

# A CRITICAL EVALUATION OF INSECTICIDE ACT, 1968: A STUDY

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## INTRODUCTION

Farmer's crop was targeted from mostly insects and caused huge loss to in the agricultural production approximately 10-90%. To reduce the loss as well as prevent the attack of insecticide over the crops, necessity felt to use insecticide. Insecticides are agents of chemical or biological origin that control insects. Control may result from killing the insect or otherwise preventing it from engaging in behaviors deemed destructive.<sup>i</sup>

The first recorded use of insecticides is about 4500 years ago by Sumerians who used sulphur compounds to control insects and mites, whilst about 3200 years ago the Chinese were using mercury and arsenical compounds for controlling body lice.<sup>ii</sup> Particularly in 19<sup>th</sup> & 20<sup>th</sup> century, major research was carried out and new insecticides and fungicides were introduced. Today, several forms of insecticides were evolved such as genetically modified engineered crops etc. These insecticides proved to be effective to prevent attacks of insects on the crops as well. Ultimately, farmers were attracted to use this method to increase the production of the crops. The extensive utilization of insecticide for the farming on regular basis has impacted upon the quality of the crops, land pollution, air pollution, water pollution, health of the farmers etc.

Ultimately, it causes several diseases to human body as well. These reasons forced researcher to do extensive research to find out legal solution to address these issues. The rationale behind this research is find out the reasons to use excessive use of insecticides as well as the probable solution to prohibit the consequences of the unnecessary use of insecticide.

## **ANALYSIS OF LEGAL FRAMEWORK OF INSECTICIDE ACT AND USE OF INSECTICIDE**

In India, use of insecticides was massively increased and necessity felt to regulate it. Accordingly, in India, The Insecticides Act, 1968 (herein after Act) was enacted by the Parliament of India with an object to regulate the import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animals.<sup>iii</sup> To fulfill the objectives laid down under Act, several bodies are constituted and powers and functions are laid down under this Act and Insecticides Rules, 1971 are in effective for smooth functioning of the Act. Act has several objects to achieve it including use of insecticide.

- I. ***Provision for authority to use insecticide:*** Sec. 38 (1)(a) of the Insecticide Act, 1968 deals with the use of insecticides by the person who cultivates the land or the use of insecticides for his own household purposes or for kitchen gardens. Sec. 38 (1) (a) empowers the common person to use insecticides for household, kitchen garden and farming purpose only. To observe the same, provision is made to appoint Insecticide Inspectors<sup>iv</sup> under this Act. Section 21 lays down the powers of Insecticide Inspectors. Such Inspector shall have power to enter and search at all reasonable times with such assistance in any shop or manufacturing premises. Also, he is empowered to inspect, examine and seize, make copies of or take extracts from registers, records or other documents kept by manufacture, distributor, carrier, dealer or any other person in pursuance of the provisions of the Act or the Insecticide Rules, 1971. Also, he is having power to stop the distribution, sale and use of an insecticide which he has reason to believe in being distributed, sold or used in contravention of the provisions of the Act or Rules made thereunder.<sup>v</sup>
- II. ***Chapter V:*** The detail rules regarding packing and labelling are mentioned in the Chapter V. Rule 17 of the Insecticide Rules, 1971. Rule 17 (2) deals with the if any insecticide is put in the package it is presumed that it is fit and ready for sale and use for which it is intended.<sup>vi</sup> Rule 18 titled as Leaflet to be contained in a package which contains all the details of the insecticide.<sup>vii</sup> Rule 19 deals with the Manner of labelling.<sup>viii</sup> Express duties are mentioned under Rule 27 of the Insecticide Rule, 1971. Rule 27 (7) imposes a duty upon the Insecticides Inspector to make such inquiries and

inspections as may be necessary to detect the sale and use of insecticide in contraventions of the Act.<sup>ix</sup>

- III. ***Offences and Punishment:*** Section 29 deals with the offences and Punishment for the uses of insecticide in contravention of any provisions of the Act or Insecticide Rules, 1971 shall be punishable with imprisonment for a term which may extend to six months or fines (five hundred to five thousand rupees).<sup>x</sup> These are the relevant provisions mentioned under the Insecticide Act, 1968 and under the Insecticide Rules, 1971 which are not sufficient to address the following issues discussed hereunder.

## MAJOR ISSUES AT A GLANCE

One of the objects of the Act is regulate the use of insecticide. While using this insecticides, numerous legal and social issues arise which are discussed below:

- ***Knowledge about the particular insecticide to the users:*** The large number of the purchaser of insecticides are the farmers in India. They are authorized to use insecticides for land cultivation. Due to weather conditions, attack on crops are routine. Hence, it is essential to apply insecticides for good production of crops. While purchasing insecticides, farmer has to rely upon the judgment of seller. Seller sells insecticides as per information provided by the farmer. Farmer applies his own experience regarding the analysis of particular attack on the crops. Due to lack of knowledge, many of the times, wrong insecticides are used by the farmers which ultimately cause the less crop of production and economic loss to the farmer.
- ***Inadequate mechanism to provide information to the farmer about the insecticide:*** India's economy is agriculturally based wherein 90 million plus people are working in agricultural sector.<sup>xi</sup> Despite of this fact, very few schemes such as Kisan Call Center<sup>xii</sup>, mkisan<sup>xiii</sup> etc. are in force to provide information to the farmer regarding crop details, weather condition, market status etc. In respect of the use of insecticide, there is no proper and adequate mechanism available wherein appropriate information would be given to the farmers which ultimately results into deceptiveness of the farmers. The functioning of the Kisan Call Center and authentication of information given by them is actually a matter of great concern. There is no specific instrument which ensures

farmers to get authentic information about the insecticides to be used for particular crop.

- **Lack of machinery to inspect actual use of insecticide:** It is very unfortunate to mention here that Act has not provided suitable machinery to inspect the use of insecticides as per the dosage by the farmers. Insecticide Inspector is under an obligation to inspect even the use of the insecticides. The serious question is the functioning of the Insecticide Inspector for his mandatory visit at each farming.

Several guidelines are provided. Rule 18 of the Insecticide Act, 1971 provides that rules and procedure to use must be printed on Leaflet. Such Leaflet should be in written either in English or Hindi language. Question is how the uneducated farmer would understand the method to use insecticide in this case. Also, merely mentioning in the leaflet is rather just a simple agenda to shift the obligation and fulfil the legal criteria. Merely, mentioning or printing leaflet is not sufficient. At least, attempt should be made to get knowledge about the procedure to use insecticide. These are the biggest drawback exists in the present rules.

- **Pollution Issues:** Use of insecticide in large quantity results into several environmental issues such as air, water and land pollution issues majorly. Though, government has issued several guidelines<sup>xiv</sup> In respect of spreading of insecticides, quality of land is going to change. There are several areas wherein due to regular and excessive use of insecticides, permanently land becomes unusable for cultivation. Along with this, while spreading insecticides upon the crops, air and water is polluted. Such insecticides directly and indirectly enter into the farmer's body as well. The present law has ignored these major issues which affects the environments.

Thus, the analysis of the legal framework of the Insecticide Act, 1968 and Insecticide Rules, 1971 exists the major lacunas which are required to be covered up on urgent basis to fulfill the objective of the Act otherwise the whole object of the Act would be frustrated.

## CONCLUSION AND SUGGESTIONS

The Insecticide Act, 1968 is enacted mainly to regulate, manufacture, import and use the insecticide in India. Regarding use of insecticide, adequate provisions are not stated in the Act regarding the use of the insecticide. Hence, the whole purpose of the Act does not get fulfilled.

Certain changes should be incorporated in the Act to achieve the objectives of the Act. Following are suggestions:

***Insecticide Information Book and Experts:*** In respect of the knowledge about the pesticide to the users, detailed information book should be prepared by the Agricultural Department of the Governments. This book should contain list of insecticides along with the images of the bottle as well. Against the name of the insecticide, for which causes this insecticide should be useful, ratio and procedure to use insecticide, expected result, images of the crops before and after use of insecticide etc should be mentioned. This information must be printed in local or regional language. Pictorial method could be useful to know even uneducated people.

Further, express obligation should be imposed upon the seller to inform the farmer how to use this insecticide against any particular insect attack. Seller should ensure that particular insecticide would be useful for particular disease or insects.

***Mechanism to provide information:*** In addition to this, at least at each Taluka level or in Panchayat Samiti, Experts should be appointed who will regularly guide farmers for the wise and appropriate use of insecticide. Also, such experts should be under an obligation to create awareness about the use of insecticides for crops. Through regular Gram Panchayat Meetings, Seminars or Workshops or Field Visits it could be possible. During the period of crops season, it should be mandatory on the part of the experts to visit crops. He should be empowered to direct Grampanchayats to display such notice to use any insecticides against any particular insects.

***Insecticide Inspector:*** This insecticide inspector should frequently visit the insecticide selling shop as well as use of it to fulfill the objectives of the Act.

***Pollution Issues:*** With regard to the use of insecticide in farming, as discussed above, air, land, water pollution issues are inherently associated with spreading of insecticide. In respect of water pollution, only precaution can be taken is adequate formula should be used while using insecticide. For this purpose, awareness and knowledge to the farmer is only probable solution to address this issue. Law has its own limitation. It won't be possible to supervise the use of insecticide by the farmer at grassroot level. Therefore, self-control with adequate knowledge of insecticide and as per the suggestions and formula, such insecticide should be used. In order

to prevent air pollution through spread of insecticide, advanced machine should be developed which can prevent the extra spread of insecticide.

In nutshell, to fulfill the objectives of Insecticide Act, 1968 abovementioned recommendations would be fruitful and the intention of the legislature could be achieved.

## ENDNOTES

<sup>i</sup> George Ware and David Whitacre, An Introduction to Insecticides, , <https://ipmworld.umn.edu/ware-intro-insecticides> (last visited on 3rd January, 2022)

<sup>ii</sup> The History of Pesticides, Organic Pesticides, September 19<sup>th</sup>, 2008, <http://blog.ecosmart.com/index.php/2008/09/19/the-history-of-pesticides/> (last accessed on 10<sup>th</sup> June, 2022).

<sup>iii</sup> The Insecticides Act, 1968 (Act NO. 46 OF 1968). object of the Act

<sup>iv</sup> Sec. 20 empowers the Central and State Government to appoint number of Inspectors under this Act.

<sup>v</sup> The Insecticides Act, 1968 (Act NO. 46 OF 1968). object Sec. 21

<sup>vi</sup> Rule 17 (2) of the Insecticide Rule 1971.

<sup>vii</sup> Rule 18 of the Insecticide Rule, 1971. Leaflet to be contained in a package

1. [The packing of every insecticides shall include a leaflet containing the following details, namely
  - a. the plant disease, insects and noxious animals or weeds for which the insecticide is to be applied, the adequate direction concerning the manner in which the insecticide is to be used at the time of application;
  - b. particulars regarding chemicals harmful to human beings, animals and wild life, warning and cautionary statements including the symptoms of poisoning suitable and adequate safety measures and emergency first-aid treatment where necessary;
  - c. cautions regarding storage and application of insecticides with suitable warnings relating to inflammable, explosive or other substance harmful to the skin;
  - d. instructions concerning the decontamination or safe disposal of used containers;
  - e. a statement showing the antidote for the poison shall be included in the leaflet and the label;
  - f. if the insecticide is irritating to the skin, nose, throat or eyes, a statement shall be included to that effect.
  - g. Common name of the insecticide as adopted by the International Standards Organization and where such a name has not yet been adopted such other name as may be approved by the Registration Committee.]
2. Two copies of the leaflets duly approved by the Registration Committee and signed by the Secretary, Registration Committee, shall be returned to the manufacturer and one copy to the State-licensing officer.

<sup>viii</sup> The following particulars shall be either printed or written in indelible ink on the label of the innermost container of any insecticide and on the outer most covering in which the container is packed:

- i. Name of the manufacturer (if the manufacturer is not the person in whose name the insecticide is registered under the Act, the relationship between the person in whose name the insecticide has been registered and the person who manufactures, packs or distributes or sells shall be stated)
- ii. Name of insecticide (brand name or trade mark under which the insecticide is sold).
- iii. Registration number of the insecticide.
- iv. Kind and name of active and other ingredients and percentage of each. (Common name accepted by the International Standards Organization or the Indian Standards Institutions of each of the ingredients shall be given and if no common name exists, the correct chemical name which conforms most closely with the generally accepted rules of chemical nomenclature shall be given).
- v. Net content of volume. (The net contents shall be exclusive of wrapper or other material. The correct statement of the net content to terms of weight, measure, number of units of activity, as the case may be, shall be given. The weight and volume shall be expressed in the metric system).
- vi. Batch number.
- vii. Expiry date, i.e. up to the date the insecticide shall retain its efficiency and safety.
- viii. Antidote statement.

2. The label shall be so affixed to the containers that it cannot be ordinarily removed.
3. The label shall contain in a prominent place and occupying not less than one-sixteenth of the total area of the face of the label, a square, set at an angle of 45° (diamond shape). The dimension of the said square shall depend on the size of the package on which the label is to be affixed. The said square shall be divided into two equal triangles, the upper portion shall contain the symbol and signal word specified in sub-rule (4) and the lower portion shall contain the colour specified in sub-rule (5).
4. The upper portion of the square, referred to in sub-rule (3) shall contain the following symbols and warning statements—
  - i. Insecticides belonging to Category I (Extremely toxic) shall contain the symbol of a skull and cross-bones and the word "POISON" printed in red;  
The following warning statements shall also appear on the label at appropriate place, outside the triangle,
    - a. "KEEP OUT OF THE REACH OF CHILDREN"
    - b. "IF SWALLOWED, OR IF, SYMPTOMS OF POISONING OCCUR CALL PHYSICIAN IMMEDIATELY";
  - ii. insecticides in Category II (highly toxic) will contain the word "POISON" printed in red and the statement "KEEP OUT OF THE REACH OF CHILDREN"; shall also appear on the label at appropriate place, outside the triangle,
  - iii. insecticides in Category III (moderately toxic) shall bear the word "DANGER" and the statement "KEEP OUT OF THE REACH OF CHILDREN"; shall also appear on the label at suitable place outside the triangle;
  - iv. Insecticides in Category IV (Slightly toxic) shall bear the word "CAUTION".
5. The lower portion of the square referred to in sub-rule (4) shall contain the colour specified in column (4) of the table below, depending on the  
Classification of the insecticides specified in the corresponding entry in column (1) of the said table.
6. In addition to the precautions to be undertaken under sub-rules (3), (4) and (5) the label to be affixed in the package containing insecticides which are highly inflammable shall indicate that it is inflammable or that the insecticides should be kept away from the heat or open flame and the like.
7. The label and leaflets to be affixed or attached to the package containing insecticides shall be printed in Hindi, English and in one or two regional languages in use in the areas where the said packages are likely to be stocked, sold or distributed.
8. labeling of insecticides must not bear any unwarranted claims for the safety of the producer or its ingredients. This includes statements such as, "SAFE", "NON-POISONOUS", "NON-INJURIOUS" or "HARMLESS" with or without such qualified phrase as "when used as directed".
  - <sup>ix</sup> Rule 27 (7) of the Insecticide Rule, 1971.
  - <sup>x</sup> Sec. 29 (2) deals with the offences and punishments
  - <sup>xi</sup> National Statistical Office's Situation Assessment of Agricultural Households (SAAH) report for 2018-19, available at <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1753856> (last accessed on 11<sup>th</sup> June, 2022).
  - <sup>xii</sup> Kisan Call Center is Government of India's scheme wherein online call free consultation is provided regarding crop details. Available at <https://mkisan.gov.in/aboutkcc.aspx> (last accessed on 7<sup>th</sup> June, 2022).
  - <sup>xiii</sup> The object behind introduction of this scheme is to disseminate information, give advises and to provide advisories to farmers on call. SMS service is also launched by the Government of India.
  - <sup>xiv</sup> <http://krishi.maharashtra.gov.in/1261/Precaution-for-spraying-pesticides> (Last accessed on 1st June, 2022 at 10:05pm).