	1.0

(h) against serial number 9 relating to Chromium in columns 2 and 3, for the existing entries, the following shall be substituted, namely,—

1	2	3
	(i) Refined Sugar	0.02
	(ii) Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	0.05

(i) against serial number 10 relating to Nickel in columns 2 and 3, the following shall be added in the end, namely,—

1	2	3
	Beverages	
	Carbonated water, Fruits and Vegetable juices. Fruit Syrup, Fruit Squash, Fruit beverages or fruit drink, Soft drinks concentrate (after dilution as per declaration), Ready to serve beverages of any kind,	0.02

(III) in rule, 65 of the said rules after the table under rule (2), the following shall be inserted, namely,—

“(3) the amount of insecticide residues in carbonated water, fruits and vegetable juices, fruit syrup, fruits quash, fruit beverage or fruit drink, soft drink concentrates (after dilution as per direction), and ready to serve beverages of any kind shall be as follows,—

(i) Pesticide residues considered individually	— Not more than 0.0001 mg/litre — (The analysis shall be conducted by using Internationally established test methods meeting the residue limits specified herein above).
(ii) Total pesticide residues	— Not more than 0.0005 mg/litre — (The analysis shall be conducted by using Internationally established test methods meeting the residues limits specified herein above)”;

[No.P.15025/80/2003-PH (Food)]

DEEPAK GUPTA, Jt. Secy.

Note:—The Prevention of Food Adulteration Rules 1955 were published in Part II, Section 3 of Gazette of India *vide* S.R.O. 2106 dated the 12th September, 1955 and were last amended *vide* G.S.R. No. 554(E) dated 18.7.2003.



THE GAZETTE OF INDIA
EXTRAORDINARY
PART II—SECTION 3—Sub-section (i)
PUBLISHED BY AUTHORITY

No. 469]

New Delhi, Monday, September 29, 2003/Asvina 7, 1925

MINISTRY OF HEALTH AND FAMILY WELFARE
(Department of Health)

NOTIFICATION

New Delhi, the 29th September, 2003

G.S.R. 769(E).—In exercise of the powers conferred by the proviso to Sub-section (1) of Section 23 of the Prevention of Food Adulteration Act, 1954 (37 of 1954), the Central Government hereby makes the following amendment in the notification of the Government of India in the Ministry of Health and Family Welfare (Department of Health), number G.S.R. 685(E), dated the 26th August, 2003, published at pages 1 to 6 in Part II, Section 3, Sub-section (i) of the Gazette of India, Extraordinary, dated the 26th August, 2003, namely:—

In the said notification, in the opening paragraph, for the words “thirty days” the words “one hundred and twenty seven days”, shall be substituted.

[F. No. P. 15025/80/2003 PH (Food)]

DEEPAK GUPTA, Jt. Secy.

Foot Note:— The principal notification was published *vide* G.S.R. 685(E) dated the 26th August, 2003.

CENTRAL COMMITTEE FOR FOOD STANDARDS (CCFS)

The composition of the Central Committee for Food Standards (CCFS) is laid down under section 3 of the PFA Act, 1954.

The Committee consists of the following members:

- (a) Director General of Health Services is *ex-officio* Chairman.
 - (b) There are 4 Central Food Laboratories functioning under the PFA Act 1954 at Kolkata, Ghaziabad, Mysore and Pune and their Directors are *ex-officio* members.
 - (c) Two experts to be nominated by the Central Government (MOHFW):
 1. The Joint Secretary in charge of PFA Administration, MOHFW, and
 2. The Director of the Central Food Technology Research Institute Mysore—are members by designation.
 - (d) One representative each from Department of Food, Agriculture, Commerce, Defence and Railways nominated by respective Ministry/Department the members by designations.
 - (e) One representative from each State nominated by respective State Government. The representative nominated by State Government are either Director Health Services or Director Food and Administration or Public Analyst are well qualified and experienced persons in food safety of the State Government. Their nominations are by designation.
 - (f) Two representatives nominated by Central Government (MOHFW) to represent Union Territories. Director PFA Department, NCT, Delhi and Commissioner Food and Drug Administration, Pondicherry are members of these two UTs by designation.
 - (g) One representative each by Central Government (MOHFW) to represent the Agricultural, Commercial and Industrial Interest.
- The Chairman (processed food), APEDA, New Delhi, the Managing Director, NAFED, New Delhi and the Chairman, Confederation of Indian Industry, New Delhi are members of the committee to represent agricultural, commercial and industrial interest respectively. Their nomination is by designation.
- (gg) Five representatives nominated by the Central Government (MOHFW) to represent the consumer interest, one of whom is from hotel industry.

The President, Federation of Hotel and Restaurant Association of India, New Delhi is representing hotel industry and Managing Trustee, Consumer Education & Research Centre,

Ahmedabad; President, Consumer, Guidance Society of India, Mumbai President, Voluntary Organisation in the interest of Consumer Education, New Delhi and the Chairman, National Sports Club of India (NSCI), New Delhi are representing consumer interest on the Committee. Their nomination is by designation.

- (h) One representative of medical profession nominated by the Indian Council of Medical Research. The Director, National Institute of Nutrition, Hyderabad is nominated member on CCFS by designation.
- (i) One representative nominated by Indian Standards Institution (now Bureau of Indian Standards) The Director (Agriculture and Food), Bureau of India Standards, New Delhi is the member on CCFS by designation.

There are no farmer's representatives as such on the committee however the representative of APEDA and NAFED are representing farmer's interest. The interests of small scale Food Company are being watched by CII, NAFED and APEDA. The composition of the sub-committees constituted by CCFS is at Annex. II. The members are mainly from CCFS. The other experts nominated on these sub-committees are from their respective fields.

The following Central Ministries are the members on the CCFS:

1. Department of Food
2. Ministry of Agriculture
3. Ministry of Commerce
4. Ministry of Defence
5. Ministry of Industry
6. Ministry of Railways
7. Ministry of Supply

Additionally, Ministry of Food Processing Industry and Agricultural Marketing Advisor to the Government of India are permanent invitees in the CCFS because these organisations deal with FPO and Agmark respectively and due to re-organisation of the Ministries these organisations are not covered in Section 3 of the PFA Act, 1954 at present.

All these Ministries and Departments are consulted along with other members of CCFS on all the proposals which are referred to the members of CCFS.

Technical sub-committees and technical groups constituted by CCFS are as under:—

1. Food Laws and Legal Advisory Sub-Committee
2. Label Sub-Committee
3. Food Additives Sub-Committee
4. Edible Oils and Fats Sub-Committee
5. Milk and Milk Products Sub-Committee
6. Pesticide Residues Sub-Committee

7. Analysts Sub-Committee
8. Group on Spices and Condiments
9. Group on Fruits and Vegetable Products
10. Group on Sugar and Confectionery
11. Group on Cereals, Pulses, and their products
12. Group on Packaged Drinking Water and Mineral Water

All the sub-committees and the Expert Groups adopt the same procedure while finalising/ setting the quality norms or safety standards under PFA Act, 1954.

WATER CHARGES PAID BY PEPSICO INDIA

Annexure to letter dt. 7.1.2004

Location	Source of Water		Charges Paid		Approving Authority	Regulatory requirement for approval
	Internal	External	Internal	External		
1	2	3	4	5	6	7
NORTH						
Bazpur	Borewell	Nil	√		Central Ground Water Authority Delhi	Central Ground Water Authority for sourcing ground water
Satharia	Borewell	Nil	√		Cess Department of UP Pollution Control Board	Approval is required for a new establishment to dig borewell.
Jainpur	Borewell	Nil	√		Pollution Control Board	an intimation is required to be sent to Pollution Control Board after digging the borewell.
SOUTH						
Madurai	Borewell	Local Supplier	√	√	Tamil Nadu Pollution Control Board	Tamil Nadu Pollution Control Board
Mamandur	Borewell	Local Supplier	√	√	Intimation to Pollution Control Board	Intimation to Pollution Control Board
Palakkad	Borewell	Local Supplier procured in 2002	√	√	Earlier it was Pollution Control Board. Now it is District Collector until Kerala Ground Water Authority is nominated	Earlier Pollution Control Board used to give approvals. Now District Collector does.
Neelamangla	Borewell	Local Supplier	NA	√	Not Applicable in Karnataka State	Pollution Control Board for effluent water discharge as per PCB regulations.
Kumbalgodu	Presently Borewell Not being used as water quality bad.	Local Supplier has borewell outside the plant.	Nil	√	Not Applicable in Karnataka State	Pollution Control Board for effluent water discharge as per PCB regulations.
WEST						
Bahruch	Nil	GIDC provided water	Nil	√	GIDC	As part of the lease deed, GIDC has to provide the water.
Naroda	Borewell	GIDC	√	√	GIDC	GIDC permission required for borewell.

1	2	3	4	5	6	7
Roha	Nil	MIDC	Nil	√	MIDC	MIDC permission is required.
Chembur	Nil	Municipal Water Supply	Nil	√	BMC	BMC
Aurangabad	Nil	MIDC	Nil	√	MIDC	Municipal Corporation License
Mahul	Nil	Municipal Water Supply	Nil	√	BMC	BMC
EAST						
Sonarpur	Tube Wells	Nil	Nil	√	Approval by Central Ground Water Board. Permission to install deep tube well by Municipality	Approval by Central Ground Water Board. Permission to install deep tube well by Municipality

(1) Standards on Bottled Waters

- (i) IS 13428:1998 Packaged natural mineral water.
- (ii) IS 14543:1998 Packaged drinking water (other than natural mineral water)

(2) Standards on Non-Alcoholic Beverages

- (i) IS 2346:1992 Carbonated beverages
- (ii) IS 12544:1988 Non-alcoholic beer
- (iii) IS 13019:1991 Soft drink concentrate [Earlier title on Non-alcoholic beverages bases (concentrate)] for domestic used.

(3) Standards on Alcoholic Beverages

- (i) IS 3811:1988 Rum
- (ii) IS 3865:2001 Beer
- (iii) IS 4100:1988 Gin
- (iv) IS 4449:1988 Whiskies
- (v) IS 4450:1988 Brandies
- (vi) IS 5286:1988 Vodka
- (vii) IS 5287:1989 Country spirit (distilled)
- (viii) IS 7058:1995 Table wines
- (ix) IS 8538:1988 Toddy
- (x) IS 14326:1995 Cashew fenny
- (xi) IS 14327:1995 Coconut fenny
- (xii) IS 14398:1996 Fortified wines

(4) Standards on Fruit Juices

- (i) IS 3881:1993 Tomato juice
- (ii) IS 4935:1968 Synthetic syrups
- (iii) IS 4936:1968 Fruit squashes
- (iv) IS 5800:2003 Orange juice preserved exclusively by physical means

- (v) IS 7732:2003 Apple juice preserved exclusively by physical means
- (vi) IS 8713:2003 Mango juice preserved exclusively by physical means
- (vii) IS 15088:2001 Lemon juice preserved exclusively by physical means
- (viii) IS 15089:2002 Pineapple juice preserved exclusively by physical means
- (ix) IS 15095:2002 Concentrated pineapple juice preserved exclusively by physical means
- (x) IS 15273:2003 Concentrated orange juice preserved exclusively by physical means