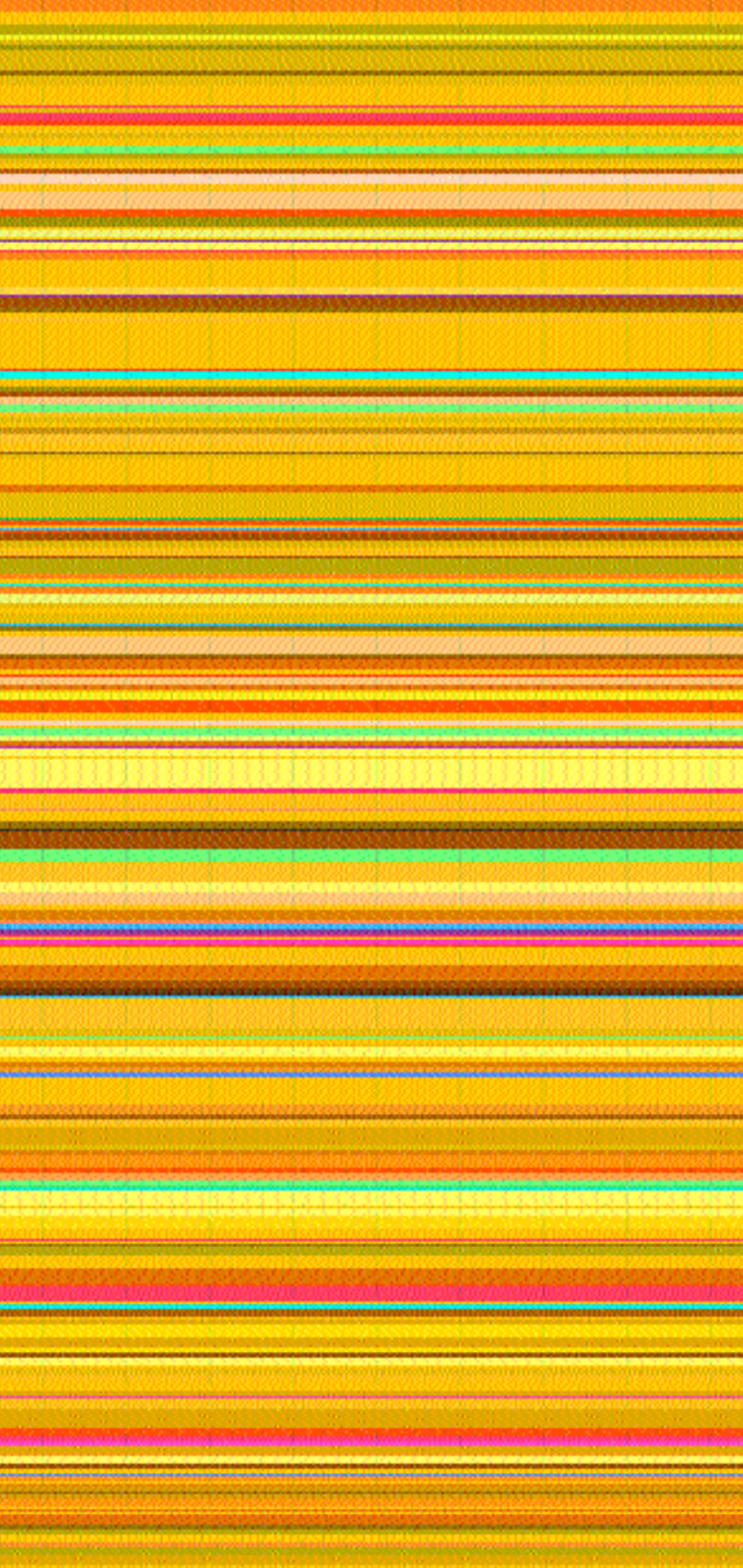


Guidelines

for the
safe **transport**
of crop protection
products

4





Guidelines

for the
safe **transport**
of crop protection
products

FOREWORD

The plant science industry, represented by CropLife International, is actively involved in and committed to programmes that promote the effective management and responsible use of crop protection products. This is achieved through support of stewardship – the responsible and ethical management of a crop protection product throughout its lifecycle – from the initial research and development, through distribution and use, to the eventual disposal of any waste.

As part of this commitment to stewardship, CropLife International has published a number of guidelines covering different aspects of the management of crop protection products. This booklet is the fourth in the series and deals with the safe transport of products. It includes advice on type and maintenance of vehicles, proper route planning, labelling and handling of loads, training of operators and drivers, as well as procedures in case of emergency.

The guidelines are an update of those originally produced by CropLife International's predecessor organisations (GIFAP, later GCPF) and build on experience gained since the original publication. They serve both as an information source and training material. The effort to improve the knowledge and advice in this area is very much in the spirit of the FAO International Code of Conduct on the Distribution and Use of Pesticides and I recommend these guidelines to all concerned with the responsible and effective use of crop protection products.



C. Verschueren
Director General,
CropLife International

These guidelines are intended to complement the requirements of any local and national laws and regulations, as well as the FAO International Code of Conduct on the Distribution and Use of Pesticides.

The information contained in this booklet is accurate to the best of the knowledge of CropLife International. No liability whatsoever can be accepted in respect of the use of this information nor in respect of any advice contained herein.

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INTRODUCTION

These Guidelines deal with the transport of packaged crop protection products in quantities ranging from full loads moved between factories, down to single packages distributed to farmers.

The requirements for the safe transport of crop protection products are essentially the same as for many other chemicals. Equally, in the event of an accident involving leakage or fire, the effect of crop protection products on the environment is generally comparable with many other chemicals. The advice given in this booklet will help to ensure that crop protection products are transported safely.

The basic principles of safety apply to all types of transport. However, road transport is the one most commonly used for the distribution of crop protection products and is the one where accidents are most likely to happen. Consequently, this guide deals predominantly with road transport.

These Guidelines are mainly directed towards dispatch and warehouse managers and managers of transport companies, but everyone concerned has a role to play.

The recommendations fall into two main parts:

Firstly, they concentrate on good practice and the prevention of accidents, and they aim to show how efficient planning, organisation and management can achieve these elements. These good practices complement the requirements of transport regulations set by international organisations and national authorities.

Secondly, should an accident occur despite these precautions, advice is given on the proper responses, in particular on the containment of the incident to prevent avoidable escalation.

It is important to recognise that the final destinations of crop protection products are very widespread. They often need transporting to remote areas, away from help and out of direct management control. With this in mind, considerable emphasis is placed on the need to provide drivers of vehicles with adequate training, information and instructions.

In these Guidelines, the word “**must**” is used to indicate minimum acceptable standards, and the words “should” and “recommended” indicate proven good practices.



Whenever this sign appears it indicates bad practices, which should be avoided.

1. ORGANISATION

The achievement of safe transport practices is strongly influenced by proper organisation and management. While supervision of separate parts of the operation may be delegated, the Warehouse Manager and Transport Operator need to understand which activities they should control. Additionally, individual responsibilities **must** be fully understood by all concerned.

In any transport operation there are two principal functions: the **preparation** and **loading** of the goods and their subsequent **carriage**. Some of the associated activities can be linked directly to either the Warehouse Manager or to the Transport Operator, but for a number of items both have a role.

For example, the supplier normally provides the loading team and is directly concerned with the proper stowage and securing of the load. At the same time, the carrier should ensure that the load he/she is transporting is safely stowed and secured.

WAREHOUSE MANAGER

Packaging
-
Marking and Labelling
-
Climatic Considerations
-
Handling Methods and Equipment
-
Carrier Selection
-
Pre-loading Inspections
-
Unloading Inspections

BOTH

Route Planning
-
Instructions to Drivers
-
Stowage and Securing of Loads
-
Load Segregation
-
Dispatch Checklist
-
Cleaning-up and Decontamination

TRANSPORT OPERATOR

Driver Selection and Training
-
Safety
-
Equipment and Protective Clothing
-
Immediate Emergency Response
-
First Aid
-
Containment
-
Fire-fighting



Allocation of responsibilities in transporting crop protection products

2. GENERAL CONSIDERATIONS

Packaging

Since loads are often transported over long distances on bad roads, attention **must** be paid to the quality of their packaging. Faulty or unsuitable packaging can lead to accidental leakage of product during transport, and present a safety hazard. All packages should meet recognised performance standards, be able to withstand the conditions normally experienced in transport and provide the desirable level of safety.

Marking and labelling

OBEY LAWS AND REGULATIONS

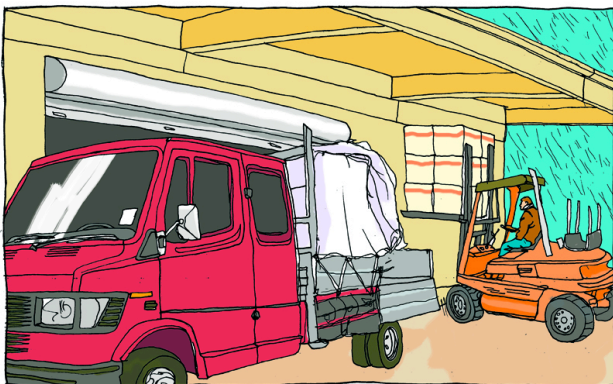
The marking and labelling of packages and transport units carrying dangerous goods are regulated by law in many countries and by international codes of safe practice. The purpose is to ensure that the potential risks are communicated to all who may handle the goods in the course of distribution. Where no such regulations exist, it is recommended that marking and labelling conform to the requirements of the United Nations recommendations on the subject.



Examples of the UN hazard labels most commonly used with crop protection products. More examples are shown in Appendix 2.

Climatic considerations

Under normal conditions, crop protection products are stable. However, if subjected to climatic extremes of temperature or moisture either during storage or transport, decomposition of some products can occur and the stability of the packaging can be adversely affected. Either of these situations may result in problems during transport.



Keep packs dry during both loading and transport

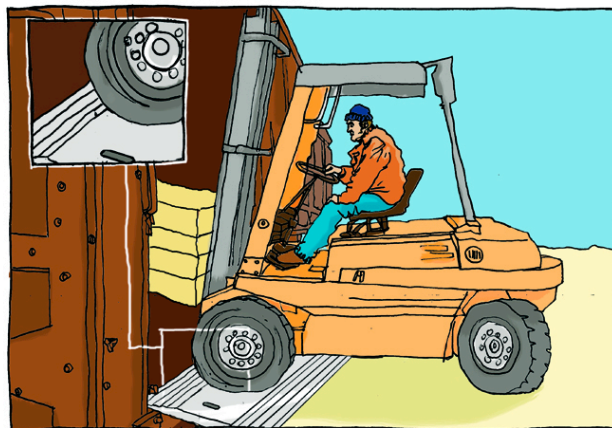
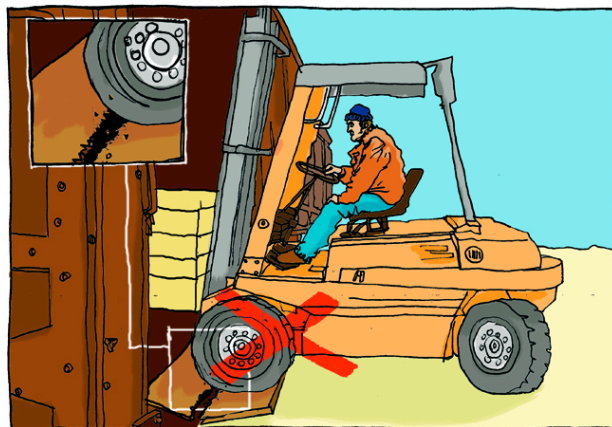
In general, crop protection products should be stored under cover and should be covered during transport to protect them from:

- (i) Rain
- (ii) Direct sunlight (particularly important in countries with hot climates).

Even when products are transported in closed units, such as a freight container, water can still be a problem. For example, if wet packaging or damp materials for cushioning and securing are used, this can give rise to condensation within the unit, which may damage the load. To avoid damage from condensation:

- Only use units which are dry inside
- Packaging, including pallets, should preferably be non-absorbent; wooden pallets should be sealed and dry when loaded
- Only use dry materials for cushioning and securing the load.

Handling methods and equipment

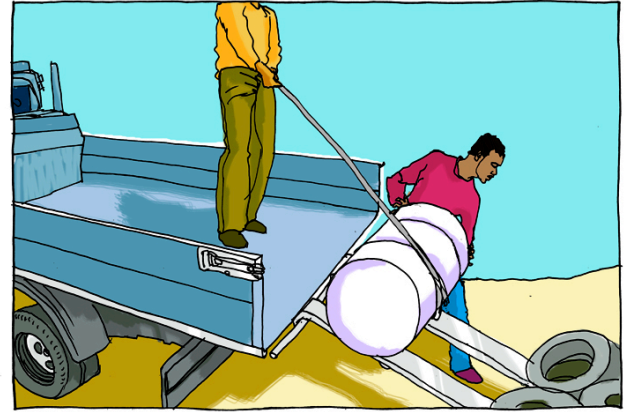


Loading equipment such as a bridge-plate **must** be properly constructed

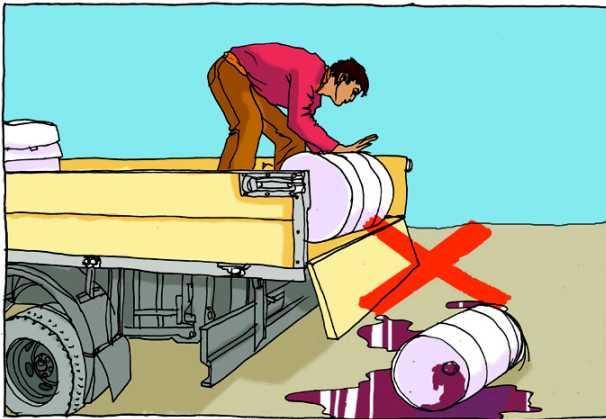
Care **must** be taken to ensure that packages are correctly handled during loading and unloading. In general, the use of suitable mechanical handling equipment is recommended, as it can reduce the risk of damage.

Conversely, the use of unsuitable equipment or poor handling techniques can seriously damage packages and increase the risk of spillage.

- Only approved equipment should be used
- Workers engaged in loading and unloading **must** be properly trained in the use of the equipment
- Tools or appliances, such as baggage hooks, which can damage packages **must** not be used
- Pallets **must** be free from protruding nails or screws, which can damage containers
- When entering a vehicle or freight container with a forklift truck, care **must** be taken to ensure that its floor will support the weight of the loaded forklift truck
- Do not unload large drums or other heavy packages by pushing them off the back of a lorry so that they drop uncontrolled onto the ground, or even onto tyres. If mechanical handling equipment is not available, unloading **must** be properly controlled to avoid impact damage.



Heavy packs **must** be properly controlled while unloading



Do not push drums off the back of a lorry directly onto the ground

3. ROAD TRANSPORT - ADDITIONAL CONSIDERATIONS

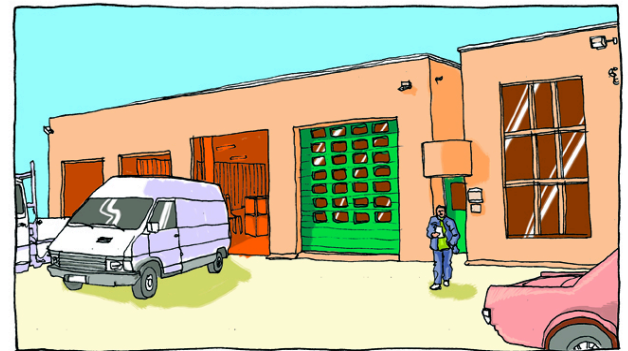
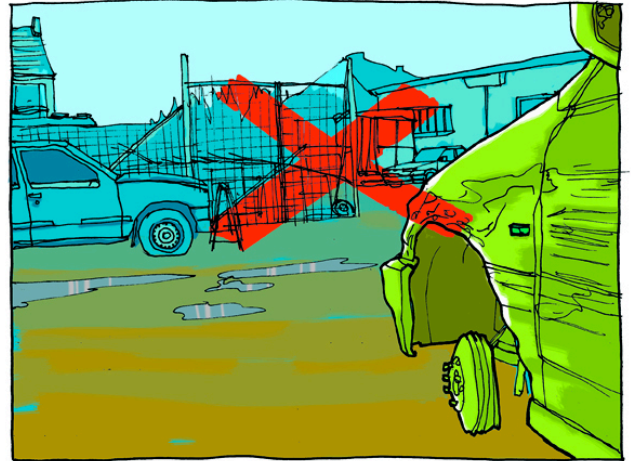
This section applies principally to commercial transport operators and to suppliers distributing significant quantities of crop protection products. At the same time, all those moving crop protection products by road should familiarise themselves with the contents, and if possible, follow the recommendations. For example, the requirement not to leave crop protection products in an unattended and unlocked vehicle, applies equally to a farmer collecting a few packages for his own use, or to a carrier delivering a full load.

Carrier selection

Where goods are not distributed in the supplier's own vehicles, a careful check **must** be made to see whether the carrier chosen is suitable and competent to handle dangerous goods. This should include inspection of the carrier's facilities and procedures to ensure that standards are met.

For example:

- The design and construction of vehicles should be suitable for the loads to be carried
- Maintenance should be regular and effective and be based on the principles of systematic and thorough inspection. Records should be available for inspection
- Crop protection products should be carried only on vehicles fitted with a separate driver's cab or compartment. This is to prevent the driver from being adversely affected by fumes or dust in the event of a spillage
- A conscious policy of route planning should be operated on the basis of criteria agreed with the supplier.



Inspect carrier's facilities to ensure that high standards are met



Only use vehicles fitted with a separate driver's cab or compartment

Driver selection and training

1. SELECTION

The selection of drivers to handle and transport dangerous goods requires special consideration.

Attention should be given to:

- A responsible attitude towards road safety
- Medical standards
- Driving skills
- The ability to evaluate potentially dangerous situations and to take appropriate action.

2. TRAINING

Adequate training should be given to drivers and should include the following aspects:

- Regulations
- Operating procedures
- Products (properties and hazards)
- Load segregation
- Securing of loads
- Dealing with leakages and spills
- First aid
- Use of safety equipment and protective clothing
- Fire-fighting
- Safe driving techniques
- Emergency procedures.



Drivers should be adequately and appropriately trained

Safety equipment and protective clothing

Regular checks should be made to ensure that the following items are available on vehicles carrying crop protection products, and that they are maintained in good condition.



Vehicles should carry a fire extinguisher, protective clothing, a first aid box, and clean-up equipment

1. FIRE EXTINGUISHERS

Sufficient fire extinguishers should be carried to meet local and international legislation. They should have sufficient capacity and be able to fight an initial fire, for example in the cab or engine compartment. Where only one is available, it is recommended that it be a multi-purpose dry chemical extinguisher.

2. FIRST AID PACK

A first aid pack, which includes a filled eyewash bottle, should be available. This should be kept in the cab of the vehicle in a readily accessible position.

3. PROTECTIVE CLOTHING

Protective clothing should be available for use by all the crew in handling damaged packages, or dealing with minor spills. Items should include:

- Neoprene® or Mitrile rubber gloves
- Eye protection, such as face shield or goggles
- Coveralls
- Rubber or plastic apron
- Rubber boots, preferably with steel toecaps.

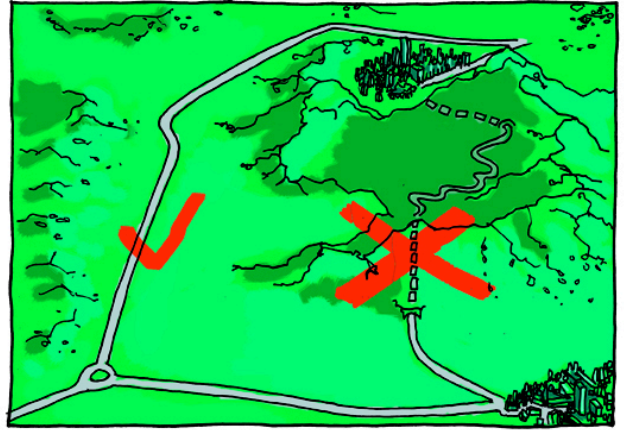
4. CLEAN-UP EQUIPMENT

A small supply of suitable absorbent material is necessary, for example a bag of pumice, together with a flat shovel, a broom or brush and large, sealable containers to deal with minor spills.

In addition, a container with clean water and a cloth for cleaning up after dealing with the spill.

Route planning

Vehicle routes should be planned in advance, particularly where significant quantities of dangerous goods are being carried. Always try to select routes that offer the minimum of hazards.



Select roads that avoid problems and offer good driving conditions, even if this increases the distance

Some general principles to apply are:

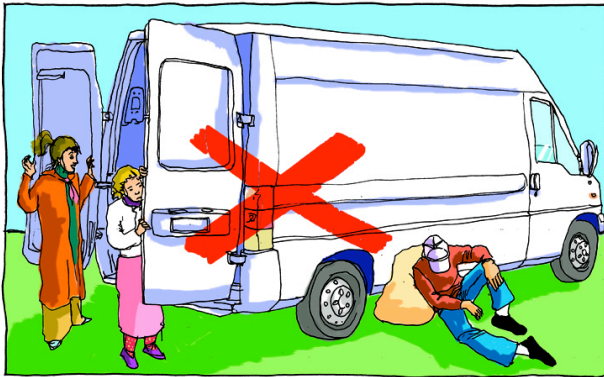
- Arrange operating schedules so that safe speed limits and drivers' hours are not exceeded
- Select roads offering good driving conditions
- Where alternative routes are possible, choose one which avoids potential problems such as roads near dams or rivers, highly populated routes, etc.
- Avoid tunnels or bridges that restrict the movement of dangerous goods.

Instructions to drivers

1. GENERAL INSTRUCTIONS

1. Parking and supervision

- Drivers should be instructed that vehicles carrying crop protection products **must** be parked either in a safe and secure place or kept under supervision and should be kept locked. Unattended vehicles are an attraction to inquisitive children and other unauthorised people. In particular, drivers should be instructed in the selection of overnight parking locations.



Never leave vehicles unlocked or unsupervised

2. Procedures

- In addition to being trained to deal with emergencies, drivers should be issued with adequate instruction on procedures in the event of an accident. These instructions should cover:
 - (i) Accidents of a general nature, with no leakage or spillage of product
 - (ii) Accidents involving the leakage or spillage of product
 - (iii) Accidents resulting in a fire
 - (iv) A contact for specialist advice both during and outside normal working hours.

Note : Further information is given in Section 5.

2. PRODUCT INFORMATION

Drivers should always be provided with a detailed inventory of the material loaded and information on the nature of the goods being carried, such as a Material Safety Data Sheet (MSDS).



Drivers should be provided with written instructions for dealing with emergencies

3. INSTRUCTIONS IN WRITING

Drivers of vehicles transporting dangerous goods should be provided with instructions in writing (e. g. a Transport Emergency Card) giving emergency information that will identify the following in the event of an accident:

- The products being carried
- The nature of the hazards
- The precautions to be taken, and actions necessary in the event of an emergency
- The supplier, including his address and an emergency telephone number.

As the driver may be incapacitated, due to an accident or illness,

- The Transport Emergency Card should be kept in the cab of the vehicle, prominently displayed and readily accessible at all times
- Only information which relates to the products being carried should be available. Documents relating to previous loads **must** be removed.

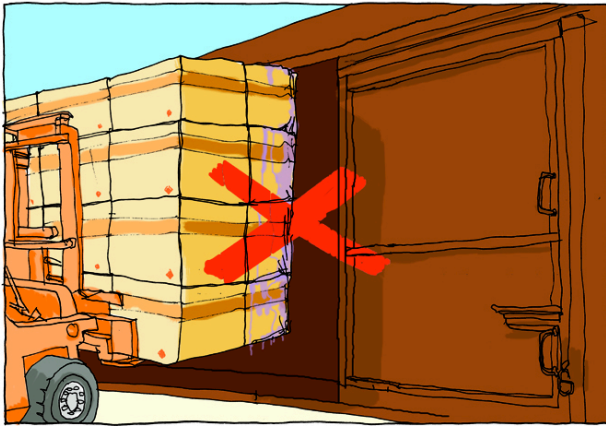
4. LOADING AND DISPATCH

Pre-loading inspections

1. PACKAGES

Before loading begins, all packs **must** be checked to ensure that they are in good condition and fit for transport. This should include inspection for correct labelling and marking as well as the general condition of the packaging - particular attention should be given to goods that have been held in stock for any length of time. The main points to note are:

- Packages that are damaged, severely corroded or that show evidence of leakage, **must** never be loaded



Never allow damaged or leaking packs to be loaded

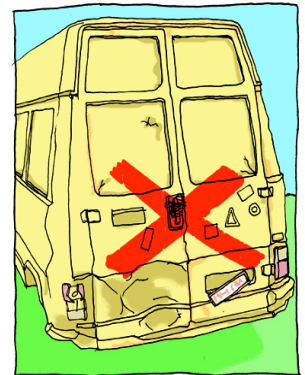
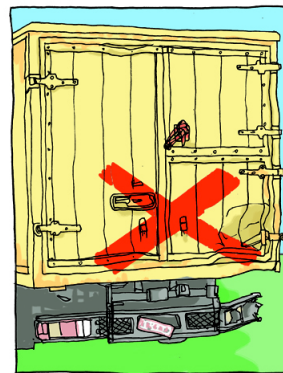
- Any packages damaged in the course of loading **must** be replaced
- Crop protection products **must** only be transported in packages that have been properly marked and labelled. Do not use labels which are illegible or in bad condition
- Labels should be positioned on packages so that they can easily be seen during storage and transit
- Packages containing goods classified as “**dangerous**”, **must** be identified by appropriate hazard labels
- Pallets should preferably be made of non-absorbent material, or if wooden should be treated to prevent absorption, and be free from damage or other signs of weakness.

2. TRANSPORT UNITS

Before any transport unit (e.g. truck, rail wagon, freight container, etc.) is loaded, it **must** be examined carefully and rejected if it is found to be unsuitable.

The main points to note are:

- The general structural condition **must** be sound and free from damage or defects, such as faulty tyres or lights, which are likely to affect its safety
- Outside coverings and floors should be free from holes and cracks and, ideally, impervious to water
- Doors **must** be in working order, and the closing devices in satisfactory condition
- Old labels (e.g. hazard warnings) relating to previous loads **must** be removed to ensure that misunderstandings do not arise.



Vehicles in poor condition pose a risk to safety and should not be loaded

- The loading space **must** be clean, dry and free from protruding screws, nails, and other sharp objects that could puncture packages



Hammer down nails and splinters before loading

- If there is evidence that the unit is regularly used for the transport of food or foodstuffs, it **must** be rejected



If there is evidence that the unit is regularly used for the transport of food, it **must** be rejected

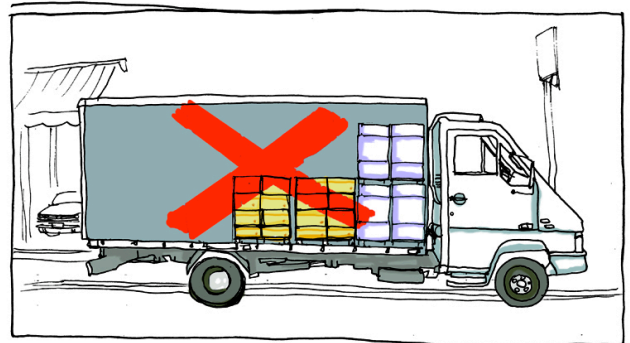
- Attention **must** be paid to approved axle loads and the highest permissible loaded weight of the transport unit.

Stowage and securing of loads

In planning the stowage and securing of loads it is important to consider what forces are likely to act on the goods during the various stages of the journey (e.g. the forces imposed by acceleration and braking of vehicles or rail wagons, or the motion of ships at sea). These elements can create serious problems, which can result in considerable damage if the load is not effectively secured.

Loading should be planned to take account of the following:

- The weight should be distributed evenly
- Heavy goods should not be stowed on top of light goods.

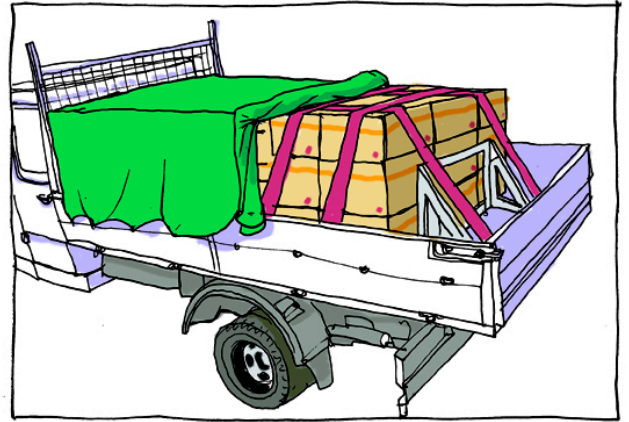


Distribute the weight evenly



Do not stow drums on top of fibreboard boxes or other light packaging

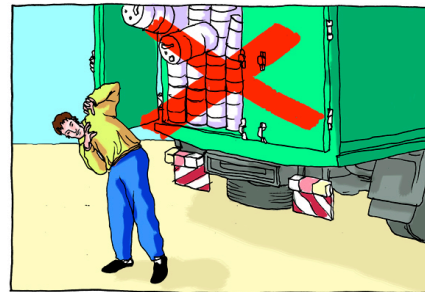
- Liquids should not normally be stowed on top of dry goods. However, consideration **must** be given to the relative strength and weight of the packages concerned
- Where two layers of different products in similar packaging are to be carried, the less dangerous one should be loaded on top
- Packages, particularly sacks or other easily damaged materials, should be protected from sharp corners or projections through the use of suitable cushioning material
- Where the load consists of unstable packs, (e.g. non-nesting drums), or of mixed pack types, timber, hardboard or other suitable material should be used between layers to provide a stable stack
- Special instructions given on individual packages **must** be strictly observed. For example, goods marked "This Way Up", or with a maximum stacking height
- All packages containing liquids should be stowed with the closures uppermost
- Goods, which may cause damage by taint or odour, should not be loaded in the same container as goods susceptible to such damage
- The total load should be firmly secured to prevent movement in transit.



Secure load to prevent movement

Additionally, for closed transport units:

- Packages near doors **must** be secured to prevent them from falling out when the doors are opened

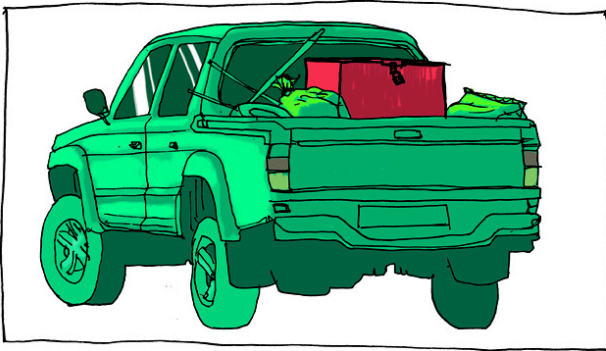


Secure packages near doors to prevent them from falling out

- Dangerous goods, forming only part of the load, should preferably be stowed near the door for ease of accessibility.

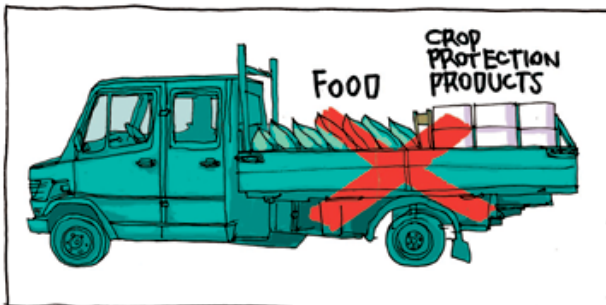
Load segregation

Crop protection products should ideally be transported separately from other commodities. Where mixed loading is unavoidable, the risk of contaminating other goods **must** be minimised by effective segregation within the transport unit.



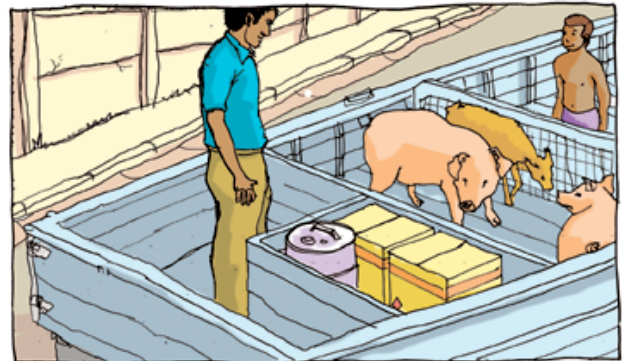
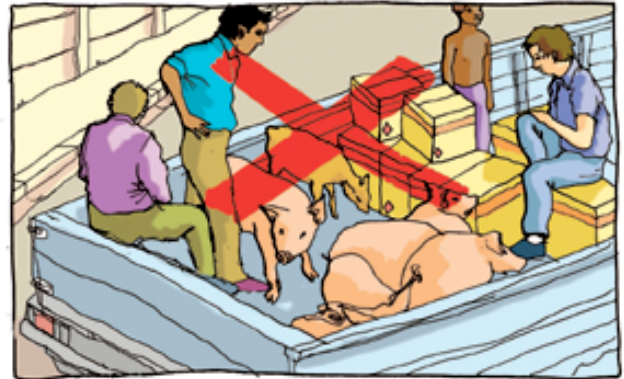
A box can be used to segregate and secure small quantities of crop protection products, when mixed loading is unavoidable.

Crop protection products **must** never be carried in the same loading space with foodstuffs, animal feeds or other goods intended for human consumption or use (e.g. pharmaceuticals, tobacco or clothing).



Crop protection products **must** never be carried in the same loading space as foodstuffs.

Do not load crop protection products together with passengers or livestock. If this is unavoidable, then the crop protection products **must** be effectively separated from passengers or livestock.



Keep crop protection products away from passengers and livestock

Products that are incompatible (e.g. oxidising agents and flammable substances) should not be carried in the same transport unit, unless they can be segregated so that no contact is possible.

The transport of crop protection products in vehicles such as cars or station wagons is not recommended. However, if it is necessary to carry small quantities of crop protection products in this type of vehicle, it is essential that they are adequately segregated and properly secured; for example, by using a separate box. Additionally, the vehicle should be kept well ventilated.

5. EMERGENCY PROCEDURES

Dispatch checklist

Practical experience over many years has demonstrated that a “Dispatch Checklist” can make an important contribution to the safe transport of crop protection products. Both the loader of the goods and the transport operator should complete this checklist. The checklist requires them to answer “yes” or “no” to specific questions concerning both the goods and the transport unit. An example of a suitable checklist is shown in Appendix 1.

Unloading inspection

When unloading has been completed, the receiver should check both packs and transport units. The main points to note are:

- Check that quantities and types delivered agree with the loading inventory. If any discrepancies are noted, check if the loss has occurred in transit
- Inspect the body of the transport unit and any coverings such as tarpaulins for evidence of leaks or spills. If found, decontaminate the unit immediately. It should not depart before it has been cleaned completely
- Check all newly delivered goods for leaks, loose closures, or other damage. If necessary, re-pack into suitable and properly labelled packaging immediately before storage
- Arrange for damaged labels to be replaced.

In the event of an accident, the actions taken in the first few minutes can be vitally important. Prompt action, especially to contain any leakage or spillage, can prevent a relatively minor incident from developing into something far more serious.

Immediate response

In the event of spillage or leakage:

- Switch off engine
- Do not smoke
- Identify the name and nature of the products involved from the Transport Emergency Card or individual product labels. Pay attention to the procedures and advice given

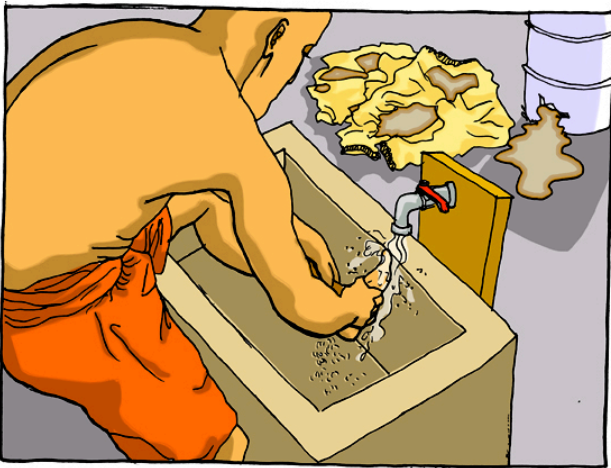


In case of accidents involving crop protection products, refer to the Transport Emergency Card

- Stay with the unit, but upwind of any spilled chemicals
- Isolate the affected area and keep other people and traffic away
- If necessary, send someone to call the emergency services (police, fire, ambulance)
- Do not open doors of closed transport units unless advised by a competent person and appropriate protective clothing is worn.

First aid

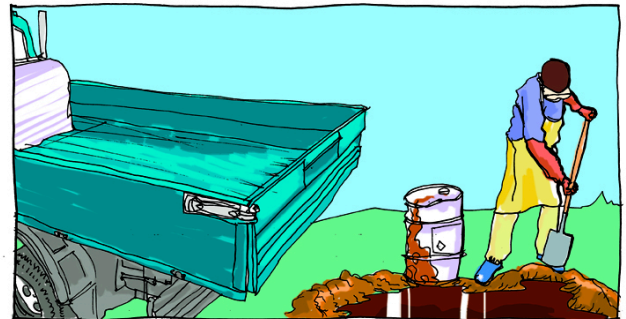
- Consult the Transport Emergency Card or individual product labels
- If the product has come into contact with the eyes, rinse immediately with clean water and continue rinsing for up to 10 minutes. Cover affected eyes with sterile eye pads or clean non-fluffy material. Seek medical advice
- Remove contaminated clothing immediately
- In the event of skin contact, rinse immediately with plenty of water, and then wash with soap and water. In the event of major contamination or if there is any pain or discomfort, contact a doctor
- If product has been swallowed or inhaled, seek medical advice immediately.



Remove contaminated clothing and rinse skin with plenty of water, and then wash with soap and water.

Containment

- Treat all spills with care until technical advice is available. Be careful to avoid skin contact and inhalation of fumes
- As a precautionary measure in cases of spillage, wear protective clothing - boots, coveralls, gloves, face shield
- Contain small liquid spills by covering with earth, sand or other suitable absorbent materials
- Larger quantities may be contained by building a dam of earth or sand around the contaminated area
- In the case of spilled dusts or powders, minimise spreading by covering with earth or sand, or with a tarpaulin
- Take care that spilled products do not seep into drains, sewers, rivers or other watercourses. If already contaminated, inform the appropriate authorities immediately
- Adjust the position of ruptured packs to minimise further leaks
- Place leaking or badly damaged packages in oversized drums or in heavy duty polythene bags
- Separate damaged packages from other goods and place them on bare ground, away from dwellings and water supplies.



Contain spills to prevent contamination of the environment



Use absorbent material to soak up any spillage



Wash contaminated parts of vehicle with water

Fire-fighting

Drivers should attempt to put out small, localised fires, for example in the cab or engine compartment, using any available means.

The objective is to prevent them from spreading to the load.

Since electrical faults are a common cause of vehicle fires, the power supply should be isolated by disconnecting the battery.

Fires involving the load

In the event of a more serious fire, call the emergency services. The main points to note are:

- Avoid inhalation of fumes
- Keep adjacent drums containing liquids cool by spraying with water
- Breathing apparatus **must** be worn when fighting a fire involving the load
- The most suitable means of extinguishing fires involving crop protection products are powder, foam and fine water spray (not jets)
- Avoid excessive volumes of water so as to keep contaminated run-off water to a minimum
- Every effort **must** be made to collect contaminated water. If necessary, build a dam using earth or sand, to prevent run-off into watercourses of any kind
- Contaminated water **must** be disposed of safely.

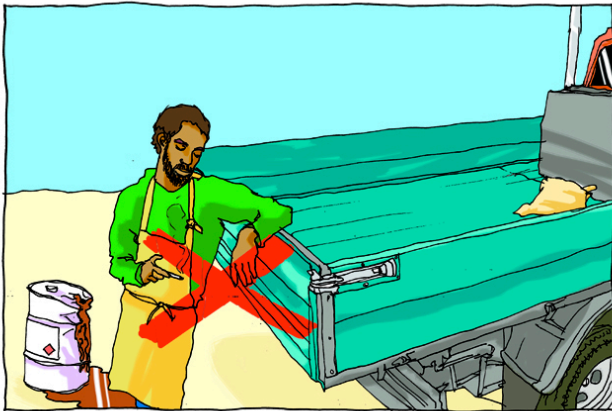
Clean-up and decontamination

Safety precautions given in the Transport Emergency Card, and on product labels **must** be observed.

- Before beginning clean-up operations, expert advice should be obtained, if at all possible, from the supplier or other qualified persons
- Always wear protective clothing during clean-up operations
- Where possible, work from the upwind side of the spill

- Do not smoke, eat or drink during clean-up operations
- Sweep up materials used to absorb leakages or spills, and shovel them into a closable container for safe disposal
- Soil contaminated with crop protection products should be removed for safe disposal
- All damaged or empty packs **must** be removed for safe disposal. Never dump them indiscriminately
- If there is any possibility that food, animal feed or other consumer goods have been contaminated, they **must** be destroyed.

Contaminated foodstuffs **must** never be eaten or fed to animals. This could be fatal.



Do not smoke, eat or drink during clean-up operations

- Heavily contaminated clothing should be rendered unfit for further use (e.g. torn or cut up) and then disposed of safely
- Clothing with only minor contamination **must** be thoroughly washed with detergent and several changes of water, and separately from other items
- Undamaged packs should be inspected for contamination and if necessary should be decontaminated, taking appropriate precautions

- After clean-up, thoroughly wash down all contaminated equipment and parts of the vehicle in a safe wash area that prevents further environmental contamination. Never wash down without first removing as much of the spilled product as possible
- Contaminated materials **must** be disposed of in a safe and approved way.



Collect contaminated waste for safe disposal

6. USEFUL REFERENCES

CropLife International publications

Guidelines for the safe and effective use of crop protection products (Guideline 1)

Guidelines for personal protection when using crop protection products in hot climates (Guideline 2)

Guidelines for the safe warehousing of crop protection products (Guideline 3)

Guidelines for the avoidance, limitation and disposal of crop protection product waste on the farm (Guideline 5)

Guidelines for the safe formulation and packaging of crop protection products (Guideline 6)

Guidelines for emergency measures in cases of crop protection product poisoning (Guideline 7)

Quality Control of Crop Protection Products

Disposal of unwanted pesticide stocks - Guidance on the selection of practical options

Also visit the CropLife International website for latest information and publications.

www.croplife.org

Other publications

The following is a list of the principal references for international transport regulations. As these publications are subject to constant review, it is important to ensure that you are using the most up to date edition.

“Recommendations on the Transport of Dangerous Goods” Prepared by the UN Committee of Experts. Available from the United Nations, Sales Section, New York or Geneva

“International Maritime Dangerous Goods Code” (IMDG Code). Published by the International Maritime Organisation (IMO). Available from IMO, 4 Albert Embankment, London, England

“Technical Instructions for the Safe Transport of Dangerous Goods by Air” Published by the International Civil Aviation Organisation (ICAO). Available from Intereg Group, Inc. 5724 N Pulaski Road, Chicago, Illinois, USA.

“IATA Dangerous Goods Regulations” Developed by the International Air Transport Association (IATA). Available from IATA, 200 Peel Street, Montreal, Quebec, Canada.

- (i) European Agreement Concerning the International Transport of Dangerous Goods by Road (ADR)
- (ii) Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID)

See also the FAO International Code of Conduct on the Distribution and Use of Pesticides

7. APPENDICES

Appendix 1: dispatch checklist

If "no" is ticked, the truck should not be allowed to leave

Checks to be made by loader and driver

LOADER

DRIVER

1. Do the goods prepared for loading agree in type and quantity with the dispatch order?
Yes No Yes No
2. Are all the packages to be loaded in good condition and undamaged, with no signs of leakage?
Yes No Yes No
3. Are the package markings and hazard labels in good condition (and legible)?
Yes No Yes No
4. - Are the packages to be loaded dry?
Yes No Yes No
- Is the load adequately protected from getting wet?
Yes No Yes No
5. Is the general condition of the vehicle safe for transporting?
Yes No Yes No
6. Has the loading space been checked for cleanliness and absence of protruding objects (e.g. nails or screws)?
Yes No Yes No
7. Are you certain that food, drink, animal feedstuffs and other consumer goods will not be carried in the same loading space?
Yes No Yes No
8. Is the vehicle provided with necessary safety equipment and protective clothing?
Yes No Yes No
9. Is the load correctly stowed, properly secured and segregated?
Yes No Yes No
10. - Does the vehicle display proper hazard markings?
Yes No Yes No
- Have any old markings been removed?
Yes No Yes No
11. - Has the driver been given a Transport Emergency Card?
Yes No Yes No
- Have old cards been removed?
Yes No Yes No

Name of Loader:

Signature of Loader:

Date:

Time:

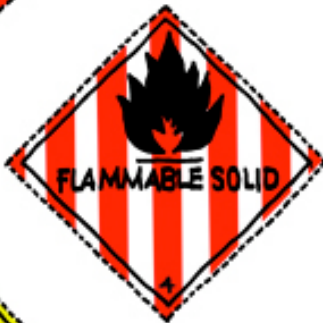
Name of Driver:

Signature of Driver:

Date:

Time:

Appendix 2: UN hazard labels commonly used with crop protection products



Appendix 3: general checklist

This checklist has been arranged in two parts for use by the Warehouse Manager and the Transport Operator respectively. The answers will assist in the identification of actions needed.

Please be as accurate as you can in your answers; this could help prevent accidents.

CHECKLIST FOR WAREHOUSE MANAGER

1. Are there defined supervisory responsibilities for:
 - Marking and labelling? Yes No
 - Handling equipment? Yes No
 - Transport selection? Yes No
 - Pre-loading and unloading inspections and checks? Yes No
 - Instructions in writing? Yes No
 - Stowage and securing of loads? Yes No
 - Load segregation? Yes No
 - Route planning? Yes No
 - Emergency procedures? Yes No
2. - Are any of these responsibilities delegated to subordinates? Yes No
- If yes, do these subordinates fully understand their responsibilities? Yes No
3. Are products protected from climatic extremes both during storage and transport? Yes No
4. Have you approved the handling methods and equipment used? Yes No
5. Have staff engaged in loading and unloading been properly trained in the use of equipment? Yes No
6. Do you check that contracted carriers are suitable and competent to handle dangerous goods? Yes No
7. Are routes planned in consultation with the carrier? Yes No
8. Are drivers provided with instructions in writing (e.g. Transport Emergency Action Cards) for all dangerous goods? Yes No
9. - Are pre-loading inspections carried out? Yes No
- Have the following been checked?
 - (a) Packages
 - General condition, undamaged, etc.? Yes No
 - correct marking and labelling? Yes No
 - (b) Transport units
 - General suitability? (see p 25) Yes No
 - Condition of the loading space? Yes No
 - Correct marking and labelling? Yes No
 - Approved axle loads and permissible loaded weight? Yes No
10. Do you follow strict procedures with regard to the stowage and securing of loads? Yes No
Do they include:
 - Weight distribution? Yes No
 - Protection of easily damaged packs? Yes No
 - Relative stowage of different types of product and packs? Yes No
 - Stacking stability? Yes No
 - Positioning of packs? Yes No
 - Securing the load to prevent movement in transit? Yes No
11. Do you ensure that crop protection products are adequately segregated? Yes No
Do you observe:
 - The use of separate transport units whenever possible? Yes No
 - The avoidance of loading crop protection products with foodstuffs, animal feeds or other goods intended for human consumption or use? Yes No
 - The effective separation from passengers and livestock? Yes No
 - The segregation of incompatible substances? Yes No

12. Do you use a dispatch checklist? Yes No
13. Are unloading inspections carried out on receipt of goods? Yes No
Do they include:
- Checks of quantities and types delivered? Yes No
 - Examination of transport units for evidence of leaks or spills? Yes No
 - If found, is the unit decontaminated before it is allowed to depart? Yes No
 - Examination of packages for leaks or other damage? Yes No
 - Repacking as necessary, including the replacement of damaged labels? Yes No
14. Are you able to respond to requests for advice or assistance in the event of an emergency? Yes No
15. Are clean-up and decontamination procedures understood and followed? Yes No
16. Are waste or other contaminated materials disposed of safely? Yes No

CHECKLIST FOR TRANSPORT OPERATOR

1. Are there defined supervisory responsibilities for:
- Driver selection and training? Yes No
 - Safety equipment and clothing? Yes No
 - Instructions to drivers? Yes No
 - Stowage and securing of loads? Yes No
 - Load segregation? Yes No
 - Route planning? Yes No
 - Emergency procedures? Yes No
2. - Are any of these responsibilities delegated to subordinates? Yes No
- If yes, are you confident that these subordinates fully understand their responsibilities? Yes No

3. Do you operate a process of driver selection? Yes No
4. Do you run driver training programmes? Yes No
5. - Are the following items available in the vehicles:
- Fire extinguisher(s)? Yes No
 - First aid pack? Yes No
 - Protective clothing? Yes No
 - Clean-up equipment? Yes No
- Do you regularly check that these items are maintained in good condition? Yes No
6. Are routes planned in consultation with the supplier? Yes No
7. Are drivers given instructions as regards parking and supervision of vehicles? Yes No
8. Are drivers provided with instructions on procedures in the event of an accident? Yes No
9. Are drivers provided with instructions in writing (e.g. Transport Emergency Action Cards) for all dangerous goods? Yes No
10. Do you follow strict procedures with regard to the stowage and securing of loads? Yes No
Do they include:
- Weight distribution? Yes No
 - Protection of easily damaged packs? Yes No
 - Relative stowage of different types of product and packs? Yes No
 - Stacking stability? Yes No
 - Positioning of packs? Yes No
 - Securing the load to prevent movement in transit? Yes No

11. Do you ensure that crop protection products are adequately segregated? Yes No

Do you observe:

- The use of separate transport units whenever possible? Yes No
- The avoidance of loading crop protection products with foodstuffs, animal feeds, or other goods intended for human consumption or use? Yes No
- The effective separation from passengers and livestock? Yes No
- The segregation of incompatible substances? Yes No

12. Do you use a dispatch checklist? Yes No

13. Are emergency response procedures understood by those transporting crop protection products? Yes No

14. Are clean-up and decontamination procedures understood and followed? Yes No

15. Are waste or other contaminated materials disposed of safely? Yes No

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