



FOREST DEVELOPMENT CORPORATION OF MAHARASHTRA LIMITED

(A Government of Maharashtra Enterprise)

No. Desk-PLN/R&M/FSC/C.R.29/24-25/ 1060

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CIRCULAR

Subject : Comprehensive Guidelines for handling and use of Pesticides.

Pesticides are used to afford adequate protection to tender seedlings and young plants. However, their safe handling and use cannot be compromised.

2.0 The Parliament has enacted the Pesticides Act, 1968 and in furtherance of the said Act, the Central Government has framed the Insecticide Rule 1971, which *inter alia* contain following provisions in view of the human safety measures-

- a. Medical Examination of persons engaged in work of handling, dealing or otherwise coming in contact with the insecticides during spraying operations.
- b. First Aid Measures.
- c. Protective Clothing.
- d. Respiratory Devices.
- e. Training Of Workers.
- f. Aerial Spraying Operations.
- g. Disposal of Used Packages, Surplus Materials and washing of insecticides.

3.0 The copy of the above mentioned Insecticides Rules, 1971 is enclosed herewith as **Annexure - 1** for ready reference. All the provisions are self explanatory and must be implemented and enforced without fail.

4.0 Forest Stewardship Council (FSC) has formulated its own policy and issued the guidelines regarding the use of pesticides in the field. It prohibits the use of 48 number of pesticides (Details are shown on page no. 5 to 8 of FSC-POL-30-001a EN document). The detailed guidelines are enclosed herewith for reference and further necessary action. All field functionaries must ensure that the prohibited pesticides shall not be used and the above said guidelines must be adhered to in letter and spirit. (**Enclosure** - FSC-POL-30-001a EN, FSC-PRO-30-001 V1-0 EN, FSC-POL-30-001 V3-0 EN)

5.0 Do's and Dont's for procuring, storage, handling and disposal of pesticides are framed and available on the official website of the Government of India, Ministry of Agriculture and Farmers Welfare. They are reproduced as under -

Do's	Dont's
While Purchasing <ul style="list-style-type: none"> • Purchase pesticides/biopesticides only from Registered pesticide dealers having valid Licence. • Purchase only just required quantity of pesticides for single operation in a specified area. • See approved labels on the containers/packets of pesticides. • See Batch No., Registration Number, Date of Manufacture / Expiry on the labels. • Purchase pesticides well packed in containers. 	While Purchasing <ul style="list-style-type: none"> • Do not purchase pesticides from foot path dealers or from un-licenced person. • Do not purchase pesticide in bulk for whole season. • Do not purchase pesticides without approved label on the containers. • Never purchase expired pesticide. • Do not purchase pesticides whose containers are leaking/loose/ unsealed.
During Storage <ul style="list-style-type: none"> • Store the pesticides away from house premises. • Keep pesticides in original containers. • Pesticides/weedicides must be stored separately. • Where pesticides have been stored, area should be marked with warning signs. • Pesticides be stored away from the reach of the children and live stocks. • Storage place should be well protected from direct sunlight and rain 	During Storage <ul style="list-style-type: none"> • Never store pesticide in house premises. • Never transfer pesticides from original to another containers. • Do not store insecticides with weedicides. • Do not allow children to enter the storage place. • Do not allow children to enter the storage place. • Pesticides should not be exposed to sunlight or rain water.
While Handling <ul style="list-style-type: none"> • Keep pesticides separate during transportation. • Bulk pesticides should be carried tactfully to the site of application. 	While Handling <ul style="list-style-type: none"> • Never carry/transport pesticides along with food/fodder/other eatable articles. • Never carry bulk pesticides on head, shoulder or on the back.
While Preparing spray solution <ul style="list-style-type: none"> • Always use clean water. • Use protective clothings viz., hand gloves, face masks, cap, apron, full trouser, etc. to cover whole body. • Always protect your nose, eyes, ears, hands, etc. from spill of spray solution 	While Preparing spray solution <ul style="list-style-type: none"> • Do not use muddy or stagnant water. • Never prepare spray solution without wearing protective clothings. • Do not allow the pesticide/its solution to fall on any body parts. • Never avoid reading instructions on container's label for use.

<ul style="list-style-type: none"> • Read instructions on pesticide container label carefully before use. • Prepare the solution as per requirement. • Granular pesticides should be used as such. • Avoid spilling of pesticides solutions while filling the spray tank. • Always use recommended dosage of pesticide. • No activities should be carried out which may affect your health. 	<ul style="list-style-type: none"> • Never use left out spray solution after 24 hours of its preparation. • Do not mix granules with water. • Do not smell the spray tank. • Do not use overdose which may affect plant health and environment. • Do not eat, drink, smoke or chew during whole operation of pesticides.
Selection of Equipments <ul style="list-style-type: none"> • Select right kind of equipments. • Select right sized nozzles. • Use separate sprayer for insecticides and weedicides. 	Selection of Equipments <ul style="list-style-type: none"> • Do not use leaky or defective equipments. • Do not use defective/non-recommended nozzles. Do not blow/clean clogged nozzles with mouth. Instead use tooth brush tied with sprayer. • Never use same sprayer for both weedicides and insecticides.
While applying spray solutions <ul style="list-style-type: none"> • Apply only recommended dose and dilution. • Spray operation should be conducted on cool and calm day. • Spray operation should be conducted on sunny day in general. • Use recommended sprayer for each spray. • Spray operation should be conducted in the wind direction. • After spray operation, sprayer and buckets should be washed with clean water using detergent/soap. • Avoid the entry of animals/workers in the field immediately after spray. 	While applying spray solutions <ul style="list-style-type: none"> • Never apply over-dose and high concentrations than recommended. • Do not spray on hot sunny day or strong windy conditions. • Do not spray just before rains and immediately after the rains. • Emulsifiable concentrate formulations should not be used for spraying with battery operated ULV sprayer. • Do not spray against wind direction. • Containers and buckets used for mixing pesticides should never be used for domestic purpose even after thorough washing. • Never enter in the treated field immediate after spray without bearing protective clothings.
After Spray Operation <ul style="list-style-type: none"> • Left over spray solutions should be disposed off at safer place viz. barren isolated area. • The used/empty containers should be crushed with stone/stick and buried deep in soil away from water sources. 	After Spray Operation <ul style="list-style-type: none"> • Left over spray solution should not be drained in or near ponds or water lines etc • Empty containers of pesticides should not be re-used for storing other articles.

<ul style="list-style-type: none"> • Wash hands and face with clean water and soap before eating/smoking. • On observing poisoning symptoms give the first aid and show the patient to doctor. Also show the empty container to doctor. 	<ul style="list-style-type: none"> • Never eat/smoke before washing clothes and taking bath. • Do not take the risk by not showing the poisoning symptoms to doctor as it may endanger the life of the patient.
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6.0 The Marathi translation of the said Do's and Dont's is enclosed in **Annexure - 2**. The same must be displayed at conspicuous places at the relevant sites.

Encl : As above


 (Sanjeev Gaur)
Chief General Manager (Planning)

To,

The General Manager, Nagpur Region, Nagpur

The Regional Manager, Chandrapur Region, Chandrapur

The Divisional Managers, Forest Project Divisions,

Nagpur / Bhandara / Yawatmal / Chandrapur / Markhanda / Pranhita / Depot Div. Ballarshah

Extract from the Insecticide Rules 1971,
notified by the Central Govt.
under the Insecticide Act, 1968.

CHAPTER VII

TRANSPORT AND STORAGE OF INSECTICIDES IN TRANSIT BY RAIL, ROAD OR WATER

35. Manner of packing, storage while in transit by rail

1. Packages containing insecticides, offered for transport by rail, shall be packed in accordance with the conditions specified in the Red Tariff, issued by the Ministry of Railways.
2. No insecticide shall be transported or stored in such a way as to come into direct contact with foodstuffs or animal feeds.
3. No foodstuffs or animal feeds which got mixed up with insecticides as a result of any damage to the packages containing insecticides during transport or storage shall be released to the consignees unless it has been examined for possible contamination by competent authorities, as may be notified by the State Government.
4. If any insecticide is found to have leaked out in transport or storage it shall be the responsibility of the transport agency or the storage owner to take such measure urgently to prevent poisoning and pollution of soil or water, if any.

36. Conditions to be specified for storage of insecticides

1. The package containing insecticides shall be stored in separate rooms or premises away from the rooms or premises used for storing other articles or shall be kept in separate almirahs under lock and key depending upon the quantity and nature of the insecticides.
2. The rooms or premises means for storing insecticides shall be well built, dry, well-lit and ventilated and of sufficient dimension.

CHAPTER VIII

PROVISIONS REGARDING PROTECTIVE CLOTHING, EQUIPMENT, AND OTHER FACILITIES FOR WORKERS DURING MANUFACTURE, ETC. OF INSECTICIDES

37. Medical Examination

1. All persons who are engaged in the work of handling, dealing or otherwise coming in contact with the insecticides during manufacture/formulation of insecticides or being engaged during spraying operation shall be examined medically before their employment and at least quarterly in the case of those engaged in manufacturing / formulation units and yearly in any other cases including operators while in service by a qualified doctor who is aware

of risks to which such persons are exposed. Particulars of all such persons, including the particulars of their medical examination, shall be entered in a register in Form XVII. Where the insecticide in question is an organo phosphorous compound or a carbonate compound, the blood cholinesterase's level shall be measured at least once a month of all persons working in the manufacturing units. The blood residue estimation shall be done once in a year in the case of persons working with organo chlorine group of insecticides in a manufacturing / formulation unit. In the case of spraying people working with the pest-control operators, the estimation of cholinesterase level (if working with organo phosphorous or carbonate compounds) and blood residue (if working with organo chlorine group) shall be conducted as and when advised by the doctor as part of the general medical test.

2. Any person showing symptoms of poisoning shall be immediately examined and given proper treatment.

38. First aid measures

In all cases of poisoning first-aid treatment shall always be given before the physician is called. The Indian Standard Guide for handling cases of insecticide poisoning-Part I First-Aid Measures [IS : 4015 (Par I)—1967] and Part II Symptoms, diagnosis and treatment [IS : 4015 (Par II)—1967] shall be consulted for such first-aid treatment in addition to any other books, on the subject. The workers also should be educated regarding the effects of poisoning and the first-aid treatment to be given.

39. Protective clothing

1. Persons handling insecticides during its manufacture, formulation, transport, distribution or application, shall be adequately protected with appropriate clothing.
2. The protective clothing shall be used wherever necessary, in conjunction with respiratory devices as laid down in rule 40.
3. The protective clothing shall be made of materials which prevent or resist the penetration of any form of insecticides formulations. The materials shall also be washable so that the toxic elements may be removed after each use.
4. A complete suit of protective clothing shall consist of the following dresses, namely :-
 - a. protective outer garment/overalls/hood/hat.
 - b. rubber gloves or such other protective gloves extending half-way up to the fore-arm, made of materials impermeable to liquids;
 - c. dust-proof goggles;
 - d. boots.

40. Respiratory devices

For preventing inhalation of toxic dusts, vapours of gases, the workers shall use any of the following types of respirators or gas-masks suitable for the purpose, namely :

- a. Chemical Cartridge Respirator;
- b. Supplied-air Respirator;
- c. Demand flow type respirator;
- d. Full-face or half-face gas-masks with canister.

In no case shall the concentrates of insecticides in the air where the insecticides are mixed exceed the maximum permissible values.

41. Manufacturers, etc. to keep sufficient quantities of antidotes and first-aid medicines

The manufacturers and distributors of insecticides and persons who undertake to spray insecticide on a commercial basis (hereafter in these rules referred to as operators) shall keep sufficient stocks of such first-aid tools, equipments, antidotes, injections and medicines as may be required to treat poisoning cases arising from inhalation, skin, contamination, eye contamination and swallowing.

42. Training of workers

The manufacturers and distributors of insecticides and operators shall arrange for suitable training in observing safety precautions and handling safety equipment provided to them.

43. Aerial spraying operations

The aerial application of insecticides shall be subject to the following provisions, namely :

- a. making of the area shall be the responsibility of the operators;
- b. the operators shall use only approved insecticides and their formulations at approved concentration and height;
- c. washing decontamination and first-aid facilities shall be provided by the operators;
- d. All aerial operations shall be notified to the public not less than twenty-four hours in advance through competent authorities;
- e. Animals and persons not connected with the operations shall be prevented from entering such areas for a specific period; and
- f. The pilots shall undergo specialization training including clinical effects of the insecticides.

44. Disposal of used packages, surplus materials and washings of

insecticides

1. It shall be the duty of manufacturers, formulators of insecticides and operators to dispose packages or surplus materials and washing in a safe manner so as to prevent environmental or water pollution.
2. The used packages shall not be left outside to prevent their re-use.
3. The packages shall be broken and buried away from habitation.

CHAPTER IX

MICELLANEOUS

45. Places at which the insecticides may be imported

No insecticides shall be imported into India except through one of the following places, namely :

Ferozepore Cantonment and Amritsar railway stations in respect of insecticides imported by rail across the frontier with West Pakistan.

Ranaghat, Bongaon and Mahiassan railway stations in respect of insecticides imported by rail across the frontier with the East Pakistan.

Madras, Calcutta, Bombay, Cochin and Kandla – in respect of insecticides imported by sea into India.

Madras, Calcutta, Bombay, Delhi and Ahmedabad – in respect of insecticides imported by air into India.

46. Traveling and other allowances payable to the members of the Board, etc.

The members of the Board, Registration Committee and any other Committee appointed by the Board shall be entitled to such traveling and other allowances for attending meetings of the Board shall be entitled to such traveling and other allowances for attending meetings of the Board, Registration Committee or other Committee, as the case may be, as are for the time being admissible to Grade I officers of the Central Government.



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Annexure - 2

कीटकनाशकाच्या सुरक्षित वापरासाठी सूचना

हे करा	हे करू नका
खरेदी करताना <ul style="list-style-type: none"> वैध परवाना असलेल्या नोंदणीकृत कीटकनाशक विक्रेत्यांकडूनच कीटकनाशके खरेदी करा. एका विशिष्ट क्षेत्रात एका फवारणीसाठी आवश्यक असतील तेवढेच कीटकनाशके खरेदी करा. कीटकनाशकांच्या डबा पॅकेट्सवर मंजूर लेबले पहा. लेबलांवर बैच क्रमांक, नोंदणी क्रमांक, उत्पादनाची तारीख / कालबाह्यता पहा. डब्यामध्ये / पॅकेटमध्ये चांगले पॅक केलेले सिलबंद कीटकनाशके खरेदी करा. 	खरेदी करताना <ul style="list-style-type: none"> फूटपाथ विक्रेत्यांकडून किंवा परवाना नसलेल्या व्यक्तीकडून कीटकनाशके खरेदी करू नका. संपूर्ण हंगामासाठी मोठ्या प्रमाणात कीटकनाशके खरेदी करू नका. डब्यावर मान्यताप्राप्त लेबल नसलेली कीटकनाशके खरेदी करू नका. कालबाह्य झालेले कीटकनाशक कधीही खरेदी करू नका. सीलबंद नसलेल्या, गळती होत असलेल्या डब्यामधून / पॅकेटमधून कीटकनाशके खरेदी करू नका.
साठवणुकी दरम्यान <ul style="list-style-type: none"> कीटकनाशके घरापासून दूर ठेवा. मूळ डब्यामध्ये/ पॅकेटमध्ये कीटकनाशके ठेवा. कीटकनाशके/तणनाशके स्वतंत्रपणे साठवली पाहिजेत. जेथे कीटकनाशके साठवली गेली आहेत, ते क्षेत्र चेतावणी चिन्हांसह चिन्हांकित केले जावे. कीटकनाशके मुलांच्या आवाक्याबाहेर आणि जिवंत साठ्यापासून दूर ठेवावीत. साठवण ठिकाण थेट सूर्यप्रकाश आणि पावसापासून चांगले संरक्षित केले पाहिजे. 	साठवणुकी दरम्यान <ul style="list-style-type: none"> घराच्या आवारात कधीही कीटकनाशके ठेवू नका. मूळ डबा / पॅकेटमधील कीटकनाशके दुसऱ्या भांड्यामध्ये ओतुन ठेवू नका. तणनाशके व कीटकनाशके एकत्र साठवू नका. मुलांना व जनावरांना साठवणुकीच्या ठिकाणी जाऊ देऊ नका. कीटकनाशकांना थेट सूर्यप्रकाश लागू नये किंवा ती पावसाच्या पाण्यात जाऊ नयेत यासाठी आवश्यक काळजी घ्या.
हाताळताना <ul style="list-style-type: none"> वाहतूक करताना कीटकनाशके इतर पदार्थापासून वेगळे ठेवा. मोठ्या प्रमाणात वापरली जाणारी कीटकनाशके कुशलतेने हाताळावीत. 	हाताळताना <ul style="list-style-type: none"> अन्न / चारा / इतर खाण्यायोग्य वस्तूंसोबत कधीही कीटकनाशके बाळगू नका / वाहतूक करू नका. मोठ्या प्रमाणात वापरली जाणारी कीटकनाशके डोक्यावर, खांद्यावर किंवा पाठीवर वाहून नेऊ नये.

<p>फवारणीचे द्रावण तयार करताना</p> <ul style="list-style-type: none"> • नेहमी स्वच्छ पाणी वापरा. • संपूर्ण शरीर झाकण्यासाठी संरक्षक कपडे उदा., हातमोजे, फेस मास्क, टोपी, एप्रन, पूर्ण पायघोळ इत्यादी वापरा. • स्प्रे द्रावणाच्या गळतीपासून नेहमी तुमचे नाक, डोळे, कान, हात इत्यादींचे संरक्षण करा. • वापरण्यापूर्वी कीटकनाशक डबा/ पॅकेटच्या लेबलवरील सूचना काळजीपूर्वक वाचा. • आवश्यक तेवढेच द्रावण तयार करा. • दाणेदार कीटकनाशकांचा वापर मुळ स्वरूपात करावा. • फवारणी टाकी भरताना कीटकनाशकांच्या द्रावणांची गळती टाळा. • नेहमी शिफारस केलेले मात्रेप्रमाणेच कीटकनाशक वापरा. • तुमच्या आरोग्यावर परिणाम होईल, अशी कोणतीही क्रिया करू नये. 	<p>फवारणीचे द्रावण तयार करताना</p> <ul style="list-style-type: none"> • गढूळ किंवा साचलेले पाणी वापरू नका. • संरक्षणात्मक कपडे परिधान केल्याशिवाय स्प्रे द्रावण कधीही तयार करू नका. • कीटकनाशक/त्याचे द्रावण शरीराच्या कोणत्याही अवयवांवर पडू देऊ नका. • वापरासाठी डबा/पॅकेटच्या लेबलवरील सूचना वाचणे कधीही टाळू नका. • फवारणीचे शिल्लक राहीलेले द्रावण तयार केल्याच्या २४ तासांनंतर कधीही वापरू नका • ग्रेन्युल्स पाण्यात मिसळू नका. • फवारणीच्या टाकीचा वास घेऊ नका. • शिफारशीपेक्षा जास्त मात्रा वापरू नका ज्यामुळे वनस्पती आरोग्य आणि पर्यावरणावर परिणाम होऊ शकतो. • कीटकनाशकांच्या संपूर्ण ऑपरेशन दरम्यान खाऊ, पिऊ, धुम्रपान किंवा चघळू नका.
<p>उपकरणांची निवड</p> <ul style="list-style-type: none"> • योग्य प्रकारची उपकरणे निवडा. • योग्य आकाराचे नोजल निवडा. • कीटकनाशके आणि तणनाशकांसाठी स्वतंत्र फवारणीयंत्र वापरा. 	<p>उपकरणांची निवड</p> <ul style="list-style-type: none"> • गळती किंवा सदोष उपकरणे वापरू नका. • सदोष/शिफारस नसलेल्या नोजलस वापरू नका. अडकलेल्या नोजलस तोंडाने उडवू नका / स्वच्छ करू नका. त्याऐवजी स्प्रेअरने बांधलेला टूथब्रश वापरा. • तणनाशके आणि कीटकनाशके दोन्हीसाठी एकच फवारणी यंत्र कधीही वापरू नका.
<p>फवारणी करताना</p> <ul style="list-style-type: none"> • शिफारस केलेले डोसप्रमाणे द्रावण तयार करा. • फवारणी वातावरण थंड आणि वारा शांत असताना करावी. • फवारणी सर्वसाधारणपणे सूर्यप्रकाशाच्या दिवशी केली पाहिजे. • प्रत्येक फवारणीसाठी शिफारस केलेले स्प्रेअर वापरा. • फवारणी वाऱ्याच्या दिशेने करावी. • स्प्रे ऑपरेशननंतर, स्प्रेअर आणि बांदल्या डिटर्जेंट/ साबण वापरून स्वच्छ पाण्याने धुवाव्यात. • फवारणी नंतर ताबडतोब शेतात जनावरे /कामगारांना जाणे टाळावे. 	<p>फवारणी करताना</p> <ul style="list-style-type: none"> • शिफारस केलेल्या प्रमाणापेक्षा जास्त डोस कधीही फवारू नका. • कडक उन्हात किंवा जोरदार वाऱ्याच्या परिस्थितीत फवारणी करू नका. पाऊस पडण्यापूर्वी आणि पाऊस पडल्यानंतर लगेच फवारणी करू नका. • इमल्सिफायबल कॉन्सन्ट्रेट फॉम्युलेशन चा वापर बॅटरीवर चालणाऱ्या ULV स्प्रेअरने फवारणीसाठी करू नये, • वाऱ्याच्या विरुद्ध दिशेने फवारणी करू नका. • कीटकनाशके मिसळण्यासाठी वापरण्यात येणारे डबा आणि बांदल्या पूर्णपणे धुतल्यानंतरही कधीही घरगुती कारणासाठी वापरू नयेत. • फवारणीनंतर संरक्षणात्मक कपडे घातल्याशिवाय शेतात कधीही प्रवेश करू नका.

फवारणी केल्यानंतर

- फवारणी नंतर शिल्लक द्रावणाची सुरक्षित नापीक / विलग क्षेत्रामध्ये नेऊन विल्हेवाट लावावी.
- वापरलेले/ रिकामे डबे / पॅकेटदगड / काठीनेटे चुनपाण्याच्या स्रोतांपासून दूर जमिनीत खोल गाडून टाकावेत.
- खाणे / धूम्रपान करण्यापूर्वी हात आणि चेहरा स्वच्छ पाण्याने आणि साबणाने धुवा.
- विषबाधाची लक्षणे दिसल्यावर प्रथमोपचार करा तसेच रिकामा डबा / पॅकेट सोबत घेवून डॉक्टरांना दाखवा.

फवारणी केल्यानंतर

- फवारणीचे उरलेले द्रावण तलावात, तलावाजवळ किंवा पाण्यात टाकु नये.
- कीटकनाशकांचे रिकामे डबे / पॅकेट इतर वस्तू साठवण्यासाठी पुन्हा वापरू नयेत. फवारणी नंतर कपडे धुण्यापूर्वी आणि आंघोळ करण्यापूर्वी कधीही खाऊ / धूम्रपान करू नका.
- विषबाधाची लक्षणे डॉक्टरांना दाखवून धोका पत्करू नका कारण त्यामुळे रुग्णाच्या जीवाला धोका होऊ शकतो.

(Sanjeev Gaur)

Chief General Manager (Planning)