

PLANT PROTECTION (FUMIGATION) REGULATIONS

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G.N. 114/1973

PLANT PROTECTION (FUMIGATION) REGULATIONS

under s. 12

1. Citation

These Regulations may be cited as the Plant Protection (Fumigation) Regulations.

2. Interpretation

In these Regulations, unless the context otherwise requires—

“fumigant” means any gaseous or readily volatilized chemical used as a pesticide or any substance or substances producing such a chemical;

“fumigation” means the application of a fumigant to any growing medium, plant, commodity or building for the purpose of destroying injurious organisms, and cognate words shall be construed accordingly;

“sand-snake” means a cylinder of hessian, at least three inches in diameter, and two feet in length, filled with sand and sealed at each end.

3. Essential fumigation equipment: First Schedule

Before commencing any fumigation, the person who intends to fumigate shall have on hand at the site of the proposed fumigation, and available for use in the operation, the equipment listed in the First Schedule, and such equipment shall be in good repair.

4. Fumigator must possess Forms No. 1 and No. 2 of Second Schedule

No person shall commence any fumigation, unless he has in his possession a Record of Fumigation Form and a Certificate of Clearance Form, being Form No. 1 and Form No. 2, respectively, of the Second Schedule.

5. Notice of intention to fumigate when phytosanitary certificate required

Where—

(a) under the Act, or any other written law, or any instruction of the Minister, a phytosanitary certificate is required to be obtained by the owner in respect of any fumigation; or

(b) any owner desires to obtain a phytosanitary certificate in respect of any particular fumigation which he intends to have carried out,

such owner shall, not less than twenty-four hours before the commencement of the fumigation, cause notice in writing of his request for a phytosanitary certificate in respect of such intended fumigation to be served upon an inspector, and such notice shall contain particulars of the date, time and place of the intended fumigation and of the fumigant intended to be used therefor unless the inspector, acting in his discretion, deems the furnishing of all or any of such particulars unnecessary.

6. Inspector may be present at fumigation

An inspector shall be entitled to be present at any fumigation made pursuant to a notice served under regulation 5, and shall be entitled to direct the same.

7. Procedure to be followed in umigating

The procedure to be followed in the fumigation of buildings and commodities shall be as set forth in the Third Schedule.

8. Inspection of equipment

An inspector shall be entitled to inspect, at all reasonable times, all equipment used, or intended to be used, in any process of fumigation, and such equipment shall be kept readily available by the fumigator for any such inspection.

9. Competence of fumigators

The Minister may, at any time and as often as he deems it necessary, require any person who undertakes, or intends to undertake, contracts for fumigation for reward, to show to the satisfaction of any duly authorized inspector, or other public officer, as the case may be, that he, or any employee of his responsible for carrying out any fumigation on his behalf, possesses sufficient knowledge of both the theory and practice of fumigation to engage in such operations. Upon being satisfied that such person possesses such knowledge, the said duly authorized inspector, or other public officer, as the case may be, shall issue to such person a Certificate of Competence in Fumigation in the form set out in Form 3 of the Second Schedule.

10. Unsatisfactory fumigation: Re-fumigation

Where any inspector has cause to believe that any fumigation has not been carried out in a satisfactory manner, or in accordance with these Regulations, he may order that the building or commodity be refumigated as often as such inspector may deem it necessary until the said building or commodity has been fumigated to the inspector's satisfaction. If the fumigation is one for which a phytosanitary certificate is requested or required, the inspector shall not issue such certificate until such fumigation has been properly and satisfactorily executed.

11. Certificate of Competence where fumigation is unsatisfactory

Where a re-fumigation has been ordered under regulation 10, the inspector may require that the person responsible for the unsatisfactory fumigation which necessitated the re-fumigation procure a

Certificate of Competence in Fumigation pursuant to regulation 9 before undertaking any further or other fumigation under these Regulations, and this requirement may be imposed on any such person whether he has undertaken, undertakes or intends to undertake, contracts for fumigation for reward or otherwise. If, however, the person responsible for any such unsatisfactory fumigation is the holder of a Certificate of Competence in Fumigation, the inspector may cancel such Certificate and may require the said person to procure a new such Certificate under regulation 9 before undertaking any further fumigation operations.

12. Fumigants and application

The fumigants to be used in any fumigation under these Regulations shall be those fumigants set forth in the Fourth Schedule and shall be used for the respective specific fumigation purposes, and in the respective specific manner, set forth in the said Schedule in respect of such respective fumigation purposes.

FIRST SCHEDULE reg. 3

ESSENTIAL EQUIPMENT FOR FUMIGATION

(a) Fumigation sheets of a size adequate to cover completely any produce to be fumigated allowing an overlap on the ground all round of at least one foot.

(b) Sand-snakes or heavy chains sufficient in number completely to seal the fumigation sheet to the ground.

(c) Where methyl bromide cylinders are used, dispersal tube systems sufficient to ensure even distribution of gas.

(d) Where methyl bromide cans are used, applicators adequate in number to secure even distribution of gas.

(e) Respirators with appropriate canisters sufficient in number to supply one to each person engaged in fumigation.

(f) Halide detector lamp or gas concentration meter.

(g) Sufficient warning notices in English and Chichewa to warn any person of his approach to the fumigation operation.

(h) Where fumigation sheets are to be joined, clamps sufficient in number for such purpose.

SECOND SCHEDULE Reg. 4 and 9

FORMS

FORM No. 1

PLANT PROTECTION ACT

(CAP. 64:01)

RECORD OF FUMIGATION

- Record of Fumigation No.
1. Date and time of application of fumigant
 2. Name of owner
 3. Location of premises
 4. Situation on premises (Diagram if more than one stack)
.....
.....
 5. Commodity
 6. Distinguishing marks of commodity to be fumigated
 7. (Tobacco only) Nature of Liners
 8. Dimensions of stacks or building and cubic capacity
 9. Nature of infestation if known
 10. Number and sizes of sheets used
 11. Dosages required for each stack or room
 12. (Methyl bromide cylinders only) identification numbers and weights of each cylinder at beginning and end of application to each stack or room (for main and booster doses of tobacco)
.....
 13. Date and time of commencement of airing
 14. Date and time of issue of clearance certificate
 15. Person to whom clearance certificate given
 16. Air temperature at time of application of fumigant
.....
 17. Evidence, if any, of efficacy of treatment (e.g. presence of dead insects)
.....

18. Name of person responsible for fumigation

Signed

Rank :

Date :

FORM No. 2

PLANT PROTECTION ACT

(CAP. 64:01)

CERTIFICATE OF CLEARANCE

Certificate of Clearance No.

This is to certify that I have carried out fumigation on the premises ofin accordance with Record of Fumigation number..... and now declare the premises free of gas and ready for reoccupation.

Signed

Rank

Date and time

FORM No. 3

PLANT PROTECTION ACT

(CAP. 64:01)

CERTIFICATE OF COMPETENCE IN FUMIGATION

This is to certify that I have today examined as to both his theoretical and practical competence in fumigation with and found that he has the knowledge adequate to enable him to carry out such fumigation satisfactorily.

Signed

for Permanent Secretary for Agriculture

and Natural Resources

Date

THIRD SCHEDULE reg. 7

FUMIGATION PROCEDURE

DIRECTIONS

Building:

Where an entire building is to be fumigated the walls and roof must be rendered impervious to gas, and all doors and ventilators, as well as all cracks or joints, shall be sealed while the fumigation is in progress, and a warning notice shall be placed outside each entrance to the building.

Commodities :

(a) Where any commodity is to be fumigated it shall be placed in a stack or stacks in such a manner as to allow full penetration of the fumigant throughout such stack or stacks.

(b) Before commencing fumigation—

(i) indoors, the floor of the building in which the operation is to be carried out shall be of concrete or firm dry earth and shall be examined thoroughly to ensure that it is impervious to gas. If the floor is not of concrete or of firm dry earth, or if it is found not to be impervious to gas, the commodity to be fumigated shall be stacked on a fumigation sheet in accordance with these directions;

(ii) out of doors, the commodity to be fumigated shall be stacked on a concrete slab, or on a fumigation sheet in accordance with these directions.

(c) For fumigation by—

(i) Methyl bromide, the distribution piping shall be placed in position on top of the stack;

(ii) Aluminium phosphide, the tablets shall be distributed evenly around the stack, preferably in papier mache egg-trays, ensuring that adjacent tablets do not touch each other, and such fumigant shall be applied in the manner and at the dosage appropriate thereto, as set out in the Fourth Schedule.

(d) A fumigation sheet shall be fitted over each stack, completely covering the same so that a one-foot wide margin of the sheet shall be extending on to the floor all round the stack.

(e) The sand-snakes, or chains, shall be placed in position on the floor on top of the extended margin of the sheet all round the stack, ensuring that each sand-snake, or chain, touches those on each side of it.

(f) The warning notices shall be placed in position; at least one warning notice at each accessible corner of each stack. If the stacks are inside a building a warning notice shall also be placed outside each entrance to the building.

(g) Where methyl bromide is to be used as the fumigant each person present shall put on a respirator and see that it is properly fitted. Respirators shall continue to be worn by all present throughout the operation until after compliance with direction (h); and at least two persons shall be present at all times until the fumigation is concluded.

(h) A check for leaks shall be made. Wherever possible, a halide lamp or gas concentration meter shall be used for this purpose.

If any leaks are found, they shall be sealed off immediately, by adjusting the position of the sand-snakes, chains or clamps. When the stack or stacks are found free of leaks, respirators may be removed.

(i) Record of Fumigation (Form No. 1, Second Schedule) shall be completed as far as item 12 and delivered to the owner, and the owner shall be instructed that unauthorized persons must not be permitted access to the fumigation area.

(j) If the stack or stacks are indoors and the relevant period of fumigation has elapsed, all doors, windows and ventilators to the building, in which the stack or stacks are located, shall be opened. The fumigation sheets covering the stack or stacks shall be removed, and the building vacated quickly. Respirators shall be worn by all persons before entering the building during this operation, and shall be worn throughout the operation. The warning notices shall be put back in position. When the building is declared free of gas by the fumigator, the respirators may be taken off, the warning notices removed, and general access to the building permitted.

(k) If the stack or stacks are outdoors and the relevant period of fumigation has elapsed, the fumigation sheet covering each stack may be removed and the warning notices put back in position. Respirators shall be worn by all persons present during this operation.

When the fumigator declares the area free of gas, the respirators may be taken off, the warning notices removed, and general access to the area permitted.

(l) A building, or an area, shall not be declared free of gas by the fumigator until the halide lamp, or gas concentration meter, shows that the building, or area, is safe, or all smell of phosphine gas has dissipated.

(m) The fumigator shall complete items 13 to 18 of the Record of Fumigation and a Certificate of Clearance (Form No. 2, Second Schedule) and deliver them to the owner.

(n) Where a phytosanitary certificate is required, a copy of the Record of Fumigation (Form No. 1, Second Schedule) and of the Certificate of Clearance (Form No. 2, Second Schedule) shall be delivered to the inspector who was notified pursuant to regulation 5.

FOURTH SCHEDULE reg. 12

FUMIGANTS

DOSAGE RATES (per 1,000 cu. ft. or 30 cu. m)

[Exposure time given is the minimum. It is always advantageous to lengthen it. If the commodity temperature is below 20°C the times should be increased by 50 per cent.]

Fumigant	Commodity	Quantity	Minimum Exposure Time
1. Methyl bromide	Grain, rice, cassava, flour, etc.	2 lb.	24 hours
	Beans, groundnuts, cotton	3 lb.	24 hours
	Tobacco (with followed by polythene liners)	4 lb. followed by additional 2 lb. after 24 hours	72 hours (total)
	Tobacco (with paper liners)	4 lb.	72 hours
	Tobacco (no lining)	3 lb.	72 hours
2. Aluminium phosphide	Empty buildings	2 lb.	24 hours
	Tobacco seedbeds	1 lb. per 100 square feet	48 hours
	Grain, rice, cassava, flour, etc.	45 tablets	3 days
3. DDVP—Dichlorvos	Empty buildings	2 gms a.i.	weekly application
	Tobacco	20 tablets	5 days
	Beans, groundnuts	30 tablets	3 days
4. Ethylene dibromide (EDB)	Empty buildings	20 tablets	3 days
	If Trogoderma granarium is present (not at present known in Malawi)	45 tablets	for at least 5 days exposure time must be used.
5. Dichloropropane (DD)	Empty buildings	2 gms a.i.	weekly application
	Tobacco seedbeds	By injector gun using 5 ml. (ccs) per injection point. Spacing 38 cm. × 38 cm. (15 in. × 15 in.) to depth of 25-30 cm. (10-12 in.)	