



**STANDING COMMITTEE ON AGRICULTURE
(2017-2018)**

SIXTEENTH LOK SABHA

**MINISTRY OF AGRICULTURE AND FARMERS WELFARE
(DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION)**

**"Impact of Chemical Fertilizers and Pesticides on Agriculture and Allied Sectors
in the Country"**

**{Action Taken by the Government on the Observations/
Recommendations contained in the Twenty Ninth Report (Sixteenth Lok Sabha)
of the Standing Committee on Agriculture (2015-2016)}**

FIFTY FOURTH REPORT



**LOK SABHA SECRETARIAT
NEW DELHI**

August 2018/Shravana, 1940 (Saka)

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Recommendations contained in the Twenty Ninth Report (Sixteenth Lok Sabha)
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Presented to Lok Sabha on 03.08.2018

Laid on the Table of Rajya Sabha on 03.08.2018



LOK SABHA SECRETARIAT

NEW DELHI

August 2018/Shravana, 1940 (Saka)

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<CONTENTS>

	PAGE
COMPOSITION OF THE COMMITTEE	(iii)
INTRODUCTION	(v)
CHAPTER I Report	
CHAPTER II Observations/Recommendations which have been accepted by the Government	
CHAPTER III Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies	
CHAPTER IV Observations/Recommendations in respect of which replies of the Government have not been accepted by the Committee	
CHAPTER V Observations/Recommendations in respect of which final replies of the Government are still awaited	

ANNEXURES

Annexure-I:	Extracts of the Minutes of the 27th Sitting of the Committee held on 31.07.2018
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APPENDIX

Analysis of Action Taken by the Government on the Recommendations contained in the Twenty Ninth Report (Sixteenth Lok Sabha) of the Standing Committee on Agriculture (2015-2016).

COMPOSITION OF THE STANDING COMMITTEE ON AGRICULTURE (2017-18)

Shri Hukmdev Narayan Yadav - Chairperson

MEMBERS

LOK SABHA

2. Shri Sanjay Dhotre
3. Prof. Ravindra Vishwanath Gaikwad
4. Shri Sanganna Amarappa Karadi
5. Shri Nalin Kumar Kateel
6. Smt. Raksha Tai Khadase
7. Md. Badaruddoza Khan
8. Shri C. Mahendran
9. Dr. Tapas Mandal
10. Shri Janardan Mishra
- @11. Shri Praveen Kumar Nishad
12. Shri Devji M. Patel
13. Shri Nityanand Rai
14. Shri Mukesh Rajput
15. Shri Konakalla Narayana Rao
16. Shri C.L. Ruala
17. Shri Arjun Charan Sethi
18. Shri Virendra Singh
19. Shri Dharmendra Yadav
20. Shri Jai Prakash Narayan Yadav
- #21. VACANT

RAJYA SABHA

22. Sardar Sukhdev Singh Dhindsa
- *23. Shri Rajmani Patel
- *24. Shri Narayan Rane
- *25. Shri Kailash Soni
26. Shri Mohd. Ali Khan
27. Shri K.K. Ragesh
28. Shri Ram Nath Thakur
29. Shri R. Vaithilingam
- *30. Shri Harnath Singh Yadav
31. Dr. Chandrapal Singh Yadav

@ Shri Praveen Kumar Nishad, MP Lok Sabha nominated *vice* Shri Nephio Rio, MP Lok Sabha w.e.f. 27.04.2018 vide Bulletin Part II No. 6866 dated 27.04.2018

Vacant due to resignation of Shri B.S. Yeddyurappa from the Membership of Lok Sabha w.e.f. 18.05.2018 vide Bulletin Part-II Table Office (B) No. 6885 dated 19.05.2018

**vice* Shri Janardan Dwivedi, Shri Meghraj Jain, Shri Vinay Katiyar and Shri Shankarbhai N. Vegad, who ceased to be the Member of the Committee on their retirement from Rajya Sabha on 27.01.2018, 02.04.2018, 02.04.2018 and 02.04.2018 respectively.

SECRETARIAT

1. Shri D.S. Malha - Joint Secretary
2. Shri Arun K. Kaushik - Director
3. Shri Sumesh Kumar - Under Secretary

INTRODUCTION

I, the Chairperson, Standing Committee on Agriculture (2017-18), having been authorized by the Committee to submit the Report on their behalf, present this Fifty Fourth Report on action taken by the Government on the Observations/Recommendations contained in the Twenty Ninth Report (Sixteenth Lok Sabha) of the Standing Committee on Agriculture (2015-16) on the Subject "Impact of Chemical Fertilizers and Pesticides on Agriculture and Allied Sectors in the Country pertaining to the Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education).

2. The Twenty Ninth Report (Sixteenth Lok Sabha) of the Standing Committee on Agriculture (2015-16) on the Subject "Impact of Chemical Fertilizers and Pesticides on Agriculture and Allied Sectors in the Country pertaining to Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education) was presented to Lok Sabha and laid on the Table of Rajya Sabha on 11.08.2016. The Action Taken Notes on the Report were received on 08.03.2017. The Committee took the evidence of the representatives of the Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare and Department of Agricultural Research and Education) and Ministry of Chemicals and Fertilizers (Department of Chemicals and Petrochemicals and Department of Fertilizers) on the observations/recommendations contained in the Report.

3. The Report was considered and adopted by the Committee at their Sitting held on 31.07.2018.

4. An analysis of the action taken by the Government on the Observations/Recommendations contained in the Twenty Ninth Report (Sixteenth Lok Sabha) of the Committee is given in **Appendix**.

NEW DELHI;
02 August, 2018
11 Shravana, 1940(Saka)

HUKMDEV NARAYAN YADAV
Chairperson,
Standing Committee on Agriculture

CHAPTER-I REPORT

This Report of the Committee on Agriculture deals with the action taken by the Government on the Observations/Recommendations contained in the Twenty-Ninth Report (Sixteenth Lok Sabha) of the Committee on Agriculture (2015-2016) on Impact of Chemical Fertilizers and Pesticides on Agriculture and Allied Sectors In the Country pertaining to Ministry of Agriculture (Department of Agricultural Research and Education) which was presented to Lok Sabha and laid on the Table of Rajya Sabha on 11.08.2016.

1.2 The Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research & Education) have furnished Action Taken Replies in respect of all the 15 Observations/Recommendations contained in the Report. These replies have been categorized as under:

- | | | | |
|-------|--|---|----------------------|
| (i) | Observations/Recommendations that have been accepted by the Government: | | |
| | Recommendation Nos. | 1, 2, 3, 4, 8, 9, 10, 11, 12, 13 and 15 | |
| | | | Total 11 |
| | | | Chapter - II |
| (ii) | Observations/Recommendations in respect of which the Committee do not desire to pursue in view of the Government's reply: | | |
| | Recommendation No. | NIL | |
| | | | Total 00 |
| | | | Chapter - III |
| (iii) | Observations/Recommendations in respect of which action taken replies of the Government have not been accepted by the Committee: | | |
| | Recommendation Nos. | 5, 7 and 14 | |
| | | | Total 03 |
| | | | Chapter - IV |
| (iv) | Observations/Recommendations in respect of which final replies of the Government are still awaited : | | |
| | Recommendation No. | 6 | |
| | | | Total 01 |
| | | | Chapter - V |

1.3 The Committee trust that utmost importance would be given to implementation of the Observations/Recommendations accepted by the Government. In cases, where it is not possible for the Department to implement the Recommendations in letter and spirit, the matter should be reported to the Committee with reasons for non-implementation. The Committee desire that further Action Taken Notes on the Observations / Recommendations contained in Chapter-I and final Action Taken Replies to the Recommendations contained in Chapter-V of this Report be furnished to them at an early date.

1.4 The Committee will now deal with the action taken by the Government on some of the Recommendations in the succeeding paragraphs.

A. DECLINE IN AGRICULTURAL GROWTH

Recommendation (Serial No. 2)

1.5 The Committee had observed/ recommended as under:-

"The Committee note that the country will require to enhance the food grains production to the level of 300 mt by 2025 to feed its teeming millions. However, the Committee are distressed to note that the pace of agricultural growth rate is slowly decreasing. The Committee observe that decadal rate of growth of agriculture since beginning of green revolution has decreased significantly from a high of 8.37% during 1960-70 to a low of 1.44% during 1990-2000. The rate of agriculture growth has been 2.61% during 2000-2010. The Committee further observe that rate of agriculture growth in important States like Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, Gujarat, Bihar and Maharashtra has decreased significantly during the last decade. The Committee also note that country failed to achieve the agriculture growth rate of 4% which was set during 12th plan. The Committee are of the view that strategy of over-reliance on chemical

fertilizers adopted during green revolution period needs reorientation keeping in view of stagnant agricultural growth in important States. The Committee, therefore, recommend the Department to analyze the strategy of agricultural growth in country and prepare a detailed plan to reinvigorate the sector in the country."

1.6 The Department of Agricultural Research and Education in the Action Taken

Reply has stated as under:-

"The issue on agricultural growth in country involved wider consultation with various departments and hence, it is deliberated through various Working Groups constituted to formulize appropriate strategies."

1.7 The Department of Agriculture, Cooperation and Farmers Welfare in the Action

Taken Reply has stated as under:-

"Judicious use of fertilizers by farmers based on soil test based recommendations has been encouraged under the scheme of Soil Health Management in the Country.

A scheme on organic farming has been implemented in the Country since 2015-16 to reduce over dependence on chemical fertilizers and promote natural farming."

1.8 While showing their concern over declining rate of agricultural growth in the Country, the Committee had opined that strategy of over-reliance on

chemical fertilizers adopted during green revolution period needs reorientation keeping in view of stagnant agricultural growth in important States and recommended the Department to analyze the strategy of agricultural growth in country and prepare a detailed plan to reinvigorate the sector in the country. The Department of Agricultural Research and Education (DARE) in their Action Taken Reply has submitted that issue on agricultural growth in country involved wider consultation with various departments and hence, it is deliberated through various Working Groups constituted to formulize appropriate strategies. Whereas Department of Agriculture,

Cooperation and Farmers Welfare (DAC&FW) has informed about promotion of judicious use of fertilizers by farmers based on soil test under the scheme of Soil Health Management in the Country and implementation of organic farming in the Country since 2015-16 to reduce over dependence on chemical fertilizers and promote natural farming. The Committee are of view that piecemeal efforts will not help to to promote organic farming or reduce dependency on chemical fertilizers for achieving the required food grains to feed the ever increasing population of the Country in future. The Committee are of view that there is need for comprehensive review of strategy for agriculture growth in the country and to promote balanced growth of agriculture based on judicious use of chemical fertilizers as well as organic manure. There is need to formulate region specific strategy to reduce dependency on chemical fertilizers. Further, there is need to provide technical and financial assistance to the farmers in order to promote organic farming. The Committee, therefore, once again reiterate their earlier recommendation and desire the Government to analyze the strategy of agricultural growth in country and prepare a detailed plan to reinvigorate the sector in the country

B. INTEGRATED NUTRIENT MANAGEMENT

Recommendation (Serial No. 5)

1.9 The Committee had observed/ recommended as under:-

"The Committee note that Integrated Nutrient Management (INM) adopted from Tenth plan envisages conjunctive use of chemical fertilizers including secondary and micronutrient, organic manure, composts/vermin-compost, bio-fertilizers and green manures. ICAR has generated GIS based soil fertility maps, nutrient management packages, developed strains of Nitrogen fixer for production of quality biofertilizers, standardized technologies for preparation of urban/rural compost, green manuring and crop residue recycling which can be effectively utilized by the farmers of the country to improve soil health and augment agricultural production and productivity. ICAR has also 91 developed conservation technologies like fertigation, zero tillage, bed

planting, laser land levelling and leaf colour chart to save costly fertilizers. According to ICAR, workshops and training programs are being organized to educate farmers on these aspects. However, the Committee are concerned to note that objectives as outlined in Integrated Nutrient Management could not be achieved by the Government which is amply exemplified by imbalanced use of fertilizers in terms of NPK, incidents of soil degradation in green revolution area like Haryana and Punjab and extreme lack of micronutrient in majority of Indian soils. The Committee also note that lack of effective extension services to the farmers as brought out in previous reports of the Committee is a limiting factor to achieve the aims of Integrated Nutrient Management. The Committee are of the view that unless a robust agriculture extension system is established in the country with special emphasis on training of farmers about good agricultural practices, provision of essential agricultural inputs and dissemination of technologies, bio-fertilizers etc. developed by agricultural institutions, it would be difficult to secure our environment without jeopardizing agricultural productivity. The Committee, therefore, recommend the Government to plan an effective agricultural extension services in the entire country. The Committee also desire that the Government may initiate discussion on the issue with all State Governments, agricultural research institutions, NGOs active in the field of agriculture and experts at National and International level so that steps may be taken to achieve the objective of Integrated Nutrient Management well before 92 environmental degradation reached at a point of no return."

1.10 The Department of Agricultural Research and Education in the Action Taken

Reply has stated as under:-

"The Government under the component of soil health management of National Mission on Sustainable Agriculture (NMSA) is promoting soil test based balanced and integrated nutrient management in the country through setting up/strengthening of soil testing laboratories, establishment of bio-fertilizer and compost unit, use of micronutrients, trainings and demonstrations. Under the Soil Health Management Scheme, Trainings for farmers & field demonstrations on judicious use of fertilizers are conducted.

Awareness campaign through Print and visual media are carried out. Media plan to publicise Soil Health Card has been finalized. KrishiVigyan Kendra's are also being equipped with soil testing kit developed by Indian Institute of Soil Science, Bhopal to ensure soil test based balanced and integrated nutrient management."

1.11 The Department of Agriculture, Cooperation and Farmers Welfare in the Action Taken Reply has stated as under:-

"The Government is promoting soil test based balanced and integrated nutrient management in the Country under the component of soil health management of National Mission on Sustainable Agriculture (NMSA). Farmers have been provided recommendations on balanced nutrient use based on soil fertility results of the fields. Training to farmers, demonstrations on judicious use of fertilizers are also part of the scheme. Widespread awareness campaign through print and visual media has been done."

1.12 While showing their concern over imbalanced use of fertilizers in terms of NPK (Nitrogen, Phosphorous, Potash), incidents of soil degradation in green revolution area like Haryana and Punjab and extreme lack of micronutrient in majority of Indian soils despite implementation of Integrated Nutrient Management scheme, the Committee had stressed on the need of a robust Agriculture Extension System with special emphasis on training of farmers about good agricultural practices, provision of essential agricultural inputs and dissemination of technologies, bio-fertilizers etc. developed by agricultural institutions. The Committee had, recommended the Government to plan an effective agricultural extension services in the entire country in consultation with State Governments, agricultural research institutions, NGOs active in the field of agriculture and experts at National and International level so that steps may be taken to achieve the objective of Integrated Nutrient Management well before environmental degradation reached at a point of no return.

The (Department of Agricultural Research and Education) DARE and Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) in their Action Taken Reply has submitted that soil health management component of National Mission on Sustainable Agriculture (NMSA) is promoting soil test based balanced and integrated nutrient management in the country through setting up/strengthening of soil testing laboratories, establishment of bio-fertilizer and compost unit, use of micronutrients, trainings and demonstrations. The Committee were also informed about Trainings for farmers & field demonstrations on judicious use of fertilizers being conducted under the Soil Health Management Scheme. However, the reply is silent on the issue of revamp of Agricultural Extension Services in the country which is necessary to achieve the aims of Integrated Nutrient Management scheme. The Committee are of view that aims of any scheme cannot be achieved unless requisite infrastructure and technical support is provided to the farmers. The Government cannot hope to achieve the aims of INM scheme and promote balanced use of fertilizer in the absence of robust Agriculture Extension Support System. The Committee, therefore, once again reiterate their earlier recommendation and urge the Government to take steps to overhaul existing agriculture extension system for the benefit of farmers and safeguard natural resources.

C. FERTILIZER SUBSIDY POLICY Recommendation

(Serial No. 6)

1.13 The Committee had observed/ recommended as under:-

"The Committee note that the Government has been regulating sale, pricing and quality of fertilizers in the country to ensure adequate and timely availability of fertilizers at affordable price to farmers for maximizing agricultural production in the country and to ensure food security for the people. The difference in concession rate/import price and net market realization is given as subsidy by the Government to the farmers through fertilizer industry. The subsidy regime started in the country during 1977 as Retention Price Scheme. Subsequently, Concession Scheme for P&K

Fertilizers was introduced w.e.f. 01 April, 2008. Under the Concession Scheme, MRP of P&K fertilizer was fixed by the Government and the difference in the delivered price of fertilizers at the farm gate and MRP was compensated by the Government as subsidy to the Manufacturing Industries. This scheme was continued upto 31.03.2010. However, to overcome the deficiency of Concession Scheme, the Government introduced Nutrient based Subsidy (NBS) policy for N,P&K fertilizers w.e.f 01.04.2010. The Committee note that under NBS policy a fixed subsidy, decided annually, is provided on each subsidized P&K fertilizers depending upon its nutrient content such as N, P, K and Sulphur. Under NBS, additional subsidy is provided for fertilizers fortified with Zinc and Boron. Single Super Phosphate (SSP) has also been included under scheme. NBS policy was expected to promote innovation and broaden the basket of fertilizers and enable fertilizer use as per soil and crop 93 requirements. However, exclusion of Urea from NBS and decontrol of price of P & K fertilizers has led to imbalanced application of nitrogen vis-a-vis phosphatic and potassic fertilizers in country. These facts have been accepted by the representatives of the Department of Fertilizer during the evidence. The Committee have also observed that present policy of fertilizer subsidy also exclude liquid fertilizers, bio-fertilizers, farm organic manure etc. which are considered more effective and environment friendly to restore soil fertility and enhancement of agricultural productivity. It has also been argued by the Department Agriculture, Cooperation & Farmers Welfare that usage of fertilizers should be left to the discretion of the farmers by direct transfer of fertilizer subsidy to the farmers. The representative of Department of fertilizer had also suggested to provide fertilizers to the farmers as per soil health card. The Committee are of view that the present NBS policy has failed to rationalize fertilizer subsidy and has led to imbalanced use of fertilizers due to high prices of Phosphatic and Potassic fertilizers and low price of Urea. While appreciating the recent reduction in the prices of phosphatic and potassic fertilizers by the Central Government, the Committee are of the view that there is a need of fertilizer subsidy regime which can promote environment friendly fertilizers like bio-fertilizers, organic farm manure or liquid fertilizer which are more effective than granules. The Committee, therefore,

recommend that existing fertilizer subsidy policy may be revised and the revised policy which is more appropriate for Indian conditions and favour sustainable growth of agriculture sector may be formulated. Further, there is a need to encourage 94 the organic farming considering its long term benefits. The ways of encouraging the organic farming should also be explored while revising the existing Fertilizer Subsidy Policy."

1.14 The Department of Agricultural Research and Education in the Action Taken Reply has stated as under:-:-

"As per Department of Fertilizers, Ministry of Chemical & Fertilizers, the issue on fertilizer subsidy policy involved wider consultation and hence, will be examined separately."

1.15 The Department of Agriculture, Cooperation and Farmers Welfare in the Action Taken Reply has stated as under:-

"Government is promoting organic farming across the country through various schemes viz. National Mission for Sustainable Agriculture (NMSA), Paramparagat Krishi Vikas Yojana (PKVY), Rashtriya Krishi Vikas Yojana (RKVY) and Mission for Integrated Development of Horticulture (MIDH), Network Project on Organic Farming under ICAR etc.

The Department has also been focusing on creating awareness and educating the farmers about organic farming practices in the areas where clusters are formed.

The Department is also providing back ended subsidy through NABARD for setting up of Bio-fertilizer production units which is 25% of the cost, subject to maximum limit of Rs. 40 lakhs. During 2013-14 to 2015-16, 39 units have been sanctioned. Besides, subsidy is being provided to farmers under PKVY scheme for purchase of bio-fertilizers @ Rs. 500/acre. Under PKVY Scheme, Rs. 18.02 crore have been released for 7208 clusters in different States for practicing organic farming."

1.16 While observing adverse consequences of NBS scheme for fertilizers, the Committee had opined about need of fertilizer subsidy regime which can promote environment friendly fertilizers like bio-fertilizers, organic farm manure or liquid fertilizer which are more effective than granules and recommended the Government to revise existing fertilizer subsidy policy more appropriate for Indian conditions and which favour sustainable growth of agriculture sector. The DARE in their Action Taken reply has stated that as per Department of Fertilizers, Ministry of Chemical & Fertilizers, the issue on fertilizer subsidy policy involved wider consultation and hence, will be examined separately. Whereas, DAC&FW has submitted about schemes such as National Mission for Sustainable Agriculture (NMSA), Paramparagat Krishi Vikas Yojana (PKVY), Rashtriya Krishi Vikas Yojana (RKVY) and Mission for Integrated Development of Horticulture (MIDH), Network Project on Organic Farming under ICAR which is being implemented to promote organic farming across the country. The Committee were also informed back ended subsidy being provided through NABARD for setting up of Bio-fertilizer production units and subsidy being provided to farmers under PKVY scheme for purchase of bio-fertilizers @ Rs. 500/acre.

The Committee existing Nutrient Based Subsidy Scheme has resulted in to imbalanced use of fertilizer which is against the interest of farmers and environmental sustainability. There is urgent need to take steps to overhaul existing policy for fertilizer subsidy and make provision for environment friendly fertilizers like bio-fertilizers, organic farm manure or liquid fertilizer. The Committee, therefore, once again reiterate their earlier recommendation and urge the Government to review the existing existing policy for fertilizer subsidy for the betterment of Indian Agriculture.

D. CONSTITUTION OF REGULATORY AUTHORITY FOR FERTILIZER SECTOR

(Recommendation No. 7)

1.17 The Committee had observed/ recommended as under:-

"Availability of good quality fertilizers is one of the major responsibility of Central and State Governments by which they can help the farmers of the

country to enhance their production and income. However, sometimes production and sale of inferior quality of fertilizers in the market badly affect agricultural production, which in turn affect already burdened farmers. Therefore, robust registration process of fertilizers and regular check are ways to ensure that only qualitative fertilizers are produced and sold in the market. The Committee note that Central Government has constituted a Central Fertilizer Committee (CFC) under Fertilizer Control Order (FCO), 1957 for analysis and recommendation of new fertilizer for inclusion in the FCO. CFC constituted a technical group consisting of a Chairman from ICAR and other members/scientists/experts from the field of agriculture. The Committee also note that before inclusion of any new fertilizer in the FCO, this technical group examines the agronomic aspects, specifications and field trials reports of new fertilizer. Agronomic field trials are required to be conducted by the Company in minimum two cropping seasons under the aegis of a State Agricultural University or any other Institutes of ICAR. Recommendation for inclusion of new fertilizer in FCO is done by CFC only on the basis of further examination of technical group report/recommendations. 95 The Committee are of the view that present system of certification of new fertilizer is cumbersome, time consuming and bureaucratic. Further, field trials of new fertilizer without involvement of technical group or CFC leaves scope for manipulation of results of field trials. Thus, there is a need to streamline the existing process and constitution of a Fertilizer Development and Regulating Authority will help to streamline the process, certification of fertilizers, continuous quality check, imposing penalty for sub standard and spurious quality of fertilizers, promoting innovations in fertilizer sector and fixation of pricing of fertilizers etc. The Committee, therefore, recommend the Government to take required steps for Constitution of a regulatory authority for fertilizer sector."

1.18 The Department of Agricultural Research and Education in the Action Taken Reply has stated as under:-

"In order to simplify the procedure of inclusion of new fertilizers in Fertiliser Control Order (FCO), the Ministry has constituted a committee under the chairmanship of Joint Secretary (INM) to examine the issue.. The Committee examined and deliberated on the issue and suggested following procedural changes.

- (1) On line disposal of application;
- (2) Fixing a time limit for recommendation of Technical Committee on new grades.

The Ministry will implement these recommendations very soon.

As regard to constitution of a regulatory authority, it is submitted that fertilizer has been declared as an Essential Commodity by the Central Government under Section 2 (a) (xi) of the Essential Commodities Act, 1955. In exercise of the power conferred under section 3 (i) of above Act, the Government of India have promulgated the Fertilizer (Control) Order (FCO), 1957 which was subsequently revised as Fertiliser (Control) Order,1985 with the objective of regulating sale, price and quality of fertilizers at a fair price.

In exercise of the power under clause 37 of FCO, the Government of India vide notification SO No. 258 (E) dated 10th February,2016 constituted the Central Fertiliser Committee under the chairmanship of Additional Secretary (INM) and 10 other members to advice Central Government on the following issues:

- Inclusion of a new fertiliser, under this order;
- Specifications of various fertilizers;
- Grades/formulation of physical /granulated mixtures of fertilizers that can be allowed to be prepared in a state;
- Requirements of laboratory facilities in a manufacturing unit ,

including a unit manufacturing physical/granulated mixtures of fertilizers;
- Method of drawl and analysis of samples

Central Fertilizer Committee advises Central Government on above technical related aspects of fertilizers, on basis of which, the new grades are notified from time to time."

1.19 The Department of Agriculture, Cooperation and Farmers Welfare in the Action Taken Reply has stated as under:-

(i) "In regard to streamlining of procedure of inclusion of new fertilizer in FCO, 1985, this Ministry has referred the matter to a committee constituted under the chairmanship of Joint Secretary (INM) to examine the simplification of procedure for notification/incorporation of new fertilizers under Fertilizer (Control) Order (FCO), 1985. The Committee examined and deliberated on the issue and recommended a simplified procedure that will reduce the time limit by 2-3 months. These recommendations are - (i) online disposal of application; and (ii) fixing a time limit for recommendation of Technical Committee on new grades. These recommendations were accepted by the Central Fertilizer Committee (CFC) in its 51st meeting. It was also suggested that a meeting of Technical Committee may be convened every month to discuss the issues relating to inclusion of new fertilizer and its recommendations to be placed before CFC, within 15 days.

(ii) As regards constitution of a regulatory authority, it is submitted that fertilizer has been declared as an Essential Commodity by the Central Government under Section 2(a) (xi) of the Essential Commodities Act, 1955. In exercise of the power conferred under section 3(i) of above act, the Government of India have promulgated the FCO, 1957 which was subsequently revised as FCO, 1985 with the objective of regulating sale, price and quality of fertilizers at a fair price.

In exercise of the power under clause 38 of FCO, the Government of India vide notification SO No. 258 (E) dated 10th February, 2016 constituted the CFC under the chairmanship of Additional Secretary (INM) and 10 other members to advice Central Government on the issues relating to fertilizers."

1.20 While observing lacuna in the process of system of certification of new fertilizer, the Committee had recommended the Government to take steps for constitution of a Fertilizer Development and Regulating Authority in order to streamline the process of certification of fertilizers, continuous quality check, imposing penalty for sub standard and spurious quality of fertilizers, promoting innovations in fertilizer sector and fixation of pricing of fertilizers etc. The Committee note that committee constituted under the chairmanship of Joint Secretary (INM) to examine the issue to simplify the procedure of inclusion of new fertilizers in Fertilizer Control Order (FCO) has suggested for On line disposal of application and Fixing a time limit for recommendation of Technical Committee on new grades. The Department has informed that DAC&FW will implement these recommendations very soon. The Government has not submitted their view on the issue of constitution of a Fertilizer Development and Regulating Authority for effective regulation of Fertilizer sector in the Country. The Committee are of view that current system of constitution of Central Fertilizer Committee is *ad hoc* mechanism which do not have continuity, expertise and necessary manpower to effectively regulate the complex issues related to Fertilizer sector. This situation is being exploited by the unscrupulous elements for their benefit which ultimately affect interest of farmers. This system is also hampering innovation in the field of fertilizer sector. The Committee, therefore, once again reiterate their recommendation and urge the Government to take steps for constitution of Fertilizer Development and Regulating Authority at the earliest. The Committee would like the Department to be apprised about steps taken in this regard within three months of presentation of Report.

E. SCIENTIFIC USE OF PESTICIDES Recommendation

(Serial No. 13)

1.21 The Committee had observed/ recommended as under:-

"The Committee are concerned to note that problems associated with unscientific and excessive use of pesticides have not been addressed properly by the Government of India and State Governments which is evident

by rising cases of occupational exposure and associated diseases such as cancer among local farmers in Punjab and other places in the country. Besides creating awareness and training of farmers for scientific use of pesticides in agriculture, the Committee feel the need of distribution of protective gears and pesticide sprinklers to the farmers to prevent them from unwanted exposure of pesticides. The Committee are of considered view that it is imperative that the use of pesticides in agriculture and other sectors is supervised scientifically. The Committee are also of the view that economic 104 gains should not be achieved at the cost of public health and the environment. The Committee, therefore, recommend that a comprehensive action plan may be prepared by the Government ensuring environment sustainable manufacturing, import, sale and use of pesticides in agriculture as well as other sectors including availability of safety gears to farmers and workers. The Committee desire the Government to prepare action plan in consultation with all stakeholders such as State governments, Agricultural Universities/Institutions, Chemical Pesticides Manufactures/Importers, Traders, Farmers along with Experts/NGOs active in the field of agricultural management. The Committee also desire the Government to allocate specific funds for implementation of action plan for the purpose. The Committee would like to be apprised of the steps taken by the Government in this regard. The Committee also desired the Government to explore options to provide license for sale of pesticides to the persons holding degree/diploma/certificates in Agriculture Sciences."

1.22 The Department of Agricultural Research and Education in the Action Taken

Reply has stated as under:-:-

"The Pesticide Management Bill, pending in parliament serves to oversee various issues and concerns associated with regulation and use of pesticides in Agriculture. Central Insecticide Board and MoA&FW periodically reviews issues concerning labeling of pesticides and classify them with colour code depending upon their toxicity and hazardous nature. DAC and CIBRC recently rationalized the label leaflet guidelines defining the language, font size, inclusion of precautions with pictorial depictions for easy and safe

handling of pesticides. The committee on review of 66 pesticides recently has also recommended distribution of protective gears and container safety instructions. DAC, MoA&FW recently has also issued gazette notification specifying the minimum qualification as a mandatory requirement for issue of license for sale of pesticides."

1.23 The Department of Agriculture, Cooperation and Farmers Welfare in the Action Taken Reply has stated as under:-

"Pesticides are regulated in India through Insecticides Act, 1968. The experience in administering the Insecticides Act, 1968 over the last four decades has exposed certain gaps which spurred the need to propose a new law. Pesticide Management Bill (PMB) which is in discussion since 2008 and before, between this Ministry and Ministry of Law and Justice resulted in substantive changes to the original Bill as was introduced in the Parliament (Rajya Sabha). It was suggested by the Legislative Department, Ministry of Law and Justice that instead of moving official amendments to rectify the changes and to add more than 90 enactments for repeal by way of lengthy amendments, it would be preferable, to withdraw 'The Pesticide Management Bill, 2008' and a new Bill namely, 'The Pesticide Management Bill, 2017' incorporating all the official amendments as on date be introduced in the Parliament. The Pesticide Management Bill, 2017 serve to oversee various issues and concerns associated with regulation and use of pesticides in Agriculture. Central Insecticide Board and MoA&FW periodically reviews issues concerning labeling of pesticides and classify them with colour code depending upon their toxicity and hazardous nature. DAC&FW and CIBRC recently rationalized the label leaflet guidelines defining the language, font size, inclusion of precautions with pictorial depictions for easy and safe handling of pesticides. The Committee on review of 55 pesticides recently has also recommended distribution of protective gears and container safety instructions. DAC&FW recently has also issues gazette notification specifying the minimum qualification as a mandatory requirement for issue of license for sale of pesticides."

1.24 While showing their concern over rising cases of occupational exposure and associated diseases such as cancer among farmers due to unscientific 16

and excessive use of pesticides, the Committee had recommended the Government to prepare a comprehensive action plan to ensure environment sustainable manufacturing, import, sale and use of pesticides in agriculture as well as other sectors including availability of safety gears to farmers and workers. The Committee also desired the Government to explore options to provide license for sale of pesticides to the persons holding degree/diploma/certificates in Agriculture Sciences.

The DARE in their Action Tekn Reply has submitted about Pesticide Management Bill, 2008, pending in parliament serves to oversee various issues and concerns associated with regulation and use of pesticides in Agriculture. Whereas, DAC&FW has stated that a new Bill namely, 'The Pesticide Management Bill, 2017' to oversee various issues and concerns associated with regulation and use of pesticides in Agriculture will be introduced in Parliament to improvise upon lacuna of Insecticides Act, 1968. The Department have also informed that Central Insecticide Board and MoA&FW periodically reviews issues concerning labeling of pesticides and classify them with colour code depending upon their toxicity and hazardous nature and rationalization of label leaflet guidelines defining the language, font size, inclusion of precautions with pictorial depictions for easy and safe handling of pesticides. The committee on review of pesticides recently has also recommended distribution of protective gears and container safety instructions. The Committee also note that DAC &FW recently has also issued gazette notification specifying the minimum qualification as a mandatory requirement for issue of license for sale of pesticides.

The Committee are of view that there is urgent need to present Pesticide Management Bill in Parliament to overcome lacuna of outdated Insecticide Act, 1968. However, the Committee note with concern that despite assurance, the Government has failed to introduce the Bill in the Parliament.

The Committee take a serious view in this regard and hope that the much needed bill will be introduced in Parliament without further delay.

F. CONSTITUTION OF PESTICIDES DEVELOPMENT AND REGULATION AUTHORITY

(Recommendation No. 14)

1.25 The Committee had observed/ recommended as under:-

"The Committee note that Insecticides Acts, 1968 and Insecticides rules, 1971 framed there under regulate import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animals, and matter connected therewith. Central Insecticide Board is constituted under the Act to advise the Central and State Governments on 105 technical matters arising out of administration of this Act and to carry out other functions assigned to the Board by or under this Act. The Committee also note that Registration Committee constituted under the Act is assigned responsibility for registration of pesticides after scrutinizing formula, verifying claims of efficacy and safety to human beings and animals, specifying the precautions against poisoning and any other functions. Registration Committee are empowered to refuse registration of any pesticides if issues pertaining to safety have not been satisfactorily adhered to. The Central Insecticide Board is empowered to ban manufacturing, import or sale of pesticides if concerns are raised about danger to public health and safety or any adverse report are received about toxic effect of any pesticides. However, the Committee are perturbed to note that there is no provision for periodic scientific evaluation of pesticides used in the country and Central Insecticide Board doesn't carry out any research/study on its own and its advice to Government is based on national and international literature/ information available. Further, action for ban of particular pesticides is taken only after receipt of general information on ban or restriction of particular pesticides in other countries. Ban on pesticides is based on the recommendation of the Expert Committee constituted for the purpose. The Committee are of view that present system of registration of pesticides is not robust and hardly take care of manipulation of systemic deficiency. Further, absence of ongoing mechanism for periodic evaluation of efficacy and toxicity of pesticides is posing danger to environment in general and public health in 106 particular.

The Committee are of view that there is need to streamline the regulatory mechanism for manufacturing, import and sale of pesticides in the country. The Committee, therefore, recommend the Government to take steps for constitution of Pesticides Development and Regulation Authority after Parliamentary approval for regulation of pesticide sector in the country. The Committee desire the Government to start discussion with all stakeholders for Constitution of such authority in a time bound manner."

1.26 The Department of Agricultural Research and Education in the Action Taken Reply has stated as under:-

"Committee constituted during 2014 to review 66 pesticides recommended Govt of India to introduce a practice of periodic review of pesticides for their efficacy, resistance, non-target effects and toxicity.

For effective regulation of pesticide sector in the country and to address various issues and concerns regarding inconsistencies in use of pesticides in Agriculture, Pesticides Management Bill, was introduced in the Rajya Sabha on October 21, 2008. The Bill standing in the parliament for approval seeks to regulate the manufacture, quality, import, export and sale of pesticides to control pests, ensure availability of quality pesticides and minimize contamination of agricultural commodities with pesticide residue. The Bill recommends imposition of penalties for offences such as use of pesticide in contravention of the law and sale of misbranded or sub-standard pesticide."

1.27 The Department of Agriculture, Cooperation and Farmers Welfare in the Action Taken Reply has stated as under:-

"The Registration Committee (RC) constituted under Section 5 of the Insecticides Act, 1968 registers pesticides after considering its efficacy and safety to human beings, animals and environment. In additions, technical reviews are carried out from time to time to assess the safety of pesticides for their continued use. The Committee constituted during 2014 to review 66 pesticides recommended Govt of India to introduce a practice of periodic

review of pesticides for their efficacy, resistance, non-target effects and toxicity.

For effective regulation of pesticide sector in the country and to address various issues and concerns regarding inconsistencies in use of pesticides in Agriculture, Pesticides Management Bill, was introduced in the Rajya Sabha on October 21, 2008. The Bill is in discussion with Ministry of Law and Justice since 2008 and before, resulted in substantive changes to the original Bill as was introduced in the Parliament (Rajya Sabha). It was suggested by the Legislative Department, Ministry of Law and Justice that instead of moving official amendments to rectify the changes and to add more than 90 enactments for repeal by way of lengthy amendments, it would be preferable, to withdraw 'The Pesticide Management Bill, 2008' and a new Bill namely, 'The Pesticides Management Bill, 2017' incorporating all the official amendments as on date be introduced in the Parliament. The Pesticides Management Bill, 2017 seeks to regulate the manufacture, quality, import, export and sale of pesticides to control pests, ensure availability of quality pesticides and minimize contamination of agricultural commodities with pesticide residue. The Bill recommends imposition of penalties for offences such as use of pesticide in contravention of the law and sale of misbranded or sub-standard pesticide."

1.28 The Committee note that Insecticides Acts,1968 and Insecticides rules, 1971 framed there under regulate import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animals, and matter connected therewith. Central Insecticide Board is constituted under the Act to advise the Central and State Governments on 105 technical matters arising out of administration of this Act and to carry out other functions assigned to the Board by or under this Act. The Committee also note that Registration Committee constituted under the Act is assigned responsibility for registration of pesticides after scrutinizing formula, verifying claims of efficacy and safety to human beings and animals, specifying the precautions against poisoning and any other functions. Registration

Committee are empowered to refuse registration of any pesticides if issues pertaining to safety have not been satisfactorily adhered to. The Central Insecticide Board is empowered to ban manufacturing, import or sale of pesticides if concerns are raised about danger to public health and safety or any adverse report are received about toxic effect of any pesticides. However, the Committee are perturbed to note that there is no provision for periodic scientific evaluation of pesticides used in the country and Central Insecticide Board doesn't carry out any research/study on its own and its advice to Government is based on national and international literature/ information available. Further, action for ban of particular pesticides is taken only after receipt of general information on ban or restriction of particular pesticides in other countries. Ban on pesticides is based on the recommendation of the Expert Committee constituted for the purpose. The Committee are of view that present system of registration of pesticides is not robust and hardly take care of manipulation of systemic deficiency. Further, absence of ongoing mechanism for periodic evaluation of efficacy and toxicity of pesticides is posing danger to environment in general and public health in 106 particular. The Committee are of view that there is need to streamline the regulatory mechanism for manufacturing, import and sale of pesticides in the country. The Committee, therefore, recommend the Government to take steps for constitution of Pesticides Development and Regulation Authority after Parliamentary approval for regulation of pesticide sector in the country. The Committee desire the Government to start discussion with all stakeholders for Constitution of such authority in a time bound manner.

CHAPTER - II

OBSERVATIONS/RECOMMENDATIONS THAT HAVE BEEN ACCEPTED BY THE GOVERNMENT

USE OF CHEMICAL FERTILIZERS AND PESTICIDES (Recommendation No. 1)

The Committee note that Green Revolution has been a boon to solve crisis of food grains which our country was facing at the time of independence. Strategy of high yielding seeds-fertilizer-irrigation has paid rich dividend and farmers of our country were able to enhance food grain production from 83 mt in 1960-61 to around 253 mt in 2014-15. Now, our country is not only sufficient in production of food grain to meet food requirements of the country but also able to contribute towards foreign earning. However, the Committee observe that this achievement in the field of agriculture has also affected the environment and brought many negative impacts associated with use of chemical fertilizers and pesticides on agriculture and allied sectors in the country. The Committee are of the view that there is need to examine pros and cons of strategy of use of chemical fertilizers and pesticides to enhance food production in order to incorporate suitable changes to conserve our natural resources and minimize adverse effects on agriculture & allied sectors without jeopardizing agricultural growth. The Committee have analyzed different aspects associated with the issue in succeeding paragraphs.

Reply of the Government (Department of Agricultural Research and Education)

Replies furnished in succeeding paragraphs.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

There is no scientific evidence that balanced and judicious use of fertilizers cause rise of deadly diseases in the Country. However, imbalanced use of chemical fertilizers coupled with low addition of organic matter over years may cause

multinutrient deficiencies. It is the endeavour of this Ministry to promote the balanced use of fertilizers in conjunction with bio-fertilizers/organic fertilizers/manure.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education) O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

DECLINE IN AGRICULTURAL GROWTH **(Recommendation No. 2)**

The Committee note that the country will require to enhance the food grains production to the level of 300 mt by 2025 to feed its teeming millions. 86 However, the Committee are distressed to note that the pace of agricultural growth rate is slowly decreasing. The Committee observe that decadal rate of growth of agriculture since beginning of green revolution has decreased significantly from a high of 8.37% during 1960-70 to a low of 1.44% during 1990-2000. The rate of agriculture growth has been 2.61% during 2000-2010. The Committee further observe that rate of agriculture growth in important States like Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, Gujarat, Bihar and Maharashtra has decreased significantly during the last decade. The Committee also note that country failed to achieve the agriculture growth rate of 4% which was set during 12th plan. The Committee are of the view that strategy of over-reliance on chemical fertilizers adopted during green revolution period needs reorientation keeping in view of stagnant agricultural growth in important States. The Committee, therefore, recommend the Department to analyze the strategy of agricultural growth in country and prepare a detailed plan to reinvigorate the sector in the country

Reply of the Government (Department of Agricultural Research and Education)

The issue on agricultural growth in country involved wider consultation with various departments and hence, it is deliberated through various Working Groups constituted to formulize appropriate strategies.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

Judicious use of fertilizers by farmers based on soil test based recommendations has been encouraged under the scheme of Soil Health Management in the Country.

A scheme on organic farming has been implemented in the Country since 2015-16 to reduce over dependence on chemical fertilizers and promote natural farming.

Comments of the Committee

For comments of the Committee please refer to Para No. 1.8 of Chapter I of this Report.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers

Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

DEGRADATION AND EROSION OF SOIL FERTILITY **(Recommendation No. 3)**

Plants require nutrients for their growth. These nutrients such as nitrogen, phosphorus, potassium, calcium, magnesium, sulphur copper, iron etc. are derived by plants from soil. Traditionally, farmers used farm yard manure or animal manure to augment declining soil productivity. However, strategy of green revolution involved use of non-renewable inputs of phosphorus potash and nitrates as chemical fertilizers to meet nutrient deficit of soil. Application or use of chemical fertilizers in agriculture should be based upon scientific assessment of soil nutrient status. However, the Committee note that use of fertilizers in India was hardly based upon scientific analysis of soil due to near absence of soil testing facilities, low awareness

and over reliance on Urea due to fertilizer subsidy policy. Imbalanced and inadequate nutrient use coupled with neglect of organic manure has caused multinutrient deficiency in Indian soil. The Committee note that out of total 525 Districts in the country, about 292 Districts account for 85 percentage of total fertilizer consumption. The Committee have further been informed that nutrient deficiency in country level are of the order of 89, 80, 50, 41, 49, 33, 13, 12, 5 and 3% for nitrogen, phosphorus, potassium, sulphur, zinc, boron, molybdenum, iron, manganese and copper respectively. The continuous use of high analysis fertilizer has made sulphur a limiting nutrient in many soils in the country. The limiting nutrients do not allow the full expression of other nutrients, thereby, lowering the fertilizer response and crop productivity. The Committee have also been informed that Indian agriculture is operating with a negative balance of plant nutrient in soil. The fertility status of Indian soils has been declining fast under intensive agriculture as nutrient application is not able to keep pace with their removal by crops and soil are showing signs of fatigue especially in Indo Gangetic plain. The inadequate and imbalanced nutrient use coupled with neglect of organic manure has caused multi nutrient deficiency in soil in many areas over the years. The Committee note that many study on impact of green revolution in India has found that excessive use of fertilizers and pesticides had led to degradation and erosion of soil fertility, built up of toxic nutrients in 88 soil, loss of micronutrient, loss of soil microorganisms among other desirable and undesirable effects. The micro nutrient deficiency in Indian soil due to excessive use of nitrogen fertilizers and inadequate use of micronutrient fertilizer has its impact on nutritional status of crop grown in it which are devoid of essential micronutrient necessary for human health. The studies have shown that micronutrient deficiency in crop is causing deficiency of micronutrient such as zinc, iron, copper etc. among Indian population leading to many diseases and growth impairment in human and animals. Use of nitrogenous fertilizers in agriculture is also causing eutrophication of water bodies causing deterioration of water quality. The Committee also note that fertilizer being used in agriculture is also source of Nitrous oxide which is a potent green house gas. However, the Committee are perturbed to note that the Government has not bothered to conduct any comprehensive study/analysis on adverse impact of use of fertilizers and pesticides on soil fertility including on surrounding environment and health of the masses. The Committee,

therefore, recommend that a comprehensive study on impact of chemical fertilizers and pesticides on agriculture and allied sectors in the country may be undertaken by the Government so that curative steps may be planned to address its negative impact and fresh strategy may be formulated for rapid agriculture growth in the country

Reply of the Government (Department of Agricultural Research and Education)

The Government has launched National Mission on Soil Health Card to ensure soil test based site specific balanced and integrated nutrient management in the country. An impact analysis on this scheme on production, productivity and soil health are being carried out by the Institute for Social and Economic Change, Bangalore.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

No comment received.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)
O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

BALANCED USE OF FERTILIZERS
(Recommendation No. 4)

The Committee note that chemical fertilizers have played an important role in increasing food grain production in country. Use of chemical fertilizers is 89 one of the costliest inputs which has become a necessity in Indian agriculture Sector without which it would be difficult to feed ever increasing population of the Country. The use of chemical fertilizer in the country have increased from less than 1 million tons of total nutrients in mid sixties to 25.6 millions tonnes in 2014-15. The country will require around 45 MT of nutrients to achieve the food grain production of 300 MT by 2025 to feed its increasing population. However, majority of 45 MT nutrients has to be supplied through chemical fertilizers as only 6-8 MT nutrients can be supplied through existing organic sources. The Committee also note that the pattern of use of

fertilizer in the country is not even. About 292 districts accounts for consumption of 85 percentage of fertilizer in the country. Further, there's imbalance in fertilizer use in terms of NPK as it is evidenced by their wider consumption ratio of 6.7:2.4:1 in the country as against their desirable ratio of 4:2:1. The situation is more grim in agriculturally important States like Punjab and Haryana where NPK use ratio is as high as 31.4:8.0:1 and 27.7: 6.1:1 respectively. According to the Secretary of Department of Agriculture, Cooperation and Farmers Welfare, skewed subsidy policy in favour of urea and high prices of other fertilizers are the real culprit behind the imbalanced use of fertilizers in the country. Even the pattern of use of fertilizer varies widely among different crops. Fertilizer use in potato, sugarcane, cotton, wheat and paddy are among highest at the level of 347.2, 239.3, 192.6, 176.7 and 165.2 kg/hectare respectively. Even among these crops, there is excessive use of nitrogenous fertilizer. The Committee also observe that there's 90 excessive use of urea in country. During 2014-15, 306 million tonnes Urea was used out of total 485 million tonnes fertilizer consumption in country. The Committee are of the view that there is an urgent need to take steps to rationalise over usage of chemical fertilizers in country in order to restore fertility of soil and to check negative effects associated with it. The Committee, therefore, recommend that a strategy may be worked out to promote the balanced use of fertilizers in the Country. It is also imperative that the farmers are educated on this aspect and therefore, the Committee also recommend that a massive awareness campaign may be launched by the Government to educate farmers regarding balanced and judicious use of fertilizers in the Country.

Reply of the Government (Department of Agricultural Research and Education)

Imbalanced use of fertilizers is due to high price of P&K fertilizer as compared to that of Urea. On the main reasons for increase in price of P&K fertilizers is reduction in subsidy over a period of time. The second most contributor to price rise of P&K fertilizers is devaluation of Indian rupee against US\$, as much of the raw materials are imported. One of the ways to reduce MRP of P&K fertilizers could be increase in subsidy rates to bring the P&K fertilizers in parity with Urea prices so as to address the issue of balanced fertilization of soil.

The Government under the component of soil health management of National Mission on Sustainable Agriculture (NMSA) is promoting soil test based balanced and integrated nutrient management in the country through setting up/strengthening of soil testing laboratories, establishment of bio-fertilizer and compost unit, use of micronutrients, trainings and demonstrations. Under the Soil Health Management Scheme, Trainings for farmers & field demonstrations on judicious use of fertilizers are conducted. Awareness campaign through Print and visual media are carried out. Media plan to publicise Soil Health Card has been finalized.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

Soil Health Card Scheme has been implemented across the Country, with focus on providing appropriate recommendations regarding use of fertilizers as per crop and site. Since the scheme has picked up momentum it is expected that the usage of chemical fertilizers will come down drastically in the coming years. Farmers are being given training for judicious use of fertilizers and field demonstrations are being organized by the Indian Council of Agricultural Research on this aspect. Awareness campaign are also carried out through print and visual media.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers

Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

INCENTIVES FOR USAGE OF BIO-FERTILIZERS
(Recommendation No. 8)

The Committee note that bio-fertilizers do not contain any chemicals which are harmful to the living soil and are extremely advantageous in enriching soil fertility. Bio-fertilizers such as Rhizobium, Azotobactor, Blue Green Algae etc. are eco friendly organic agro inputs. Bio-fertilizers fulfill plant requirements by supplying organic nutrients through microorganism and their byproducts. During 2014-15,

80696.45 MT carrier based and 4054.56 KL liquid based biofertilizers were used in the Country. The Committee also observe that use of bio-fertilizers is more in western and southern parts of country, whereas, eastern and northern States are lagging behind in use of bio-fertilizers. The Government is providing financial assistance @ 25% of total financial outlays 96 subject to ceiling of Rs. 40 lakhs to individuals and private agencies for biofertilizers units. Financial assistance is also being provided to the State Governments/Government agencies to set up input production unit and biofertilizer/bio pesticide units and bio-fertilizer and organic fertilizer quality control laboratories under Pradhan Mantri Krishi Vikash Yojna and National Mission for Sustainable Agriculture. The Committee note that 50 bio-fertilizer units have been established under the scheme with production capacity of 12563 tons as on March, 2014. However, the Committee are distressed to note that there is no provision to provide any kind of direct incentives/ subsidy on bio-fertilizers to the farmers to promote its widespread use in country. The Committee are of considered view that there is an urgent need to devise policy to promote use of green alternatives such as bio-fertilizers in order to minimize harmful impact of chemical fertilizers on environment and human health. The Committee, therefore, recommend that the Government may explore possibilities to provide direct incentives to the farmers for use of biofertilizers across the country. The Committee also desire that a strategy may be worked out to encourage entrepreneurs for establishment of units for production of bio-fertilizers in States in northern, eastern and North-eastern parts of the country. The Committee would like to be apprised of the initiatives undertaken by the Government.

Reply of the Government (Department of Agricultural Research and Education)

The Department of Fertilizers is in the process of implementing DBT for transfer of fertilizer subsidy. In this regard, the Department has identified 16 districts as pilot project in the country to implement DBT. After successful completion of the pilot projects, the DBT in fertilizer subsidy will be extended to the whole country. Market Development Assistance being provided for marketing of city compost will also be brought under the DBT.

Government is promoting bio-fertilizers across the country through various schemes of National Mission for Sustainable Agriculture (NMSA)/

ParamparagatKrishiVikasYojana (PKVY), RashtriyaKrishiVikasYojna (RKVY), National Mission on Oilseeds & Oil Palm (NMOOP), National Food Security Mission (NFSM) and Indian Council of Agricultural Research (ICAR).

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

Government is providing financial assistance for use of bio fertilizer through various schemes/ programmes viz: National Mission for Sustainable Agriculture (NMSA)/ Paramparagat Krishi Vikas Yojana (PKVY), Rashtriya Krishi Vikas Yojana (RKVY), Mission for Integrated Development of Horticulture (MIDH), National Mission on Oilseeds & Oil Palm (NMCOOP) and Network Project on Organic Farming of Indian Council of Agricultural Research (ICAR). The details of Bio-fertilizer production units operating in various States along with their installed capacity and the actual production during last three years are at Annexure-I & II respectively.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers

Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

PROMOTION OF ORGANIC FARMING

(Recommendation No. 9)

The Committee note that 7.23 lakh hectare land in the country, excluding the wild harvest, is certified area under organic farming. The Committee also note that there exist a large export market for organic food products in international market and if given proper guidance and incentives, the farmers are well placed to exploit the opportunity and help the country to earn foreign exchange. APEDA under the Department of Commerce functions as the Secretariat to the National Programme on Organic Production (NPOP), which defines the regulatory mechanism for export of organic produce. NPOP has earned equivalence with European Union and

Switzerland and now any produce certified by Indian agencies can be exported to these countries without the requirement of recertification. The Government is providing financial assistance to private agencies/individuals along with State Governments/Government agencies for setting up of bio-fertilizer production units. The Government has also launch Paramparagat Krishi Vikash Yojana (PKVY) under National Mission on Sustainable Agriculture (NMSA) through which assistance is being provided for organic farming. Under PKVY, the Government plans to develop 10000 cluster with a cluster size of 50 acres so as to increase certified area by 5 lakh hectares in next 3 years and to develop potential market for organic products. The Committee are of considered view that promotion of organic farming is urgently required to safeguard surrounding environment and health of human beings and animals from usage of chemical fertilizers and pesticides. For this, it is imperative that the farmers of the country are given direct financial support along with technical 98 expertise and supervision to switch to organic farming on a large scale. The Committee, therefore, recommend that the Government should make concerted and coordinated efforts in coordination with State Governments and other Stake holders to augment coverage area and production of organic farming in the country and for this purpose they may be provided suitable incentive in terms of financial assistance and technical expertise. Further, the Committee also desire that extension services may also be strengthened in order to provide guidance/assistance to the farmers during transition phase to organic farming.

Reply of the Government (Department of Agricultural Research and Education)

The Government is promoting organic farming under the Schemes ParamparagatKrishiVikasYojana (PKVY), “Mission Organic Value Chain Development for North Eastern Region” (MOVCDNER) which is implemented through State Governments.

Under **PKVY scheme**, the assistance is provided to the farmers for cluster formation, mobilization of farmers, PGS certification and quality control, residue analysis of samples in NABL, conversion of land to organic farming, establishment of production units (Pachagavya)/Beejamruth/Jeevamruth), green manuring/biological nitrogen harvest planting, botanical abstracts production units, liquid bio-fertilizers(*Nitrogen/fixing/Phosphate Solubilizing/Potassium mobilizing bio-fertilizers*), liquid biopesticides (*Trichodermaviridae, Pseudomonas, fluorescens, Matarhizium*,

beaviouriebassiana, Pacelomyces, verticillium), phosphate rich organic manure (PROM), establishment of vermi-compost unit, supply of improved agricultural implements, transportation of organic products, packing, labeling and branding of organic products etc. Under this scheme, an area of 2 lakh ha will be covered under organic farming from 2015-16 to 2017-18.

Realizing the potential and benefits of organic farming particularly in areas like hilly, tribal and also in rainfed areas where utilization of chemical fertilizers and pesticides is relatively lower, the Govt. of India is promoting organic farming in country through the dedicated schemes of ParamparagatKrishiVikasyojana(PKVY) and Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) under National Mission for Sustainable Agriculture (NMSA). *Some other schemes of Govt. of India are also supporting organic farming viz., National Mission on oilseeds and oilpalm (NMOOP), National Food Security Mission (NFSM), Mission for Integrated Development of Horticulture (MIDH) and ICAR network project on organic farming.*

Under **MOVCDNER Central Sector scheme**, the assistance is provided for cluster development, on/off farm input production, supply of seeds/ planting materials, setting up of functional infrastructure, establishment of integrated processing unit, refrigerated transportation, pre-cooling /cold stores chamber, branding labeling and packaging, hiring of space, hand holdings, organic certification through third party, mobilization of farmers/processors etc. Under this scheme, an area of 0.50 lakh ha will be covered under organic farming in North Eastern Region of the country during next three years.

Awareness Programmes by DAC&FW:

The Department has been focusing on creating awareness and educating the farmers about organic farming practices in the areas where clusters are formed, under PKVY. The scheme guidelines provide a sum of Rs.80,000 per cluster to undertake mobilization of farmers through exposure visits and training. The National Centre of Organic Farming (NCOF), Ghaziabad, a unit under the department undertakes various extension and publicity activities like exhibitions, radio talks, TV programmes, distribution of literature on organic inputs/ organic farming etc. to educate the farmers. NCOF is also publishing biannually Bio-Fertilizer Newsletter as well as quarterly Organic Farming Newsletter. In addition, various books on

production and use of bio-fertilizers have been published in various languages for distribution to the farming community. Radio jingles on organic agriculture are broadcasted on 4 different FM Radio Stations including Delhi, Bangalore, Nagpur and Lucknow.

NCOF organizes 30 days certificate course on organic farming for skill development in organic agriculture sector for youth. It also conducts 10 days Refresher course for analysts under Fertilizer Control Order (FCO); 5 Days Trainers Training & 2 Days training for field functionaries and extension staff of the State Government.

NCOF has also been organizing Farmers' Training and Field Demonstration (FTFD) programmes on organic farming since 2015-16 in various villages adopted by the Hon'ble Members of Parliament under "SansadAadarsh Gram Yojana" (SAGY), through its Regional Centres of Organic Farming (RCOFs). It has completed 300 no. of FTFD in 2015-16 and has scheduled 297 no. in the year 2016-17.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

Government is promoting organic farming across the Country through various schemes viz. National Mission for Sustainable Agriculture (NMSA), Paramparagat Krishi Vikas Yojana (PKVY), Rashtriya Krishi Vikas Yojana (RKVY) and Mission for Integrated Development of Horticulture (MIDH), Network Project on Organic Farming under ICAR etc. The pattern of assistance to State Governments through various schemes for promoting use of organic/bio-fertilizer is given at Annexure-III

The Department has also been focusing on creating awareness and educating the farmers about organic farming practices in the areas where clusters are formed.

- a) The provision of Rs. 80,000 per cluster financial assistance allocated for Rs. 10,000 clusters under PKVY scheme for the mobilization of farmers through different training & exposure visits.
- b) Similarly, under MOVDNER scheme the financial assistance of Rs. 8 crore is allocated for North Eastern Region to create awareness and publicity through lead agencies.

c) The National Centre of Organic Farming (NCOF), Ghaziabad, a subordinate office of DAC&FC undertakes various extension and publicity activities like exhibitions, radio talks, TV programmes, distribution of literature on organic inputs/ organic farming etc. to educate the farmers. NCOF is also publishing biannual Newsletter "Biofertilizers" as well as quarterly Newsletter called Organic Farming. In addition, various books on production and use of bio-fertilizers have been published in various languages for distribution to the farming community. Radio jingles on organic agriculture are broadcasted on 4 different FM Radio Stations including Delhi, Bangalore, Nagpur and Lucknow. NCOF organizes 30 days certificate course on organic farming for skill development in organic agriculture sector for youth. It also conducts 10 days Refresher course for analysts under Fertilizer Control Order (FCO); 5 Days Trainers Training & 2 Days training for field functionaries and extension staff of the State Government. NCOF has also been organizing Farmers' Training and Field Demonstrations (FTFD) programmes on organic farming since 2015-16 in various villages adopted by the Hon'ble Members of Parliament under "Sansad Aadharsh Gram Yojana" (SAGY), through its Regional Centres on Organic Farming (RCOFs). It has completed 300 no. of FTFD in 2015-16 and has targeted 298 no. in the year 2016-17.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers

Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

EFFECTS OF EXCESSIVE/UNSCIENTIFIC USE OF PESTICIDES (Recommendation No.10)

The Committee note that the chemical fertilizers and Pesticides changed the face of agriculture in country by enhancing agricultural production and productivity and making India self reliant in food grains. Usage of pesticides has been an integral part of green revolution strategy which not only enhanced food grain production by

reducing losses from weeds, diseases and insects/pests but also helped in improving quality of crops/vegetables/fruits. However, the Committee also note that pesticides have several drawbacks such as potential toxicity to human and other species. Excessive/unscientific use of pesticides has caused tremendous harm to the environment as well as affected human population indirectly. Pesticides causes various deteriorating health hazards in animals as well as human 99 beings. Pesticides such as organochlorine, pyrethroids can cause cancer along with other neurological and endocrine system disorders. According to Stockholm convention on Persistent organic pollutants, 9 out of 12 most dangerous and persistent organic chemicals are organo-chlorine pesticides. The Committee also note the havoc caused to the local population due to unscientific use of endosulphan in Kerala. Increasing incidents of cancer are being reported among local population in Punjab where pesticides use in agriculture is among the highest in the country. The Committee also note about report of Centre for Science and Environment in Punjab wherein, they established presence of multiple pesticides in blood samples of residents in 4 villages in Bhatinda and Ropar districts. However, according to the Department of Health Research, the study didn't attempt to correlate the presence of pesticides to any observed health effects. The Committee also take note of studies by Department of Health Research wherein, effects of pesticides are being analyzed among exposed population in the country. However, lack of funds is one of the constraints to take up a comprehensive research on impact of pesticides and fertilizers on human health. The Committee note that 25 institutions in Country are monitoring pesticides level in food samples across the country under 'Monitoring of Pesticides Residues at National level (MPRNL)' programme of Ministry of Agriculture wherein, samples of vegetables, fruits, pulses, spices, wheat, rice, fish etc. are collected and analysed for possible presence of pesticides level. The Committee also note that FSSAI have set standards for maximum 100 pesticides residues in food products and department of DAC & FW, FSSAI and State Governments are responsible for ensuring compliance to these standards. The Committee note with concern that unscientific and excessive use of pesticides in agriculture and other sectors in the country pose a real threat to the environment and the health of human population as well. Since pesticides are mostly non biodegradable and persist in environment, there is possibility of entry of pesticides in to human blood through the

process of bio-magnification through food chain. The Committee are therefore of the view that there is an imperative need for promoting scientific use of pesticides in agriculture sector in our country. The Committee, therefore, recommend that rigorous efforts in coordination with all concerned may be made to create awareness amongst farmers for scientific use of pesticides for increasing production and productivity of their food grains. All State Governments may also be impressed upon to strictly monitor pesticides level in food samples as per the Standards set up by FSSAI on regular basis. The Committee also recommend that the Government should also impress upon the Ministry of Finance to provide adequate funds to the Department of Health Research for undertaking comprehensive research on impact of pesticides on human health. The Committee would like to be apprised of the initiatives undertaken by the Department in this regard.

Reply of the Government (Department of Agricultural Research and Education)

1. Farmers awareness and Scientific use of pesticides

- a. In order to enhance the production and productivity of crops by protecting them from the ravages of pests and to create awareness amongst farmers and farming community, the Govt. of India, Ministry of Agriculture, Department of Agriculture & Co-Operation (DAC) has launched a scheme “Strengthening and Modernization of Pest Management Approach in India” since 1991-92 by adopting Integrated Pest Management (IPM) as cardinal principle and main plank of plant protection strategy in overall crop production and protection programme. Under the ambit of IPM programme, the Government of India has established 35 Central IPM Centres in 28 States and one UT.
- b. These Central IPM centers are working with the objectives to maximize crop production with minimum input costs; Minimize environmental pollution in soil, water and air due to pesticides; Minimize occupational health hazards due to chemical pesticides; Conserve ecosystem and maintain ecological equilibrium; Judicious use of chemical pesticides for reducing pesticide residues; Popularizing IPM in farming community by imparting training to Agriculture / Horticulture Extension Officers and Farmers at Grass Root Level by organizing Farmers Field Schools / 2 days HRD/ Five days HRD programmes and 30 days duration Season

Long Training Programme. Basic aim of these programmes is to train the farmers on the latest IPM technology and also to create awareness about the judicious use of pesticides on their crops so that the crop can be grown with minimum use of pesticides. IPM package of practices for 87 crops has been developed in collaboration with NCIPM and NIPHM and uploaded on Farmers portal and Directorate's website for farmers use. Also 'Grow Safe Food Campaign' has been launched by placing hoardings and banners at prominent public places to create awareness among public and farmers as well.

2. Monitoring Pesticides Residues in Food and Environmental Samples

ICAR has sponsored an all India Network Project on Pesticide Residues (AINP-PR) with 16 Centres across the country. These Centers are responsible for conducting GAP trials based on which MRLs are fixed for each registered pesticides on host crops by the FSSAI. The Department of Agriculture & Cooperation (DAC), Government of India has sponsored a network of 25 Pesticide Residue analysis laboratories functioning under Central Sector Scheme "Monitoring of Pesticide Residues at National Level" implemented through the AINP. The scheme MPRNL covers monitoring of Pesticides residue in food commodities and environmental samples (soil and water), since 2005-06 with the participation of 25 laboratories under Indian Council of Agriculture Research, Ministry of Agriculture, Ministry of Health and Family Welfare, Ministry of Environment and Forest, Council of Scientific and Industrial Research, Ministry of Chemical and Fertilizer, Ministry of Commerce and State Agricultural Universities across the country.

The well-equipped laboratories with state of art facilities and accredited by National Accreditation Board for Testing and Calibration of Laboratories (NABL) are regularly participating in the Inter laboratory Comparison (ILC) at national level and Proficiency testing (PT) at international level to ensure generation of internationally acceptable quality data on pesticide residue.

During 2012-16, a total of 76,005 samples of food commodities including vegetables, fruits, cereals, pulses, spices, curry leaves, milk, egg, fish/marine, meat, tea from Agriculture Produce Marketing Committee (APMC) markets, local

markets, farm gate, organic outlets, CIPMC and Public Distribution Systems (PDS) and surface water from intensive agricultural fields from various parts of the country were analysed for the possible presence of pesticide residues. Based on the analysis 1,882 samples (2.5 %) were detected with pesticides above FSSAI MRL's. The data generated under the scheme includes the status of pesticide load in various food commodities as well as usage of recommended /non-recommended pesticides by the farmers.

This data is shared with state agricultural departments for necessary corrective action. It was observed that the residues of pesticides without label claim and MRL were frequently detected in vegetables. To overcome the non-judicious use of pesticides by the farmers, the AINP on Pesticide Residues initiated multi-location supervised field trials for the fixation of MRL and approval of label claim. Since 2013, out of 833 GAP trials, a total of 600 trials have been completed. The data generated will be submitted to Codex for fixation of MRL and will also be utilized by CIB & RC for the fixation of MRL, safe waiting period and approval of label claim.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

1. Farmers awareness and Scientific use of pesticides

- a. In order to enhance the production and productivity of crops by protecting them from the ravages of pests and to create awareness amongst farmers and farming community, the Govt. of India, Ministry of Agriculture, Department of Agriculture & Co-Operation (DAC) has launched a scheme "Strengthening and Modernization of Pest Management Approach in India" since 1991-92 by adopting Integrated Pest Management (IPM) as cardinal principle and main plank of plant protection strategy in overall crop production and protection programme. Under the ambit of IPM programme, the Government of India has established 35 Central IPM Centres in 28 States and one UT.

b. These Central IPM centers are working with the objectives to maximize crop production with minimum input costs; Minimize environmental pollution in soil, water and air due to pesticides; Minimize occupational health hazards due to chemical pesticides; Conserve ecosystem and maintain ecological equilibrium; Judicious use of chemical pesticides for reducing pesticide residues; Popularizing IPM in farming community by imparting training to Agriculture / Horticulture Extension Officers and Farmers at Grass Root Level by organizing Farmers Field Schools / 2 days HRD/ Five days HRD programmes and 30 days duration Season Long Training Programme. Basic aim of these programmes is to train the farmers on the latest IPM technology and also to create awareness about the judicious use of pesticides on their crops so that the crop can be grown with minimum use of pesticides. IPM package of practices for 87 crops has been developed in collaboration with NCIPM and NIPHM and uploaded on Farmers portal and Directorate's website for farmers use. Also 'Grow Safe Food Campaign' has been launched by placing hoardings and banners at prominent public places to create awareness among public and farmers as well. In the last three years (2014-15 to 2016-17), a total of 1991 FFSs have been organized imparting training to 53,730 farmers on IPM approval to pest management. In addition, a total of 326 two day HRD and 50 five day HRD programmes have been organized imparting training to 15,040 Nos. of AEOs/NGOs/Lead Farmers/Private Entrepreneurs etc. in the last three years. Between 2014-15 to 2016-17, a total of 12 SLTPs have been conducted imparting training to 480 Master Trainers.

2. Monitoring Pesticides Residues in Food and Environmental Samples

ICAR has sponsored an all India Network Project on Pesticide Residues (AINP-PR) with 16 Centres across the country. These Centers are responsible for conducting GAP trials based on which MRLs are fixed for each registered pesticides on host crops by the FSSAI. The Department of Agriculture & Cooperation (DAC), Government of India has sponsored a network of 25 Pesticide Residue analysis laboratories functioning under Central Sector Scheme "Monitoring of Pesticide Residues at National Level" implemented through the AINP. The scheme MPRNL covers monitoring of Pesticides residue in food commodities and environmental samples (soil and water), since

participation of 25 laboratories under Indian Council of Agriculture Research, Ministry of Agriculture, Ministry of Health and Family Welfare, Ministry of Environment and Forest, Council of Scientific and Industrial Research, Ministry of Chemical and Fertilizer, Ministry of Commerce and State Agricultural Universities across the country.

The well-equipped laboratories with state of art facilities and accredited by National Accreditation Board for Testing and Calibration of Laboratories (NABL) are regularly participating in the Inter laboratory Comparison (ILC) at national level and Proficiency testing (PT) at international level to ensure generation of internationally acceptable quality data on pesticide residue.

During 2012-16, a total of 76,005 samples of food commodities including vegetables, fruits, cereals, pulses, spices, curry leaves, milk, egg, fish/marine, meat, tea from Agriculture Produce Marketing Committee (APMC) markets, local markets, farm gate, organic outlets, CIPMC and Public Distribution Systems (PDS) and surface water from intensive agricultural fields from various parts of the country were analysed for the possible presence of pesticide residues. Based on the analysis 1,882 samples (2.5 %) were detected with pesticides above FSSAI MRL's. The data generated under the scheme includes the status of pesticide load in various food commodities as well as usage of recommended /non-recommended pesticides by the farmers.

This data is shared with state agricultural departments for necessary corrective action. It was observed that the residues of pesticides without label claim and MRL were frequently detected in vegetables. To overcome the non-judicious use of pesticides by the famers, the AINP on Pesticide Residues initiated multi-location supervised field trials for the fixation of MRL and approval of label claim. During 2012-18, a total of 943 GAP trials were planned on various pesticide-crop combinations (triazophos, acephate, chlorpyrifos, quinalphos, ethion, carbendazim, profenophos, cypermethrin, methyl parathion, bifenthrin, imidacloprid, cyhalothrin-I and spiromesifen on cabbage, cauliflower, okra, tomato, brinjal, capsicum, green chilli, curry leaf, bitter gourd, cucumber and green tea), out of which 723 trials have been completed. The data generated is

being submitted to Codex for fixation of MRL and will also utilized by CIB & RC for approval of label claim and FSSAI for the fixation of MRL.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers

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INTEGRATED PEST MANAGEMENT

(Recommendation No. 11)

The Committee note that the Government has adopted Integrated Pest Management (IPM) as cardinal principle and main plan of plant protection in the overall crop production programme since 1985. IPM lays emphasis on pest Management through a combination of agronomic, chemical and biological methods. IPM ensure the safe and judicious use of pesticides in agriculture. Timely sowing, use of tolerant and resistant plant varieties, transgenic pest resistant crops, bio-control agents and need based application of chemical pesticides are basic tools of IPM tool box. The Committee also note that Government is implementing various schemes namely Strengthening & Modernization of Pest Management Approach in the country (SMPMA), Strengthening & Modernization of Plant Quarantine Facilities in India (SMPQF) and Monitoring of Pesticides Residues at National Level (MPRNL) to achieve objectives outlined in IPM. The Committee have also been informed that National Research Centre for Integrated Pest Management (NRCIPM) is validating IPM technologies in various crops and developed location specific forecasting models of some crops under NICRA project and ICT based e-pest surveillance system. Besides, National Institute of Plant Health Management (NIPHM) assists the States and Government of India in increasing the efficiency of the existing pest and disease surveillance and control system, certification and accreditation system through a core role as a training and adaptive research centre in the field of extension and policy development related to plant protection. The Government of India has established 31 Central IPM Centres (CPIMCs) in 29 States and 1 UT. These CIPMCs do take 102 activities like training for farmers, training for State extension officials, conducting farmers field schools etc. However, the Committee

are distressed to note that no specific allocations have been made for achieving the objectives of IPM and budget allocated for Central IPM centres is used for IPM work. The Committee, therefore, recommend that adequate funds may be allocated for IPM for achieving its objectives without any financial constraints. The Committee would like the Department to impress upon the Ministry of Finance for the purpose.

Reply of the Government (Department of Agricultural Research and Education)

To promote judicious use of chemical pesticides, Govt. of India, Ministry of Agriculture, Department of Agriculture & Co-Operation (DAC) has launched a scheme "Strengthening and Modernization of Pest Management Approach in India" since 1991-92 by adopting Integrated Pest Management (IPM) as cardinal principle and main plank of plant protection strategy in overall crop production and protection programme. Under the ambit of IPM programme, the Government of India has established 35 Central IPM Centres in 28 States and one UT. IPM centers are working with the objectives to maximize crop production with minimum input costs; minimize environmental pollution in soil, water and air due to pesticides; minimize occupational health hazards due to chemical pesticides; conserve ecosystem and maintain ecological equilibrium; Judicious use of chemical pesticides for reducing pesticide residues; popularize IPM among farming community by imparting training to Agriculture / Horticulture Extension Officers and Farmers at Grass Root Level by organizing Farmers Field Schools / 2 days HRD/ Five days HRD programmes and 30 days duration Season Long Training Programme. Basic aim of these programmes is to train the farmers on the latest IPM technology and also to create awareness about the judicious use of pesticides on their crops so that the crop can be grown with minimum use of pesticides. Also 'Grow Safe Food Campaign' has been launched by placing hoardings and banners at prominent public places to create awareness among public and farmers as well.

Government implemented various schemes namely ICAR-National Research Centre for Integrated Pest Management (NCIPM) and All India Coordinated Projects for Biological Control for promoting bio-control of crop pests and diseases for developing and validating Bio-intensive IPM technologies in various crops. Govt had

approved Rs. 5335 lac for ICAR-NCIPM and Rs. 2100 lac under the sub-scheme AICRP-BC for the XII five year plan (2012-17). About 19.99 lakh ha area has been brought under Bio intensive-Integrated Pest Management (BIPM). The Centre has developed location specific pest forecasting models of crops through ICT based e-pest surveillance system. IPM package of practices for 87 crops has been developed in collaboration with NCIPM and NIPHM and uploaded on Farmers portal and Directorate's website for farmers use.

Other schemes include crop Pest surveillance and advisory project (CROPSAP) and horticultural crop pest surveillance and advisory project (HORTSAP) under National food Security Mission (NFSM) and National Horticultural Missions (NHM), respectively; Strengthening & Modernization of Pest Management Approach in the country (SMPMA); Strengthening & Modernization of Plant Quarantine Facilities in India (SMPQF), Monitoring of Pesticides Residues at National Level (MPRNL) and All India Coordinated Research Project (AICRP) to monitor pesticide residues in food items and for developing Good Agricultural Practices, to achieve objectives of need-based and judicious use of pesticides, principles outlined under IPM. Central level monitoring of supply of inputs, pests/diseases and related aspects, through the mechanism of 'Crop and Weather Watch Group' is contributing to achieve objectives at national level through the Department of Agriculture & Cooperation and Farmers Welfare.

ICAR-National Bureau of Agriculturally Important Insect Resources (NBAIR) has created several success stories by controlling serious pests (e.g. papaya mealy bug, sugarcane woolly aphid, etc.) through deployment of biocontrol agents and thereby minimizing application of chemical pesticides. ICAR-National Bureau of Agriculturally Important Microbes (NBAIM) carries out research on replenishing soil with microorganisms, which make crops healthier and less prone to pests and disease attacks.

Two recently established Institutes, ICAR - National Institute for Biotic Stress Management (NIBSM), Raipur and ICAR- National Institute for Abiotic Stress Management (NIASM), Pune have initiated efforts in the direction to reduce

dependence on chemical pesticides. DAC-National Institute of Plant Health Management (NIPHM) assists the States and Government of India in increasing the efficiency of the existing pest and disease surveillance and control system, certification and accreditation system through trainings / HRD and adaptive research Centre in the field of extension and policy development related to plant protection and use of pesticides.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

To promote judicious use of chemical pesticides, Govt. of India, Ministry of Agriculture, Department of Agriculture & Co-Operation (DAC) has launched a scheme "Strengthening and Modernization of Pest Management Approach in India" since 1991-92 by adopting Integrated Pest Management (IPM) as cardinal principle and main plank of plant protection strategy in overall crop production and protection programme. Under the ambit of IPM programme, the Government of India has established 35 Central IPM Centres in 28 States and one UT. IPM centers are working with the objectives to maximize crop production with minimum input costs; minimize environmental pollution in soil, water and air due to pesticides; minimize occupational health hazards due to chemical pesticides; conserve ecosystem and maintain ecological equilibrium; Judicious use of chemical pesticides for reducing pesticide residues; popularize IPM among farming community by imparting training to Agriculture / Horticulture Extension Officers and Farmers at Grass Root Level by organizing Farmers Field Schools / 2 days HRD/ Five days HRD programmes and 30 days duration Season Long Training Programme. Basic aim of these programmes is to train the farmers on the latest IPM technology and also to create awareness about the judicious use of pesticides on their crops so that the crop can be grown with minimum use of pesticides. Also 'Grow Safe Food Campaign' has been launched by placing hoardings and banners at prominent public places to create awareness among public and farmers as well. In the last three years an amount of Rs. 9.71 crore have been incurred on organizing FFSs, two day HRD, five day HRD programmes and SLTPs. A provision of Rs. 37.25 crore for organizing

2772 FFSs, 564 two day HRD, 100 five day HRD programmes and 19 SLTPs has been made in the proposed EFC for 2017-18 to 2019-20.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)
O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

REGULATION OF IMPORT AND USE OF PESTICIDES

(Recommendation No. 12)

The Committee note that 57353 MT (technical grade) pesticides were used in country during 2014-15 (provisional).However, the Committee also observe that use of pesticides in the country is not even in different States. There is widespread use of pesticides in States like Uttar Pradesh, Maharashtra, Punjab, Haryana, Andhra Pradesh and West Bengal which were pioneer States during green revolution. Further, the Committee also observe that 77376 MT (technical grade) pesticides worth Rs.5122.09 crore were imported in country during 2013-14. The Committee are also perturbed to note that there is variation in use of pesticides in the country and import figures and the Department of Chemical and Petrochemical have received complaints about the same by local manufacturers that multinationals companies are importing formulation rather than chemical grade and pushing these in local markets. 103 The Committee also note that DDT is still being used in agriculture in some States despite its ban in the Country. This only goes to show that there is no effective regulatory mechanism to ensure manufacturing, import and sale of pesticides in country in terms of the provisions of Insecticides Act, 1968. The Committee, therefore, recommend that the existing regulatory mechanism may be strengthened in consultation with State Governments concerned to check the acts which are contrary to the provisions of Insecticides Act, 1968. The Committee also recommend that an enquiry may also be conducted to find out inconsistency between import and use of pesticides in the country along with diversion of DDT for agriculture use and legal action may be taken against companies which are indulged in such illegal acts.

Reply of the Government (Department of Agricultural Research and Education)

India is one of the most dynamic generic pesticide manufactures in the world with approximately 60 technical grade pesticides being manufactured indigenously by around 125 producers consisting of large and medium scale enterprises (including 10 MNCs) and more than 500 pesticide formulators spread over the country.

Govt has recently initiated several measures to promote “Make in India” directives. Registration committee of CIBRC in its 371st meeting held on 16.12.2016 has recommended cancellation of import certificates for technical grade chemicals /formulation import for companies who already possess registration certificates for manufacture of technical grade chemicals in the country. Similarly companies intending to manufacture pesticides in India will be given adequate relaxation/ exemption in terms of data requirements for registration once the chemical equivalence with the imported technical grade pesticide is established (Please also see Annexure-IV). All these steps are made to encourage indigenous manufacture and sale and discourage import of pesticides.

RC in its 373rd meeting 27.1.2017 recommended that henceforth every company has to provide monthly turnover of pesticides including technical imported, used for manufacture of formulations, balance stock, sold in the market etc. These practices would serve to remove inconsistencies between import and actual use in agriculture removing possibilities of diversion for illegal use.

To streamline the regulatory mechanism for manufacturing, import and sale of pesticides in the country and to curb the menace of spurious pesticides, several steps have been taken which are as under:

1. Drawal of samples by notified Insecticide Inspectors under the Act from the manufacturing premises, distributions / sale points and their analysis in the State Pesticides Testing Laboratories (SPTLs) to monitor the quality of pesticides by State authorities.

2. Launching of prosecutions against the manufacturers/ suppliers of pesticides which are found substandard.
3. Periodical review during the Zonal Conferences on inputs and National Conferences on Agriculture for Kharif and Rabi campaigns to further strengthen the Quality Control arrangements.
4. Training of Insecticide Analysts and Insecticide Inspectors to up-grade their knowledge and skills in the analysis of pesticides and enforcement of the various provisions of the Insecticides Act, 1968 and the Rules framed thereunder, respectively.
5. Education of farmers for correct and judicious use of good quality insecticides under the overall ambit of eco-friendly Integrated Pest Management (IPM) approach.
6. States have been advised to constitute special flying squads comprising of senior officers of the department to draw samples for quality monitoring. During every crop season to curb this menace of spurious products, mostly by unscrupulous manufacturers targeted purposeful sampling is advised.
7. States/UTs have been advised to fully utilize the analysis capacity of their SPTLs.
8. From time to time, the state functionaries have been guided to handle the cases of misbranded insecticides carefully and the launching of prosecutions against defaulters should not be delayed.
9. States have been advised that their Insecticide Inspectors should draw samples uniformly covering all manufacturers rather than selecting a few reputed manufacturers.
10. States / UTs have been advised to update their laboratory facilities in SPTLs. The Central Government has been giving grants-in-aid for the purpose.

11. Twenty Five States and One UT have set up 68 pesticides Testing Laboratories (PTLs) with an annual capacity of analyzing over 73507 samples for monitoring the quality status of pesticides.

12. The Central Government has also set up a Central Insecticides Laboratory as a National Referral laboratory under Section 16 of Insecticides Act, 1968. Besides, two Regional Pesticides Testing Laboratories have also been set up at Chandigarh and Kanpur to supplement the resources of the States/UTs in the analysis of pesticides. The Central Government has also set up a task force in the Department of Agriculture & Cooperation with a view to curb the menace of spurious pesticides.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

India is one of the most dynamic generic pesticide manufactures in the world with approximately 60 technical grade pesticides being manufactured indigenously by around 125 producers consisting of large and medium scale enterprises (including 10 MNCs) and more than 500 pesticide formulators spread over the country.

Govt has recently initiated several measures to promote “Make in India” directives. Registration committee of CIBRC in its 371st meeting held on 16.12.2016 has recommended cancellation of import certificates for technical grade chemicals /formulation import for companies who already possess registration certificates for manufacture of technical grade chemicals in the country. Similarly companies intending to manufacture pesticides in India will be given adequate relaxation/ exemption in terms of data requirements for registration once the chemical equivalence with the imported technical grade pesticide is established (Please also see **Annexure-I**). All these steps are made to encourage indigenous manufacture and sale and discourage import of pesticides.

RC in its 373rd meeting 27.1.2017 recommended that henceforth every company has to provide monthly turnover of pesticides including technical imported, used for

manufacture of formulations, balance stock, sold in the market etc. These practices would serve to remove inconsistencies between import and actual use in agriculture removing possibilities of diversion for illegal use.

The DAC&FW has issued following direction to the CIB&RC with a view to rationalize the import of pesticides in the Country.

1. Import of pesticides shall be permitted on submission of three years authentic import data by the holder of the registration.
2. The import of pesticides shall be reduced by 25% of the average of three years of import.

To streamline the regulatory mechanism for manufacturing, import and sale of pesticides in the country and to curb the menace of spurious pesticides, several steps have been taken which are as under:

1. Drawal of samples by notified Insecticide Inspectors under the Act from the manufacturing premises, distributions / sale points and their analysis in the State Pesticides Testing Laboratories (SPTLs) to monitor the quality of pesticides by State authorities.
2. Launching of prosecutions against the manufacturers/ suppliers of pesticides which are found substandard.
3. Periodical review during the Zonal Conferences on inputs and National Conferences on Agriculture for Kharif and Rabi campaigns to further strengthen the Quality Control arrangements.
4. Training of Insecticide Analysts and Insecticide Inspectors to up-grade their knowledge and skills in the analysis of pesticides and enforcement of the various provisions of the Insecticides Act, 1968 and the Rules framed thereunder, respectively.

5. Education of farmers for correct and judicious use of good quality insecticides under the overall ambit of eco-friendly Integrated Pest Management (IPM) approach.
6. States have been advised to constitute special flying squads comprising of senior officers of the department to draw samples for quality monitoring. During every crop season to curb this menace of spurious products, mostly by unscrupulous manufacturers targeted purposeful sampling is advised.
7. States/UTs have been advised to fully utilize the analysis capacity of their SPTLs.
8. From time to time, the state functionaries have been guided to handle the cases of misbranded insecticides carefully and the launching of prosecutions against defaulters should not be delayed.
9. States have been advised that their Insecticide Inspectors should draw samples uniformly covering all manufacturers rather than selecting a few reputed manufacturers.
10. States / UTs have been advised to update their laboratory facilities in SPTLs. The Central Government has been giving grants-in-aid for the purpose.
11. Twenty Five States and One UT have set up 68 pesticides Testing Laboratories (PTLs) with an annual capacity of analyzing over 73507 samples for monitoring the quality status of pesticides.
12. The Central Government has also set up a Central Insecticides Laboratory as a National Referral laboratory under Section 16 of Insecticides Act, 1968. Besides, two Regional Pesticides Testing Laboratories have also been set up at Chandigarh and Kanpur to supplement the resources of the States/UTs in the analysis of pesticides. The Central Government has also set up a task force in the Department of Agriculture & Cooperation with a view to curb the menace of spurious pesticides. With a view to assist the State in quality monitoring, establishment of two new RPTLs is proposed in the EFC for 2017-18 to 2019-20.

13. National Pesticides Reference Repository (NPRR) has been established for developing standardizing and providing Certified Reference Material (CRM)/reference standards to pesticides testing laboratories across the country for bringing uniformity in use of such standards, thereby bringing more accuracy and efficiency in monitoring quality of pesticides.

14. National Pesticides Investigation Laboratory (NPIL) has been established for investigations on lacing of bio-pesticides with chemical pesticides, investigations on pesticides imported illegally, method development & validation for newly introduced pesticide molecules and randomly verifying the test results of the analysts of all pesticides testing laboratories.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers

Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

SCIENTIFIC USE OF PESTICIDES

(Recommendation No.13)

The Committee are concerned to note that problems associated with unscientific and excessive use of pesticides have not been addressed properly by the Government of India and State Governments which is evident by rising cases of occupational exposure and associated diseases such as cancer among local farmers in Punjab and other places in the country. Besides creating awareness and training of farmers for scientific use of pesticides in agriculture, the Committee feel the need of distribution of protective gears and pesticide sprinklers to the farmers to prevent them from unwanted exposure of pesticides. The Committee are of considered view that it is imperative that the use of pesticides in agriculture and other sectors is supervised scientifically. The Committee are also of the view that economic gains should not be achieved at the cost of public health and the environment. The Committee, therefore, recommend that a comprehensive action plan may be prepared by the Government ensuring environment sustainable manufacturing, import, sale and use of pesticides in agriculture as well as other

sectors including availability of safety gears to farmers and workers. The Committee desire the Government to prepare action plan in consultation with all stakeholders such as State governments, Agricultural Universities/Institutions, Chemical Pesticides Manufactures/Importers, Traders, Farmers along with Experts/NGOs active in the field of agricultural management. The Committee also desire the Government to allocate specific funds for implementation of action plan for the purpose. The Committee would like to be apprised of the steps taken by the Government in this regard. The Committee also desired the Government to explore options to provide license for sale of pesticides to the persons holding degree/diploma/certificates in Agriculture Sciences.

Reply of the Government (Department of Agricultural Research and Education)

The Pesticide Management Bill, pending in parliament serves to oversee various issues and concerns associated with regulation and use of pesticides in Agriculture. Central Insecticide Board and MoA&FW periodically reviews issues concerning labeling of pesticides and classify them with colour code depending upon their toxicity and hazardous nature. DAC and CIBRC recently rationalized the label leaflet guidelines defining the language, font size, inclusion of precautions with pictorial depictions for easy and safe handling of pesticides. The committee on review of 66 pesticides recently has also recommended distribution of protective gears and container safety instructions. DAC, MoA&FW recently has also issued gazette notification specifying the minimum qualification as a mandatory requirement for issue of license for sale of pesticides.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

Pesticides are regulated in India through Insecticides Act, 1968. The experience in administering the Insecticides Act, 1968 over the last four decades has exposed certain gaps which spurred the need to propose a new law. Pesticide Management Bill (PMB) which is in discussion since 2008 and before, between this Ministry and Ministry of Law and Justice resulted in substantive changes to the original Bill as was introduced in the Parliament (Rajya Sabha). It was suggested by the Legislative Department, Ministry of Law and Justice that instead of moving official amendments

to rectify the changes and to add more than 90 enactments for repeal by way of lengthy amendments, it would be preferable, to withdraw 'The Pesticide Management Bill, 2008' and a new Bill namely, 'The Pesticide Management Bill, 2017' incorporating all the official amendments as on date be introduced in the Parliament. The Pesticide Management Bill, 2017 serve to oversee various issues and concerns associated with regulation and use of pesticides in Agriculture. Central Insecticide Board and MoA&FW periodically reviews issues concerning labeling of pesticides and classify them with colour code depending upon their toxicity and hazardous nature. DAC&FW and CIBRC recently rationalized the label leaflet guidelines defining the language, font size, inclusion of precautions with pictorial depictions for easy and safe handling of pesticides. The Committee on review of 55 pesticides recently has also recommended distribution of protective gears and container safety instructions. DAC&FW recently has also issues gazette notification specifying the minimum qualification as a mandatory requirement for issue of license for sale of pesticides.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)
O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

Comments of the Committee

For comments of the Committee please refer to Para No. 1.24 of Chapter I of this Report.

INSECTICIDES ACT, 1968

(Recommendation No. 15)

The Committee were briefed by the Department of Chemical and Petrochemical that while production of pesticides lies with them, the usage of pesticides is administered by the Ministry of Agriculture. So there is conflict of interest, in the admissibility of the provisions of the Act of 1968. It was argued that as the Department of Chemical and Petrochemicals is responsible for production of

pesticides in the country, administration of Insecticide Act should naturally be done by them. The Committee are of view that there is an urgent need for review of Insecticide Act, 1968 as the sector needs better regulatory framework in order to safeguard environment and public health. There is also a need for enhanced supervision and coordination between Central and State Governments for regulation of pesticides sector at ground level. The Committee, therefore recommend the Government to take steps for revision of Insecticides Act, 1968 in consultation with all stakeholders including farmers organizations, experts and NGOs/research institutions 107 active in agricultural field. The Committee also desire the Government to submit a report in this regard at the action taken stage.

Reply of the Government (Department of Agricultural Research and Education)

The Insecticides Act, 1968 and Rules framed there under not only regulate usage, but also regulate import, manufacturing, sale and distribution of Insecticides. Central Insecticides Board and Registration Committee (CIB & RC) constituted under section 4 and 5, respectively of the aforesaid Act, 1968 approve inclusion of a chemical or biological moiety in the schedule of Insecticides and its registration after scrutinizing their formulae and verifying claims made by the manufacturer and importer. A manufacturer can only start the production, once he has been issued certificate of registration from CIB & RC and license for manufacturing from the concerned state Govt. The manufacturing facilities for production of pesticides are verified by the state Govt. before issuing manufacturing license to the concerned firm/person. Further, officials from Food Safety and Standards Authority of India (FSSAI), under Union Health and Family Welfare Ministry, are responsible for checking the maximum residual level (MRL) of pesticides in food crops at the end level. The third agency, under Union ministry of Commerce and Industry, sets the guidelines and standards for production of pesticides in the country.

With the objectives to further improve Insecticides Act, 1968, Pesticides Management Bill was introduced in the Rajya Sabha on October 21, 2008. The Bill seeks to regulate the manufacture, quality, import, export and sale of pesticides to control pests, ensure availability of quality pesticides and minimize contamination of agricultural commodities with pesticide residue. Under the new regulation the Central Government shall constitute a Central Pesticides Board to advise the Central

and State Governments on matters related to the law such as (a) prevention of risk to human beings, animals and environment during the manufacture, sale and transport of pesticides; (b) monitoring performance of registered pesticides; and (c) review of the safety of pesticides. The Central Government shall establish a Registration Committee to (a) register pesticides after scrutinizing their formulae and verifying claims made with regard to its efficacy and safety; (b) specify requirements of necessary infrastructure; and (c) specify protocols and good manufacturing practices for manufacture of pesticides. The officers shall (a) maintain a register of persons engaged in manufacture or sale of pesticides; (b) provide information to the State Government on performance of registered pesticides; and (c) provide information to the State Government on infrastructure facilities of manufacturers.

The Central Government had established 02 Regional Pesticide Testing Laboratories and, a referral laboratory for regulating quality of pesticides. Central Insecticides Laboratory has been renamed as Central Pesticides Laboratory in the Pesticide Management Bill, 2008. The Bill prohibits the manufacture, import and export of misbranded, spurious or sub standard pesticides and any pesticide that contravenes the law. The Central or State Governments may appoint pesticide analysts and pesticide inspectors, latter shall have the power to enter and search a premise if he has reason to believe that a violation of the law has taken place; to take registers and records maintained by the manufacturer; to stop the distribution, sale or use of pesticide with the permission of the Executive Magistrate; and to take samples of any pesticides and send it for analysis by a pesticide analyst within 48 hours.

The Bill lists a number of penalties for offences such as use of pesticide in contravention of the law and sale of misbranded or sub-standard pesticide.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

The Insecticides Act, 1968 and Rules framed there under not only regulate usage, but also regulate import, manufacturing, sale and distribution of Insecticides. Central Insecticides Board and Registration Committee (CIB & RC) constituted under section 4 and 5, respectively of the aforesaid Act, 1968 approve inclusion of a

chemical or biological moiety in the schedule of Insecticides and its registration after scrutinizing their formulae and verifying claims made by the manufacturer and importer. A manufacturer can only start the production, once he has been issued certificate of registration from CIB & RC and license for manufacturing from the concerned state Govt. The manufacturing facilities for production of pesticides are verified by the state Govt. before issuing manufacturing license to the concerned firm/person. Further, officials from Food Safety and Standards Authority of India (FSSAI), under Union Health and Family Welfare Ministry, are responsible for checking the maximum residual level (MRL) of pesticides in food crops at the end level. The third agency, under Union ministry of Commerce and Industry, sets the guidelines and standards for production of pesticides in the country.

With the objectives to further improve Insecticides Act, 1968, Pesticides Management Bill was introduced in the Rajya Sabha on October 21, 2008. The Bill seeks to regulate the manufacture, quality, import, export and sale of pesticides to control pests, ensure availability of quality pesticides and minimize contamination of agricultural commodities with pesticide residue. Under the new regulation the Central Government shall constitute a Central Pesticides Board to advise the Central and State Governments on matters related to the law such as (a) prevention of risk to human beings, animals and environment during the manufacture, sale and transport of pesticides; (b) monitoring performance of registered pesticides; and (c) review of the safety of pesticides. The Central Government shall establish a Registration Committee to (a) register pesticides after scrutinizing their formulae and verifying claims made with regard to its efficacy and safety; (b) specify requirements of necessary infrastructure; and (c) specify protocols and good manufacturing practices for manufacture of pesticides. The officers shall (a) maintain a register of persons engaged in manufacture or sale of pesticides; (b) provide information to the State Government on performance of registered pesticides; and (c) provide information to the State Government on infrastructure facilities of manufacturers. The Bill is in discussion with Ministry of Law and Justice since 2008 and before, resulted in substantive changes to the original Bill as was introduced in the Parliament (Rajya Sabha). It was suggested by the Legislative Department, Ministry of Law and Justice that instead of moving official amendments to rectify the changes and to add more than 90 enactments for repeal by way of lengthy amendments, it

would be preferable to, to withdraw 'The Pesticide Management Bill, 2008' and a new Bill namely, 'The Pesticides Management Bill 2017' incorporating all the official amendments as on date be introduced in the Parliament.

The Central Government had established 02 Regional Pesticide Testing Laboratories and, a referral laboratory for regulating quality of pesticides. Central Insecticides Laboratory has been renamed as Central Pesticides Laboratory in the Pesticide Management Bill, 2008. The Bill prohibits the manufacture, import and export of misbranded, spurious or sub standard pesticides and any pesticide that contravenes the law. The Central or State Governments may appoint pesticide analysts and pesticide inspectors, latter shall have the power to enter and search a premise if he has reason to believe that a violation of the law has taken place; to take registers and records maintained by the manufacturer; to stop the distribution, sale or use of pesticide with the permission of the Executive Magistrate; and to take samples of any pesticides and send it for analysis by a pesticide analyst within 48 hours. In addition, with a view to assist the State in quality monitoring, establishment of two new RPTLs is proposed in the EFC for 2017-18 to 2019-20.

The Bill lists a number of penalties for offences such as use of pesticide in contravention of the law and sale of misbranded or sub-standard pesticide.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

CHAPTER - III

**OBSERVATIONS/RECOMMENDATIONS WHICH THE COMMITTEE DO NOT
DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES**

NIL

CHAPTER - IV

OBSERVATIONS/ RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

INTEGRATED NUTRIENT MANAGEMENT

(Recommendation No. 5)

The Committee note that Integrated Nutrient Management (INM) adopted from Tenth plan envisages conjunctive use of chemical fertilizers including secondary and micronutrient, organic manure, composts/vermin-compost, bio-fertilizers and green manures. ICAR has generated GIS based soil fertility maps, nutrient management packages, developed strains of Nitrogen fixer for production of quality biofertilizers, standardized technologies for preparation of urban/rural compost, green manuring and crop residue recycling which can be effectively utilized by the farmers of the country to improve soil health and augment agricultural production and productivity. ICAR has also 91 developed conservation technologies like fertigation, zero tillage, bed planting, laser land levelling and leaf colour chart to save costly fertilizers. According to ICAR, workshops and training programs are being organized to educate farmers on these aspects. However, the Committee are concerned to note that objectives as outlined in Integrated Nutrient Management could not be achieved by the Government which is amply exemplified by imbalanced use of fertilizers in terms of NPK, incidents of soil degradation in green revolution area like Haryana and Punjab and extreme lack of micronutrient in majority of Indian soils. The Committee also note that lack of effective extension services to the farmers as brought out in previous reports of the Committee is a limiting factor to achieve the aims of Integrated Nutrient Management. The Committee are of the view that unless a robust agriculture extension system is established in the country with special emphasis on training of farmers about good agricultural practices, provision of essential agricultural inputs and dissemination of technologies, bio-fertilizers etc. developed by agricultural institutions, it would be difficult to secure our environment without jeopardizing agricultural productivity. The Committee, therefore, recommend

the Government to plan an effective agricultural extension services in the entire country. The Committee also desire that the Government may initiate discussion on the issue with all State Governments, agricultural research institutions, NGOs active in the field of agriculture and experts at National and International level so that steps may be taken to achieve the objective of Integrated Nutrient Management well before 92 environmental degradation reached at a point of no return.

Reply of the Government (Department of Agricultural Research and Education)

The Government under the component of soil health management of National Mission on Sustainable Agriculture (NMSA) is promoting soil test based balanced and integrated nutrient management in the country through setting up/strengthening of soil testing laboratories, establishment of bio-fertilizer and compost unit, use of micronutrients, trainings and demonstrations. Under the Soil Health Management Scheme, Trainings for farmers & field demonstrations on judicious use of fertilizers are conducted. Awareness campaign through Print and visual media are carried out. Media plan to publicise Soil Health Card has been finalized.

KrishiVigyan Kendra's are also being equipped with soil testing kit developed by Indian Institute of Soil Science, Bhopal to ensure soil test based balanced and integrated nutrient management.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

The Government is promoting soil test based balanced and integrated nutrient management in the Country under the component of soil health management of National Mission on Sustainable Agriculture (NMSA). Farmers have been provided recommendations on balanced nutrient use based on soil fertility results of the fields. Training to farmers, demonstrations on judicious use of fertilizers are also part of the scheme. Widespread awareness campaign through print band visual media has been done.

Comments of the Committee

For comments of the Committee please refer to Para No. 1.12 of Chapter I of this Report.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)
O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

CONSTITUTION OF REGULATORY AUTHORITY FOR FERTILIZER SECTOR (Recommendation No. 7)

Availability of good quality fertilizers is one of the major responsibility of Central and State Governments by which they can help the farmers of the country to enhance their production and income. However, sometimes production and sale of inferior quality of fertilizers in the market badly affect agricultural production, which in turn affect already burdened farmers. Therefore, robust registration process of fertilizers and regular check are ways to ensure that only qualitative fertilizers are produced and sold in the market. The Committee note that Central Government has constituted a Central Fertilizer Committee (CFC) under Fertilizer Control Order (FCO), 1957 for analysis and recommendation of new fertilizer for inclusion in the FCO. CFC constituted a technical group consisting of a Chairman from ICAR and other members/scientists/experts from the field of agriculture. The Committee also note that before inclusion of any new fertilizer in the FCO, this technical group examines the agronomic aspects, specifications and field trials reports of new fertilizer. Agronomic field trials are required to be conducted by the Company in minimum two cropping seasons under the aegis of a State Agricultural University or any other Institutes of ICAR. Recommendation for inclusion of new fertilizer in FCO is done by CFC only on the basis of further examination of technical group report/recommendations. 95 The Committee are of the view that present system of certification of new fertilizer is cumbersome, time consuming and bureaucratic. Further, field trials of new fertilizer without involvement of technical group or CFC

leaves scope for manipulation of results of field trials. Thus, there is a need to streamline the existing process and constitution of a Fertilizer Development and Regulating Authority will help to streamline the process, certification of fertilizers, continuous quality check, imposing penalty for sub standard and spurious quality of fertilizers, promoting innovations in fertilizer sector and fixation of pricing of fertilizers etc. The Committee, therefore, recommend the Government to take required steps for Constitution of a regulatory authority for fertilizer sector.

Reply of the Government (Department of Agricultural Research and Education)

In order to simplify the procedure of inclusion of new fertilizers in Fertiliser Control Order (FCO), the Ministry has constituted a committee under the chairmanship of Joint Secretary (INM) to examine the issue.. The Committee examined and deliberated on the issue and suggested following procedural changes.

- (1) On line disposal of application;
- (2) Fixing a time limit for recommendation of Technical Committee on new grades.

The Ministry will implement these recommendations very soon.

As regard to constitution of a regulatory authority, it is submitted that fertilizer has been declared as an Essential Commodity by the Central Government under Section 2 (a) (xi) of the Essential Commodities Act, 1955. In exercise of the power conferred under section 3 (i) of above Act, the Government of India have promulgated the Fertilizer (Control) Order (FCO), 1957 which was subsequently revised as Fertiliser (Control) Order,1985 with the objective of regulating sale, price and quality of fertilizers at a fair price.

In exercise of the power under clause 37 of FCO, the Government of India vide notification SO No. 258 (E) dated 10th February,2016 constituted the Central Fertiliser Committee under the chairmanship of Additional Secretary (INM) and 10 other members to advice Central Government on the following issues:

- Inclusion of a new fertiliser, under this order;
- Specifications of various fertilizers;

- Grades/formulation of physical /granulated mixtures of fertilizers that can be allowed to be prepared in a state;
- Requirements of laboratory facilities in a manufacturing unit , including a unit manufacturing physical/granulated mixtures of fertilizers;
- Method of drawl and analysis of samples

Central Fertilizer Committee advises Central Government on above technical related aspects of fertilizers, on basis of which, the new grades are notified from time to time .

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

(i) In regard to streamlining of procedure of inclusion of new fertilizer in FCO, 1985, this Ministry has referred the matter to a committee constituted under the chairmanship of Joint Secretary (INM) to examine the simplification of procedure for notification/incorporation of new fertilizers under Fertilizer (Control) Order (FCO), 1985. The Committee examined and deliberated on the issue and recommended a simplified procedure that will reduce the time limit by 2-3 months. These recommendations are - (i) online disposal of application; and (ii) fixing a time limit for recommendation of Technical Committee on new grades. These recommendations were accepted by the Central Fertilizer Committee (CFC) in its 51st meeting. It was also suggested that a meeting of Technical Committee may be convened every month to discuss the issues relating to inclusion of new fertilizer and its recommendations to be placed before CFC, within 15 days.

(ii) As regards constitution of a regulatory authority, it is submitted that fertilizer has been declared as an Essential Commodity by the Central Government under Section 2(a) (xi) of the Essential Commodities Act, 1955. In exercise of the power conferred under section 3(i) of above act, the Government of India have promulgated the FCO, 1957 which was subsequently revised as FCO, 1985 with the objective of regulating sale, price and quality of fertilizers at a fair price.

In exercise of the power under clause 38 of FCO, the Government of India vide notification SO No. 258 (E) dated 10th February, 2016 constituted the CFC

under the chairmanship of Additional Secretary (INM) and 10 other members to advise Central Government on the issues relating to fertilizers.

Comments of the Committee

For comments of the Committee please refer to Para No. 1.20 of Chapter I of this Report.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)
O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

CONSTITUTION OF PESTICIDES DEVELOPMENT AND REGULATION

AUTHORITY

(Recommendation No. 14)

The Committee note that Insecticides Acts, 1968 and Insecticides rules, 1971 framed there under regulate import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animals, and matter connected therewith. Central Insecticide Board is constituted under the Act to advise the Central and State Governments on 105 technical matters arising out of administration of this Act and to carry out other functions assigned to the Board by or under this Act. The Committee also note that Registration Committee constituted under the Act is assigned responsibility for registration of pesticides after scrutinizing formula, verifying claims of efficacy and safety to human beings and animals, specifying the precautions against poisoning and any other functions. Registration Committee are empowered to refuse registration of any pesticides if issues pertaining to safety have not been satisfactorily adhered to. The Central Insecticide Board is empowered to ban manufacturing, import or sale of pesticides if concerns are raised about danger to public health and safety or any adverse report are received about toxic effect of any pesticides. However, the Committee are perturbed to note that there is no provision for periodic scientific evaluation of pesticides used

in the country and Central Insecticide Board doesn't carry out any research/study on its own and its advice to Government is based on national and international literature/ information available. Further, action for ban of particular pesticides is taken only after receipt of general information on ban or restriction of particular pesticides in other countries. Ban on pesticides is based on the recommendation of the Expert Committee constituted for the purpose. The Committee are of view that present system of registration of pesticides is not robust and hardly take care of manipulation of systemic deficiency. Further, absence of ongoing mechanism for periodic evaluation of efficacy and toxicity of pesticides is posing danger to environment in general and public health in 106 particular. The Committee are of view that there is need to streamline the regulatory mechanism for manufacturing, import and sale of pesticides in the country. The Committee, therefore, recommend the Government to take steps for constitution of Pesticides Development and Regulation Authority after Parliamentary approval for regulation of pesticide sector in the country. The Committee desire the Government to start discussion with all stakeholders for Constitution of such authority in a time bound manner.

Reply of the Government (Department of Agricultural Research and Education)

Committee constituted during 2014 to review 66 pesticides recommended Govt of India to introduce a practice of periodic review of pesticides for their efficacy, resistance, non-target effects and toxicity.

For effective regulation of pesticide sector in the country and to address various issues and concerns regarding inconsistencies in use of pesticides in Agriculture, Pesticides Management Bill, was introduced in the Rajya Sabha on October 21, 2008. The Bill standing in the parliament for approval seeks to regulate the manufacture, quality, import, export and sale of pesticides to control pests, ensure availability of quality pesticides and minimize contamination of agricultural commodities with pesticide residue. The Bill recommends imposition of penalties for offences such as use of pesticide in contravention of the law and sale of misbranded or sub-standard pesticide.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

The Registration Committee (RC) constituted under Section 5 of the Insecticides Act, 1968 registers pesticides after considering its efficacy and safety to human beings, animals and environment. In additions, technical reviews are carried out from time to time to assess the safety of pesticides for their continued use. The Committee constituted during 2014 to review 66 pesticides recommended Govt of India to introduce a practice of periodic review of pesticides for their efficacy, resistance, non-target effects and toxicity.

For effective regulation of pesticide sector in the country and to address various issues and concerns regarding inconsistencies in use of pesticides in Agriculture, Pesticides Management Bill, was introduced in the Rajya Sabha on October 21, 2008. The Bill is in discussion with Ministry of Law and Justice since 2008 and before, resulted in substantive changes to the original Bill as was introduced in the Parliament (Rajya Sabha). It was suggested by the Legislative Department, Ministry of Law and Justice that instead of moving official amendments to rectify the changes and to add more than 90 enactments for repeal by way of lengthy amendments, it would be preferable, to withdraw 'The Pesticide Management Bill, 2008' and a new Bill namely, 'The Pesticides Management Bill, 2017' incorporating all the official amendments as on date be introduced in the Parliament. The Pesticides Management Bill, 2017 seeks to regulate the manufacture, quality, import, export and sale of pesticides to control pests, ensure availability of quality pesticides and minimize contamination of agricultural commodities with pesticide residue. The Bill recommends imposition of penalties for offences such as use of pesticide in contravention of the law and sale of misbranded or sub-standard pesticide.

Comments of the Committee

For comments of the Committee please refer to Para No. 1.28 of Chapter I of this Report.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education)

O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers

Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

CHAPTER - V

OBSERVATIONS/ RECOMMENDATIONS IN RESPECT OF WHICH FINAL REPLIES OF GOVERNMENT ARE STILL AWAITED

FERTILIZER SUBSIDY POLICY

(Recommendation Para No. 6)

The Committee note that the Government has been regulating sale, pricing and quality of fertilizers in the country to ensure adequate and timely availability of fertilizers at affordable price to farmers for maximizing agricultural production in the country and to ensure food security for the people. The difference in concession rate/import price and net market realization is given as subsidy by the Government to the farmers through fertilizer industry. The subsidy regime started in the country during 1977 as Retention Price Scheme. Subsequently, Concession Scheme for P&K Fertilizers was introduced w.e.f. 01 April, 2008. Under the Concession Scheme, MRP of P&K fertilizer was fixed by the Government and the difference in the delivered price of fertilizers at the farm gate and MRP was compensated by the Government as subsidy to the Manufacturing Industries. This scheme was continued upto 31.03.2010. However, to overcome the deficiency of Concession Scheme, the Government introduced Nutrient based Subsidy (NBS) policy for N,P&K fertilizers w.e.f 01.04.2010. The Committee note that under NBS policy a fixed subsidy, decided annually, is provided on each subsidized P&K fertilizers depending upon its nutrient content such as N, P, K and Sulphur. Under NBS, additional subsidy is provided for fertilizers fortified with Zinc and Boron. Single Super Phosphate (SSP) has also been included under scheme. NBS policy was expected to promote innovation and broaden the basket of fertilizers and enable fertilizer use as per soil and crop 93 requirements. However, exclusion of Urea from NBS and decontrol of price of P & K fertilizers has led to imbalanced application of nitrogen vis-a-vis phosphoric and potassic fertilizers in country. These facts have been accepted by the representatives of the Department of Fertilizer during the evidence. The Committee have also observed that present policy of fertilizer subsidy also exclude liquid fertilizers, bio-fertilizers, farm organic manure etc. which are considered more

effective and environment friendly to restore soil fertility and enhancement of agricultural productivity. It has also been argued by the Department Agriculture, Cooperation & Farmers Welfare that usage of fertilizers should be left to the discretion of the farmers by direct transfer of fertilizer subsidy to the farmers. The representative of Department of fertilizer had also suggested to provide fertilizers to the farmers as per soil health card. The Committee are of view that the present NBS policy has failed to rationalize fertilizer subsidy and has led to imbalanced use of fertilizers due to high prices of Phosphatic and Potassic fertilizers and low price of Urea. While appreciating the recent reduction in the prices of phophestic and potassic fertilizers by the Central Government, the Committee are of the view that there is a need of fertilizer subsidy regime which can promote environment friendly fertilizers like bio-fertilizers, organic farm manure or liquid fertilizer which are more effective than granules. The Committee, therefore, recommend that existing fertilizer subsidy policy may be revised and the revised policy which is more appropriate for Indian conditions and favour sustainable growth of agriculture sector may be formulated. Further, there is a need to encourage 94 the organic farming considering its long term benefits. The ways of encouraging the organic farming should also be explored while revising the existing Fertilizer Subsidy Policy.

Reply of the Government (Department of Agricultural Research and Education)

As per Department of Fertilizers, Ministry of Chemical & Fertilizers, the issue on fertilizer subsidy policy involved wider consultation and hence, will be examined separately.

Reply of the Government (Department of Agriculture, Cooperation and Farmers Welfare)

Government is promoting organic farming across the country through various schemes viz. National Mission for Sustainable Agriculture (NMSA), Paramparagat Krishi Vikas Yojana (PKVY), Rashtriya Krishi Vikas Yojana (RKVY) and Mission for Integrated Development of Horticulture (MIDH), Network Project on Organic Farming under ICAR etc.

The Department has also been focusing on creating awareness and educating the farmers about organic farming practices in the areas where clusters are formed.

The Department is also providing back ended subsidy through NABARD for setting up of Bio-fertilizer production units which is 25% of the cost, subject to maximum limit of Rs. 40 lakhs. During 2013-14 to 2015-16, 39 units have been sanctioned. Besides, subsidy is being provided to farmers under PKVY scheme for purchase of bio-fertilizers @ Rs. 500/acre. Under PKVY Scheme, Rs. 18.02 crore have been released for 7208 clusters in different States for practicing organic farming.

Comments of the Committee

For comments of the Committee please refer to Para No. 1.16 of Chapter I of this Report.

[Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education) O.M No. NRM/1/11/2016-SWDF dated 08/03/2017 & 26/07/2017]

[Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare) O.M No. 3-15/2016-Fert Law dated 01.08.2017]

NEW DELHI;
July, 2018
Shravana, 1940 (Saka)

HUKM DEO NARAYAN YADAV
Chairperson,
Standing Committee on Agriculture.

State-wise Biofertilizer production units and their capacity

S. No.	Name of State	No of Units	Capacity Carrier based (MT)	No of units (Liquid based)	Capacity Liquid based (KL)
1.	A & N Islands	0	0	0	0
2.	Andhra Pradesh	16	3650	6	650
3.	Daman & Diu	0	0	0	0
4.	Karnataka	44	52878	21	855
5.	Kerala	23	8695	9	86.5
6.	Lakshadweep	0	0	0	0
7.	Pondicherry	3	2075	2	200
8.	Tamil Nadu	105	57875.31	15	2125
9.	Chhattisgarh	6	1015	2	555
10.	Gujarat	11	4670	11	6575
11.	Goa	1	1000	0	0
12.	Madhya Pradesh	36	14750	6	255
13.	Maharashtra	86	15840	10	866
14.	Rajasthan	1	1000	0	0
15.	D & N Haveli	0	0	0	0
16.	Delhi	1	1000	0	0
17.	Chandigarh	0	0	0	0
18.	Haryana	3	1220	3	130
19.	H.P.	2	250	1	450
20.	J & Kashmir	1	0.8	0	0
21.	Punjab	8	3620	8	255
22.	Uttar Pradesh	34	3159	5	1400
23.	Uttarakhand	5	6458	3	380
24.	Bihar	1	150	0	0
25.	Jharkhand	2	10	0	0
26.	Odisha	9	4100	2	90
27.	West Bengal	17	16385	3	50
28.	Arunachal Pradesh	1	100	0	0
29.	Assam	4	2200	1	1400
30.	Manipur	0	0	0	0
31.	Meghalaya	0	0	0	0
32.	Mizoram	1	75	0	0
33.	Nagaland	1	150	0	0
34.	Sikkim	1	150	0	0
35.	Tripura	1	3000	0	0
TOTAL		424	205476.1	108	16322.5

Annexure II

State-wise details of different bio fertilizers produced / available (lakh MT) in different States during last three years

SI N.	State	2013-14			2014-15		2015-16	
		Carrier based	Carrier	Liquid	Carrier	Liquid	Carrier	Liquid
South Zone								
1	A & N Islands	0	0.0000	0.0000	0	0		
2	Andhra Pradesh	2714.22	2668.8000	274.8560	3062.6	317.811		
3	Daman & Diu	0	0.0000	0.0000	0	0		
4	Karnataka	9907.337	16462.6200	23.0561	23042.91	488.142		
5	Kerala	3520.66	4916.9700	10.5096	4926.045	56.5751		
6	Lakshadweep	0	0.0000	0.0000	0	0		
7	Pondicherry	516.98	560.9500	1.4976	283.641	4.088		
8	Tamil Nadu	14104.83	15373.2900	11.3017	23721.2104	861.9535		
	Total	30764.027	39982.6300	321.2210	55036.41	1728.57		
West Zone								
1	Chhattisgarh	712.07	1024.680	9.620	954.371	9.38		
2	Gujarat	6411.434	3667.929	2800.500	3963.42	2873.317		
3	Goa	66.26	802.520	0.000	820.52	0		
4	Madhya	4824.194	2637.990	119.216	2741.30775	131.033		
5	Maharashtra	6218.607	14847.397	324.767	7825.142	389.665		
6	Rajasthan	1315	599.898	0.000	680	0		
7	D & N Haveli	0	0.000	0.000	0	0		
	Total	19547.565	23580.414	3254.103	16984.76	3403.395		
North Zone								
1	Delhi	396	104.500	0.000	106.2	0		
2	Chandigarh	0	0.000	0.000	0	0		
3	Haryana	1146.483	872.955	46.489	1097.457	58.032		
4	H.P.	26.147	0.768	33.070	2.712	190.05		
5	J & Kashmir	45.26	0.000	0.000	0	0		
6	Punjab	2124.852	6305.453	74.278	2197.197	149.581		
7	Uttar Pradesh	2682.221	4099.068	98.036	3053.115	223.34		
8	Uttarakhand	5493.851	2129.952	208.034	3549.39	428.22		
	Total	11914.814	13512.696	459.907	10006.07	1049.223		
East Zone								
1	Bihar	52.4	64.90	0.00	97	0		
2	Jharkhand	14.2	9.08	0.00	9.172	0		
3	Odisha	1097.61	1074.46	4.70	467.634	13.701		
4	West Bengal	1682.7076	2061.83	14.63	2826.27	23.537		
	Total	2846.9176	3210.27	19.33	3400.076	37.238		
North East Zone								
1	Arunachal Pradesh	59	59	0	3062.6	317.811		
2	Assam	149	88.000	0.000	1315	22.5		
3	Manipur	0	0.000	0.000	0	0		
4	Meghalaya	0	0.000	0.000	0	0		
5	Mizoram	4	3.600	0.000	4.2	0		
6	Nagaland	7.45	7.450	0.000	8.81	0		
7	Sikkim	10.1	12.400	0.000	12.91	0		
8	Tripura	225	240.000	0.000	1143.07	0		
	Total	454.55	410.450	0.000	5546.59	340.311		
	Grand Total	65527.87	80696.4559	4054.56371	88029.3041	6240.926		

Source: Compiled by NCOF (Data Provided by Production Units/State Government/ RCOFs)

**A. National Mission of Sustainable Agriculture (NMSA)-Organic & INM
Component of Soil Health Management (SHM):**

- i) Setting up of State of art liquid/ carrier based Bio -fertilizer /Bio-pesticide units, 100% Assistance to State Govt. /Govt..Agencies upto a maximum limit of Rs.160.00 lakh /unit and 25% of total financial outlay or limited to Rs.40 lakh /unit whichever is less for individuals /private agencies through NABARD as b a c k e n d e d capital investment subsidy scheme of 200 Total Per Annum (TPA) production capacity.
- ii) Setting up of Bio-fertilizer and Organic fertilizer testing Quality Control Laboratory (BOQCL) or Strengthening of existing Laboratory under FCO, assistance upto maximum limit of Rs.85 lakh for new laboratory and upto a maximum limit of Rs.45 lakh for strengthening of existing infrastructure to State Government Laboratory under Agriculture or Horticulture Department.
- iii) Promotion of Organic Inputs on farmer's field (Manure, Vermi-compost, Bio-Fertilizers Liquid /solid, Waste compost, Herbal extracts etc.), 50% of cost subject to a limit of Rs.5000/-per ha. and Rs.10,000 per beneficiary.
- iv) Setting up of mechanized Fruit/ Vegetable market waste/ Agro waste compost production unit 100% financial assistance to State Government/ Government Agencies upto a maximum limit of Rs.190.00 lakh per unit and 33% of project cost or maximum limited to Rs.63 lakh per unit whichever is less for individuals/private agencies through NABARD as capital investment for establishment of agro/vegetable waste compost production units of 3000 Total Per Annum (TPA) production.
- v) **Paramparagat Krishi VikasYojana (PKVY):** The scheme is implemented by the State Governments on a cluster basis of 20 hectare each. The farmer within the cluster is given following financial assistance for Integrated Manure Management.
 - a) Liquid Bio-fertilizer consortia (Nitrogen fixing/ Phosphate Solubilizing/ potassium mobilizing bio-fertilizer) @ Rs.500/acre x 50 of Rs.25000 per cluster in first year.
 - b) Liquid Biopesticides (*Trichoderma viridae*, *Pseudomonas fluorescens*, *Matarhizium*, *Beaviourie bassiana*, *Pacelomyces*, *verticillium*) 2 Rs.500/ acre x 50 of Rs.25000 per cluster in second year.

The detail guidelines are uploaded in web site www.agricoop.gov.in

B. Mission for Integrated Development of Horticulture (MIDH)

1. **Adoption of Organic Farming.** -50% of cost limited to Rs. 10000/ha for a maximum area of 4 ha. per beneficiary, spread over a period of 3 years involving assistance of Rs.4000/- in first year and Rs.3000/- each in second & third year. The programme to be linked with certification.

2. **Organic Certification** - Rs. 5 lakh for a cluster of 50 ha which will include Rs. 1.50 lakh in first year, Rs. 1.50 lakh in second year and Rs. 2.00 lakh in third year.

3. **Vermi compost Units/organic input production** - 50% of cost conforming to the size of the unit of 30'X8'X2.5' dimension of permanent structure to be administered on pro-rata basis. For HDPE Vermibed, 50% of cost conforming to the size of 96 cft (12'X4'X2') and IS 15907:2010 to be administered on pro-rata basis (Rs. 100,000/ unit for permanent structure and Rs. 16,000/unit for HDPE Vermibed)

C. National Mission on Oilseeds and Oil Palm (NMOOP): Financial assistance is being provided for different type of components including bio-fertilisers, Supply of Rhizobium culture/Phosphate Solubilising Bacteria (PSB)/ Zinc Solubilising Bacteria (ZSB)/ Azatobacter/ Mycorrhiza and vermi compost.

D. National Food Security Mission (NFSM): Under NFSM, financial assistance is provided for promotion of Bio-Fertilizer (Rhizobium/PSB) @50% of the cost limited to Rs.300 per ha.

E. Rashtriya Krishi Vikas Yojana (RKVY): Organic Farming projects are considered by respective State Level Sanctioning committee

F. Indian Council of Agricultural Research (ICAR): The Indian Council of Agricultural Research (ICAR), Pusa under Network project on Soil Biodiversity-Bio-fertilizer has developed improved and efficient strains of bio-fertilizer specific to different crops and soil types. Liquid Bio-fertilizer technology with higher shelf life has also been developed. The ICAR also imparts training, organizes Front Line Demonstrations (FLDs) to educate farmers on all these aspects.

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**MINUTES OF 371st MEETING OF REGISTRATION COMMITTEE (RC) HELD ON
16.12.2016 AT 10.30 A.M. IN COMMITTEE ROOM NO. 1 GROUND FLOOR, ICAR,
KRISHI BHAWAN, NEW DELHI**

S. No.	Issues	Decision of Registration Committee
1.	To reduce Import, guidelines shall be made stringent.	<p>Pesticides play an important role in increasing of Crop production. It is observed that during this decade import of pesticides have increased many folds impacting indigenous manufacturing of pesticides. It is also observed that some of the countries are trying to dump inferior quality pesticides in to Indian market. The Govt. of India is pushing “Make in India” program to achieve self-reliance and a major thrust has been given to Research and Development and production of high quality Agrochemicals. The Committee considered the situation alarming and decided to redefine the guidelines for import. The following decision were taken:</p> <ol style="list-style-type: none"> a. Where the molecule is registered under Indigenous manufacturing category, No Certificate of Registration for such molecules for import shall be granted in any category/section, henceforth. b. All the applications under scrutiny or completed or put up to RC for decision shall be governed under above decision at “a”. c. In view of the above decision TI v/s TIM guidelines stands withdrawn, henceforth. No certificate shall be issued under this category. d. No Certificate shall be issued henceforth u/s 9(4) Technical Import/ Formulation Import, if that molecule/formulation is registered under TIM or FIM. e. It was time again felt that some of the data/information relaxed in case of TI like details of Process of manufacturing of Technical/Formulation, Copy of Certificate of Registration, other authentic documents containing detailed Chemical Composition of the product shall be included in the requirement list, henceforth. f. Five batch samples in case of Technical Import/Formulation Import without Registering Technical have to be drawn from the commercial plant as per FAO guidelines for PRV purposes. All the expenditure on this Item Arrangements System shall be borne by the applicant. A detail proposal may be submitted to DAC&FW for in-principal approval and implementation of this provision.

2.	Those companies possessing manufacturing Certificate for Indigenous manufacturing of that pesticides shall not be permitted for import category registration.	It was decided that henceforth no certificate shall be issued to any company for import, if the applicant possess the Certificate of Registration of that product under Indigenous Manufacturing. Applicant of TI category has to submit an affidavit that he does not possess the CR of that product in TIM category. All such CR issued shall be stand cancelled and respective states Govt. may be requested for cancelling manufacturing/sell license of those products.
3.	To improve local manufacturing facilities and guidelines shall be relaxed in favour of local manufacturers.	The existing guidelines relevant to grant of registration for Indigenous Manufacture of pesticides under various categories have to be simplified. The committee decided as under: a. The following studies-Acute oral (Mice), Acute inhalation (Rat), Primary skin irritation, Irritation to mucous membrane in case of TIM category u/s 9(3) shall not be required, henceforth except in case of first registrant of the molecule. b. Ames test (First tier) shall replace all toxicology data requirement in case of TIM category u/s 9(4). c. All the studies non-adhering to GLP principles conducted by GLP accredited laboratory shall be accepted henceforth for all categories of applications of Indigenous category. d. Toxicology studies conducted by Non-GLP laboratories shall also be accepted for two years from the date of approval these minutes to encourage indigenous manufacturing and ease out in the process of registration of TIM/FIM category.
4.	Imports permits (Certificate of Registration) does not containing validity period shall need to be notified and shall be examined again.	It is observed that some of Source of import registered long back ceased to existence as on date, but some of the registrants are continuously importing pesticides from such sources as no verification has been carried out. Therefore it was decided that all Certificate Of Registrations, which does not bear validity of duration shall stand cancelled. All such Certificate of Registration is required to get verified their source of registration and its validity status from the Sectt. of CIB&RC. DAC&FW shall be requested to issue a Gazette Notification for cancelling all such Certificates. It was also further decided that all the respective States Govt./UT may also requested to cancel the manufacturing/repacking license of such products/registrants immediately. After in principle approval of DAC&FW for above, the procedural aspects may be devised by the Sectt. of CIB&RC and put up to RC.
5.	Matters relating to chemical equivalence shall be	It was decided that this matter may be put up in to next RC with complete facts.

compared with 9(3) registrant only.	
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STANDING COMMITTEE ON AGRICULTURE
(2016-17)

MINUTES OF THE TWENTY FIFTH SITTING OF THE COMMITTEE

The Committee sat on Thursday, the 03rd August, 2017 from 1500 hrs. to 1700 hrs. in Committee Room No. 1 (Block-A), Extension to Parliament House Annexe Building, New Delhi.

PRESENT

Shri Hukm Deo Narayan Yadav – Chairperson

MEMBERS
LOK SABHA

2. Prof. Ravindra Vishwanath Gaikwad
3. Shri Nalin Kumar Kateel
4. Smt. Raksha Khadse
5. Md. Badaruddoza Khan
6. Shri Janardan Mishra
7. Shri Neiphiu Rio
8. Shri B. S. Yeddyurappa

RAJYA SABHA

9. Shri Sambhaji Chhatrapati
10. Shri Janardan Dwivedi
11. Shri Mohd. Ali Khan
12. Shri Ram Nath Thakur

SECRETARIAT

- | | | | |
|----|----------------------|---|---------------------|
| 1. | Shri D.S. Malha | - | Joint Secretary |
| 2. | Shri Arun K. Kaushik | - | Director |
| 3. | Smt. Juby Amar | - | Additional Director |
| 4. | Shri C. Vanlalruata | - | Deputy Secretary |
| 5. | Shri Sumesh Kumar | - | Under Secretary |

LIST OF WITNESSES

MINISTRY OF AGRICULTURE AND FARMERS WELFARE
(DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION)

<u>S.No.</u>	<u>NAME OF THE OFFICER</u>	<u>DESIGNATION</u>
1.	Dr.Trilochan Mohapatra	Secretary (DARE) &DG (ICAR)
2.	Dr. K. Alagusundaram	Deputy Director General (NRM), ICAR
3.	Dr. S.K. Chaudhari	Assistant Director General (SWM), ICAR
4.	Dr. P.K. Chakrabarty	Assistant Director General (PP&B), ICAR
5.	Dr. P.P. Biswas	Assistant Director General (PP&B), ICAR
6.	Dr. Krishan K. Sharma	Principal Scientist (Soils), ICAR
7.	Shri B.S.Phogat	Principal Scientist, IAR, New Delhi
8.	Shri D.D.K.Sharma	Additional Plant Protection Advisor Secretary, Central Board of Insecticides & Registration Committee

MINISTRY OF AGRICULTURE AND FARMERS WELFARE
(DEPARTMENT OF AGRICULTURE, COOPERATION AND FARMERS
WELFARE)

- | | | |
|----|--------------------------|-----------------|
| 1. | Shri Shobhana Pattanayak | Secretary |
| 2. | Shri Ashwani Kumar | Joint Secretary |

MINISTRY OF CHEMICALS & FERTILIZERS
(DEPARTMENT OF CHEMICALS & PETROCHEMICALS)

- | | | |
|----|-------------------------|--|
| 1. | Shri Rajeev Kapoor | Secretary (Department of Chemicals & Petrochemicals) |
| 2. | Shri Samir Kumar Biswas | Joint Secretary (Chemicals) |
| 3. | Dr. Jitendra Kumar | Director (IPFT) |
| 4. | Shri S.P.Mohanty | Chairman & Managing Director (HIL) |

MINISTRY OF CHEMICALS & FERTILIZERS
(DEPARTMENT OF FERTILIZERS)

- | | | | | | | |
|--------|-----------------|----------------|-----|-----|-----|-----|
| 1. | Shri Dharam Pal | Addl.Secretary | | | | |
| *2. | XXX | XXX | XXX | XXX | XXX | XXX |
| *(i) | XXX | XXX | XXX | XXX | XXX | XXX |
| *(ii) | XXX | XXX | XXX | XXX | XXX | XXX |
| *(iii) | XXX | XXX | XXX | XXX | XXX | XXX |
| *(iv) | XXX | XXX | XXX | XXX | XXX | XXX |
| *3. | XXX | XXX | XXX | XXX | XXX | XXX |

[WITNESSES WERE USHERED IN]

4. Thereafter, the Chairperson welcomed the Representatives of the Ministry of Agriculture and Farmers Welfare (Department of Agriculture, Cooperation and Farmers Welfare and Department of Agricultural Research and Education) and Ministry of Chemicals and Fertilizers (Department of Chemicals and Petro-chemicals

and Department of Fertilizers) to the meeting and apprised them of the Directions regarding confidentiality of the Sitting.

5. After the introduction, Members of the Committee sought views on issue such as need to streamline the process of registration of new fertilizer and replacement of Central Fertilizer Committee by Fertilizer Regulatory Authority, provision for grievances redressal of farmers in case of supply of spurious and sub-standard pesticides and need of constitution of Pesticides Regulatory Authority. The representatives of the Ministries responded to most of the queries raised by the Committee and presented their views and action taken by the respective Ministries on the observations/recommendations contained in 29th Report of the Committee on the Subject "Impact of Chemical Fertilizers and Pesticides on Agriculture and Allied Sectors in the Country."

6. The Chairperson then thanked the witnesses for sharing valuable information with the Committee and directed them to send, in writing, the requisite information on the points or items, which was not readily available with them to the Secretariat by 10 August, 2017.

A verbatim record of the proceedings has been kept separately.

The Committee then adjourned.

****Matter not related to this report.***

STANDING COMMITTEE ON AGRICULTURE

(2017-18)

MINUTES OF THE TWENTY SEVENTH SITTING OF THE COMMITTEE

The Committee sat on Tuesday, the 31st July, 2018 from 1500 hrs. to 1635 hrs. in the Committee Room "B", Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Hukm Deo Narayan Yadav – Chairperson

**MEMBERS
LOK SABHA**

2. Shri Sanjay Dhotre
3. Prof. Ravindra Vishwanath Gaikwad
4. Shri Nalin Kumar Kateel
5. Smt. Rakha Nikhil Khadse
6. Md Badaruddoza Khan
7. Shri C. Mahendran
8. Dr. Tapas Mandal
9. Shri Nityanand Rai
10. Shri Mukesh Rajput
11. Shri Virendra Singh
12. Shri Dharmendra Yadav
13. Shri Jai Prakash Narayan Yadav

RAJYA SABHA

14. Shri Rajmani Patel
15. Shri Kailash Soni
16. Shri Harnath Singh Yadav

SECRETARIAT

- | | | | |
|----|----------------------|---|---------------------|
| 1. | Shri D.S. Malha | – | Joint Secretary |
| 2. | Shri Arun K. Kaushik | – | Director |
| 3. | Smt. Juby Amar | – | Additional Director |
| 4. | Shri Sumesh Kumar | – | Under Secretary |

- | | | | | |
|-----|-------|-------|-------|-------|
| *2. | XXXXX | XXXXX | XXXXX | XXXXX |
| *3. | XXXXX | XXXXX | XXXXX | XXXXX |

[THE WITNESSES WITHDREW]

4. Thereafter, the Committee took up for consideration the following draft Reports:
- (i) Draft Report on the Action Taken by the Government on the Observations/Recommendations contained in the 29th Report (16th Lok Sabha) of the Standing Committee on Agriculture (2015-16) on "Impact of Chemical Fertilizers and Pesticides on Agriculture and Allied Sectors in the Country" of the Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education).

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|--------|-------|-------|-------|-------|
| *(ii) | XXXXX | XXXXX | XXXXX | XXXXX |
| *(iii) | XXXXX | XXXXX | XXXXX | XXXXX |
| *(iv) | XXXXX | XXXXX | XXXXX | XXXXX |
| *(v) | XXXXX | XXXXX | XXXXX | XXXXX |
| *(vi) | XXXXX | XXXXX | XXXXX | XXXXX |

5. After some deliberations, the Committee adopted the draft Reports at para (i), (ii), (iii), (v) and (vi) without any modifications and Draft Report at para (iv) with minor modification and authorized the Chairperson to finalize and present these Reports to Parliament after factual verification of Subject report from the concerned Departments/Ministries.

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|-----|-------|-------|-------|-------|
| *6. | XXXXX | XXXXX | XXXXX | XXXXX |
|-----|-------|-------|-------|-------|

The Committee then adjourned.

(A copy of the verbatim proceedings of the Sitting has been kept separately).

Appendix

ANALYSIS OF ACTION TAKEN BY GOVERNMENT
ON THE TWENTY-NINTH REPORT (16th LOK
SABHA) OF STANDING COMMITTEE ON
AGRICULTURE (2015-16)
(Vide Para 4 of Introduction of the Report)

(i)	Total number of Recommendations	15
(ii)	Recommendations/Observations which have been Accepted by the Government	
	Para Nos. 1, 2, 3, 4, 8, 9, 10, 11, 12, 13 and 15	
	Total	11
	Percentage	73.33%
(iii)	Recommendations/Observations which the Committee Do not desire to pursue in view of the Government's replies	
	Para No.NIL	
	Total	00
	Percentage	0.00%
(iv)	Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee	
	Para Nos. 5, 7, and 14	
	Total	03
	Percentage	20.00%
(v)	Recommendations/Observations in respect of which Final replies of the Government are still awaited	
	Para No. 6	
	Total	01
	Percentage	6.66%