

TECHNICAL REVIEW

SAFE, LEGAL, AND MANAGEABLE PESTICIDE STORAGE ON BRITISH FARMS: AN EVALUATION OF TWO ARABLE SITUATIONS AND SUGGESTED LOW-CAPITAL SOLUTIONS

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It is already widely known that many useful pesticides could face withdrawal from the market due to a change in the way active ingredients gain approval for use. The shift in the EU's approach to approving pesticides for use in agriculture from risk-based to hazard-based threatens to strip more useful chemicals from the farmer's toolbox. Particular chemicals currently on the Annex 1 list of approved active ingredient, but which may fail re-registration under new criteria, include many useful herbicides like pendimethalin. The background to this is the EU's Sustainable Use Directive (2009/128/EC), which follows on from the Thematic Strategy on the Sustainable Use of Pesticides, adopted in 2006. The Chemicals Regulation Directorate (formerly the Pesticides Safety Directorate) has estimated that 15-20% of existing pesticides will be lost. Chemical approval is also influenced by the EU Water Framework Directive. In this case, it is the responsibility of the Environment Agency to monitor chemical residues in groundwater, but useful products already identified as under threat include carbetamide and propyzamide herbicides. This broad-spectrum threat to many key tools used in crop management means responsible use and storage of pesticides becomes ever more important for farmers and farm managers.

Key words pesticides, chemical stores, EU sustainable use directive, thematic strategy on pesticides, 91414

Introduction

Adequate pesticide storage is a subject which deserves to be taken seriously to protect farm staff from exposure to harmful chemicals, prevent point-source or diffuse pollution from misuse of agrochemicals, and demonstrate to legislators that pesticides can continue to be used in food production by safe and responsible operators with no risk to environmental or public safety.

In the years since the BSE and foot-and-mouth crises, public opinion of farming and food production has improved significantly. Nevertheless, a degree of public concern remains around the safety of pesticides and their use; poor practice on farms threatens to shake public confidence further. This undermines public confidence in food and environmental safety and could lead to:

- Collapse of consumer confidence in food leading to sudden shifts in consumer behaviour, causing market prices to collapse.

- Domestic or EU legislation being introduced to restrict pesticide use or remove essential products from farms, hampering efficient production of raw foodstuffs at a time when agriculture is expected to respond to growing world populations and a changing climate.

Safe pesticide storage also prevents:

- Damage to environment, pollution of drinking water and harm to biodiversity
- Harm to human health. The maximum permitted concentration of any single pesticide in drinking water is 0.1µg/litre (micrograms) or 0.1 parts per billion. [EU Drinking Water Directive]

Pesticides, when used in the context of crop protection, are sophisticated scientific tools to make the production of food more efficient. When not used in their proper crop protection context they become dangerous pollutants or poisons. Therefore safe, safe storage is important.

This paper seeks to explore the context for pesticide storage in the UK today, how this affects farm businesses and farm staff, and actions necessary to maintain high standards of agricultural production while remaining safe and within the law. It will identify desirable characteristics of pesticide stores for them to remain compliant and safe. Passing references are made to pesticide handling areas but this is not the main focus. Nor does this paper cover storage of pesticides by suppliers or contractors, or transporting pesticides from suppliers to their end user. Specific guidance on these aspects is available from the Department for Environment, Food & Rural Affairs (DEFRA) in its *Code of Practice for Suppliers of Pesticides to Agriculture, Horticulture and Forestry*, usually known as *The Yellow Code*. (DEFRA 1998)

Having reviewed the criteria for acceptable pesticide storage, this paper goes on to examine two differing pesticide stores in real situations on real farms; to critically evaluate their suitability, performance, legality and suggest areas where they may be improved. It will also identify practical courses of action to achieve regulatory approval and safe operation in a low-capital.

Methodology

To assist in performing an evaluation of the quality of pesticide storage on the two farms in question, the author will use checklists based on literature review. The checklist is not definitive but provides a useful working basis for criticism and is based on regulation and best practice documents set out in Appendix One.

There are several aspects to pesticide storage on farms and these can be examined in turn:

Legal

Various different pieces of legislation affect farms storage of pesticides in

different ways. There is no single piece of EU or UK legislation specifically covering pesticide storage on farms – there is no ‘Pesticide Stores Act’. However, those supplying and selling agrochemicals are governed by the following legislation.

- Control of Pesticides Regulations 1986 (amended 1997)
- The Plant Protection Products (Basic Conditions) Regulations 1997
- Control of Substances Hazardous to Health Regulations 1994 (COSHH) (made under the Health & Safety at Work Act 1974)

Very large pesticides stores (such as factory depots) are covered by the Control of Industrial Major Hazards Regulations 1984. However use – and storage – of pesticides on farms is subject directly and indirectly to other areas of law.

The principal risks posed by agricultural pesticides:

Environmental pollution

- Damage to biodiversity, habitats.
- Contamination of groundwater – and therefore human drinking water.

Human health

- Damage to human health through exposure to concentrations of harmful chemicals e.g. organo-phosphorous insecticides like anticholinesterase inhibitors, or by pesticides entering drinking water

Animal Health

- Damage to animal health through exposure to concentrations of harmful chemicals, and potential for chemicals to threaten human health via animal tissue entering the food chain. This would constitute a breach of Food & Feed Law (Statutory Management Requirement 11 under cross-compliance rules) even if no animal health symptoms were obvious.

The EU Water Frameworks Directive states that no single pesticide should be found in drinking water in concentrations greater than 0.1 micrograms per litre (expressed as $\mu\text{g/l}$) or 0.1 parts per billion. In Britain, drinking water quality is regulated by the Drinking Water Inspectorate

The ‘polluter pays’ principle

The so-called ‘polluter pays’ principle is adopted by most OECD (Organisation for Economic Co-operation & Development) and European Union countries. This means that the party responsible for causing pollution is

responsible for paying for the damage done to the natural environment.

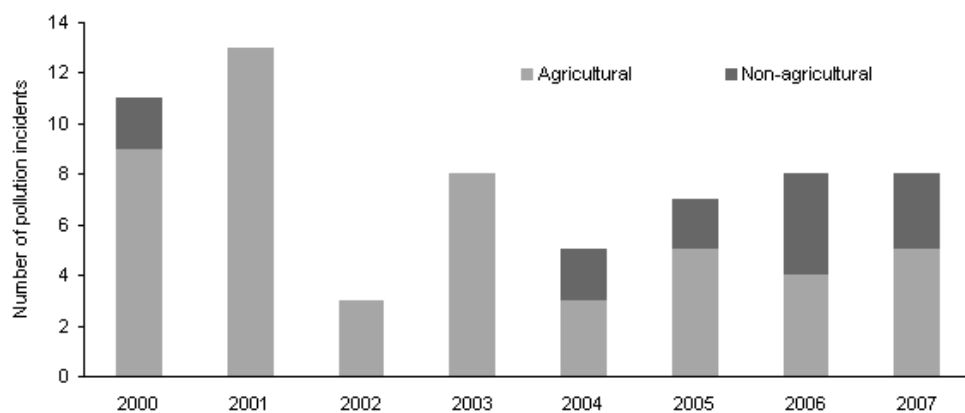
Pollution of watercourses or groundwater by agricultural pesticides takes two forms:

Diffuse pollution – where contamination may occur gradually over time, or where no defined event is identifiable as the cause. In the context of agriculture, most diffuse pollution is caused by small quantities of agrochemicals or nutrients in surface or groundwater either running off the soil surface or leaching through the soil structure into watercourses.

Point Source – where a single action or event can be explicitly said to have caused contamination. In the context of agriculture this can often be either from a concentrated chemical product being tipped directly – or allowed to fall – into a drain or watercourse, perhaps from a chemical during filling operations for the sprayer. A common incidence is through failure to retrieve foil seals from product containers; one foil seal can contain enough pesticide to contaminate 30km of stream (Voluntary Initiative, 2010).

Although increased legislation, better industry awareness of the need for careful pesticide use, and the efforts of the Voluntary Initiative have helped to

Figure 1: Serious Plant Protection Pesticide pollution incidents (Cat 1 & 2) 1999-2007.



Source: Environment Agency

significantly decrease the incidence of pollution from agricultural pesticides, the threat of a ban on certain chemicals or a pesticide tax remains real.

Instead of direct legislation, farm practices are subject to detailed guidance issued by the relevant authorities. Compliance with these best-practice guidelines is often included in other legislation affecting farmers. Therefore, although it remains 'good practice' it is important that farms remain compliant with these standards in order to avoid breaching other legislation.

For example, cross-compliance regulation is part of EU law, requiring

farmers to obey cross-compliance regulations in order to receive Single Payment Scheme support from Europe. Cross-compliance regulations directly affect storage and use of pesticides, as they require farmers to comply with the DEFRA, HSE and Chemicals Regulation Directorate (formerly the Pesticides Safety Directorate) Code of Practice for Using Plant Protection Products.

Pesticide stores: What should a modern, legal, safe store look like?

Location

A store used for agricultural pesticides should:

- Have convenient access for delivery of products and collection of waste material
- Be sited away from watercourses, drains, wells, boreholes or areas liable to flood.
- Be separated from buildings housing combustible materials such as hay and straw, fertiliser and fuel, cardboard or plastic wastes.

Ease of use

A store should have:

- Easy access for sprayer operators.
- Adequate lighting so product labels can be read.
- Comfortable shelf heights.
- Sufficient capacity for stocks of pesticides at peak times in the season.
- Additional capacity for rinsed plastic cans awaiting disposal.
- Plenty of ventilation but remain dry and frost-free.
- Protection for containers and labels from sunlight.

Security and Safety

A store should:

- Have adequate bunding to retain spills and leaks. Bunding should be able to contain 110% of total volume of pesticides held by the business, or 185% if in environmentally vulnerable areas (eg close to watercourses).¹

1. The Environment Agency can advise on the location of stores which may fall into this category – for instance if they are within a Groundwater Protection Zone. In any event, stores should be at least 10 metres from a watercourse, 50 metres from any borehole or well, and away from known flash flood routes, farmyard drains or busy farm traffic routes. [Voluntary Initiative Best Practice Guide on Pesticide Handling Areas, 2005]

- Be lockable.
- Be marked with a warning sign. Most general danger warning signs depict a black exclamation mark against a yellow background.
- Be constructed from fire-resistant material. Timber sheds are therefore not suitable. Timber doors are equally unsuitable.
- Have provision to securely separate particularly hazardous chemicals such as organo-phosphorous insecticides – locked in a cabinet for this purpose.
- Have safety equipment close at hand including fire extinguishers and materials for containing spills such as absorbent granules or sand. There should also be a shovel for removal for disposal by a licensed waste operator.

Management

Pesticide stores should:

- Have set procedures for operation, emergencies, spills and disposals, in place and understood by farm staff plus any contractors who may have authorised access to the store.
- Be accessed only by trained staff.
- Have emergency contact telephone numbers for business managers or owners, emergency services, pesticide supplier, waste disposal contractor, Environment Agency, all clearly displayed.
- Be available for and subject to regular inspection. The Health & Safety Executive should be informed of any new stores, as well as local fire authorities, in writing. Guidance should also be sought from the Environment Agency or in Scotland, the Scottish Environmental Protection Agency.

The above points are adapted from the Crop Protection Association's *Best Practice Guide on Pesticide Storage* (Crop Protection Association 2006). The VI guidance is, however, not exhaustive. The Health & Safety Executive (HSE) issues its own guidance (HSE 2006).

This document makes the following additional points:

- Check where contaminated fire-fighting water will drain to.

- Put ‘No Smoking’ and ‘No Naked Flames’ signs on the exterior of the store
- Highly flammable materials should be kept in a container which can withstand the effects of fire for more than 30 minutes.

It is worth noting that the Rural Payments Agency’s Cross Compliance guidance specifically refers farmers to the information within AIS 16.

It is also good practice for stores to include the following points:

- Roof should be collapsible – in the event of fire or explosion it will not carry fire or chemical beyond the structure itself.
- Store should be vermin proof
- Wall and floor meeting points should be sealed with a suitable masonry sealer (if brick/cement/block structure)
- Floor surface must not be permeable.
- Adequate shelving should be provided – pesticide containers should be off floors.
- Shelving must not be porous, absorbent or flammable (therefore timber shelves not adequate)
- Different classes of chemicals should be kept separated – insecticides, herbicides, fungicides
- Chemicals in powdered or water-soluble granular form should be stored *above* those in liquid form.
- Stores should have direct access – not through another structure.
- There should be no mains services (eg water) running through the store

Also near the store but not in it (Octopus Agronomy Training, 2010):

- Lighting – internal lighting should be operated by an external switch.
- First aid kit
- Eyewash equipment
- Locker for personal protective equipment (PPE) eg overalls, gloves,

rubber boots

- Pesticide stock records

In addition to these points, the *Safety Equipment Handbook*, published by the British Crop Protection Council (2002), adds the following:

- Clean water supply must be available *nearby*.
- In the event of a fire, tell the fire officer what pesticides are involved.

It also makes the obvious, but rarely explicitly stated, point that stores should include product labels. This should not be removed and store elsewhere e.g. the farm office.

The DEFRA, HSE and Chemicals Regulation Directorate (formerly the Pesticides Safety Directorate) *Code of Practice for Using Plant Protection Products* (DEFRA 1998) makes the following additional points:

- “You must only store approved pesticides in the original container with the approved product label.
- “When you have mixed a pesticide with another substance such as a dilutant, carrier, marker or adjuvant, you are strongly recommended to use the mixture as soon as possible and not to store it for a long period – you should only have enough mixture to use in a day.

“Practice good store management by ensuring that you:

- Do not have unapproved or unwanted pesticides in your store.
- Remove waste packaging and dispose of it legally.
- Use the oldest stock first.
- Deal with damaged or deteriorating containers.
- Have an up to date stock record easily available, and, in case of emergency, keep a copy away from the store for safekeeping.

In the context of all the above, this article will now begin to evaluate two real-life examples of on-farm pesticide stores against the following checklist, developed from the material covered in the previous chapter:

Table 1: Example checklist for use in assessing chemical storage

Criteria	Yes	No	notes
Location Convenient access? Away from watercourses? Away from fertiliser, fuel, straw, etc			
Construction Fire-resistant construction? Collapsible roof? Fireproof door? (>30 minute burn life) Walls-floors sealed? Impermeable floor? Light switch outside?			
Ease of use Adequate shelving? Capacity for peak stocks? Adequate lighting? Rinsed cans and cardboard separated? Capacity for rinsed cans and cardboard? Products out of direct sunlight? Clean and clutter-free? Clean water available nearby? Adequate ventilation?			
Security & Safety Bunding for 110% stock capacity? Lockable? Warning sign? Vermin proof? Segregated storage for harmful chemicals? Safety equipment close at hand?			
Management Set procedures for emergencies, spills, in place? Emergency contacts clearly visible? Different chemical classes separated?			

Case Study 1: Overbury Farms, Overbury, Gloucestershire.

Overbury Farms is the in-hand farming operation of the Holland-Martin family's Overbury Estate on the Glos/ Worcs border. Principal crops are cereals with a high proportion of milling wheat grown. Land is also let for potatoes, field vegetable and peas. There are also significant Entry Level and Higher Level Stewardship scheme interests. The author visited the farm in December 2010 to record its pesticide storage.

Figure 2: Sprayer preparation area at Overbury Farms



Figure 2 shows the sprayer preparation area at Overbury Farms. The chemical store itself is through the green door on right of the picture. Note the bunding around the sprayer area and the 'speed bump' walls of the bund allowing the sprayer to enter and exit. Any chemical spillage here would need to be collected with absorbent granules and disposed of by a licensed waste contractor.

The store is of cement and block construction with a sliding steel door. Its location is suitable as it is some significant distance from watercourses, drains or dwelling houses.

Figure 3
Steel door
displaying warning sign



Figure 4: Steel door with circular padlock, switch for interior light on exterior of store.



Figure 5: Interior of store



Figure 5 shows the interior of store, with adequate shelving and products segregated. Note the pallet truck for handling large quantities of chemicals – this should be stored elsewhere to reduce the risk of contamination if used elsewhere. The red circle indicates two shortcomings – the ceiling is constructed of a flammable material, in this case Oriented Strand Board, and equally is a collapsible roof. Also discarded cardboard creates clutter and makes working environment awkward increasing risk of spills when handling/moving chemicals. On the right, liquids appear to be stored above a dry or soluble material in the paper sack – although this may be absorbent granules.

Figure 6: Interior of store showing wide, lockable steel doors for delivery/ removal of products and wastes on pallets.



Figure 7: Notice board showing emergency contacts, relevant notices, best practice guidelines for some pesticides (in this case metaldehyde)



Figure 8: Unsuitable shelves



Figure 8 demonstrates unsuitable shelves for a pesticide store – chipboard, although cheap, is both porous and flammable. Supplies like nylon twine and spare drive belts should be stored in the workshop, not the chemical store.



Figure 9: This simple, DIY-built system allows plastic chemical containers to be triple-rinsed and drained with the run-off collected in separate vessels.

Figure 10: storage of empty containers



Figure 10 shows rinsed, dried and crushed plastic containers stored in empty polypropylene bags, ready for disposal by a licensed waste contractor. These should additionally be placed in a secure store so they pose no risk to children or the environment. A supply of clean water is available in the green tank.

Table 2: Overbury Farms' Chemical Store – how compliant is it?

Criteria	Yes	No	notes
Location Convenient access? Away from watercourses? Away from fertiliser, fuel, straw, etc	✓ ✓ ✓		
Construction Fire-resistant construction? Collapsible roof? Fireproof door? (>30 minute burn life) Walls-floors sealed? Impermeable floor? Light switch outside?	✓ ✓ ✓ ✓ ✓		But wooden roof
Ease of use Adequate shelving? Capacity for peak stocks? Adequate lighting? Rinsed cans and cardboard separated? Capacity for rinsed cans and cardboard? Products out of direct sunlight? Clean and clutter-free? Clean water available nearby? Adequate ventilation?	 ✓ ✓ ✓ ✓ ✓ 	x x x	shelves unsuitable Not obvious
Security & Safety Bunding for 110% stock capacity? Lockable? Warning sign? Vermin proof? Segregated storage for harmful chemicals? Safety equipment close at hand?	✓ ✓ ✓ ✓ 	 x x	 Not evident Not obvious
Management Set procedures for emergencies, spills, in place? Emergency contacts clearly visible? Different chemical classes separated?	 ✓ ✓ ✓		

Summary

Overbury Farms is more or less compliant and observing the HSE guidance in AIS 16 and the other detailed guidance discussed earlier in this paper. But there are areas for improvement.

- Steel shelving would be more suitable as it is neither flammable nor porous.
- The only evident ventilation to the store was the gaps around the rims of the steel double-doors.

- The location of eye-wash and first aid equipment was not immediately evident.
- Used cardboard boxes need to be folded or crushed and stacked neatly in the store
- The ceiling construction of OSB is unsuitable as it is flammable although this may have been disguising a roof of more suitable material.

Case Study 2: Farm in north Wiltshire

This farm is a small, 375-acre arable and sheep farm. It falls within a Nitrate Vulnerable Zone and the North Wessex Downs Area of Outstanding Natural Beauty. Soils are heavy clays over deep chalk with occasional areas of exposed pebbly gravel. It is not farmed intensively and pesticides are not used in great quantities; most field operations are carried out by contractors. Nevertheless, its chemical store is operational.

The store is adapted from former dairy buildings (it was the plant room) and is of blockwork construction with a steel-supported asbestos sheet roof. It is between a workshop with a heavy, sliding steel door and the former bulk tank/ washroom.

Figure 11: Chemical store



Figure 11 shows the chemical store adjacent to main farm thoroughfare. A warning symbol is displayed but the door is timber and badly rotted. It should be noted that when the black corrugated workshop door is fully open it obstructs entry to the chemical store. Immediately outside the store is a sloping area of concrete leading to a drain. Access to the store is also obstructed by sheep fencing materials.

Figure 12: Chemical store - interior



Figure 12 shows the store to be unlocked, dirty and cluttered. The floor is obstructed by detritus, a welder, and compressor material. Pesticides are crammed into available floorspace – in this case glyphosate in the green plastic cans. The floor is of tamped concrete. There is no bunding to speak of. Already it is evident this is wholly unsuitable as a chemical store.

Figure 13: light switch

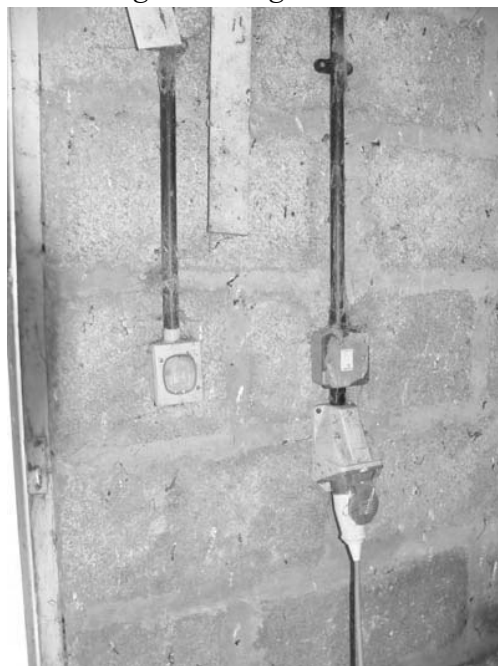


Figure 14: empty chemical containers (1)



Figure 13 shows the electric light switch to be on the inside of the store. Mains power and an extension lead run through the store. Bird muck everywhere indicates the store is far from being vermin-proof.

Discarded plastic chemical containers (pendimethalin) lie with discarded cardboard among the bird muck (Figure 14). It is also evident that some chemical has been spilled when the container was used. The product label indicates that it is a substance harmful to the environment.

Figure 15: empty chemical containers (2)



Figure 16: Shelving



More discarded chemical containers lie among the debris (Figure 15), in this case a container for a NuFarm product Swipe P, a broadleaved weed herbicide containing ioxynil, bromoxynil and mecoprop-P. Swipe P no longer has approval for use and its final use-up and storage date was 31/8/10. Shelving would still be unsuitable even if cleared of clutter (Figure 16) – the old, home-made timber shelves are both flammable and porous as well as being considerably rotted.

Table 3: Case study 2 chemical store – how compliant is it?

Criteria	Yes	No	notes
Location Convenient access? Away from watercourses? Away from fertiliser, fuel, straw, etc	✓	x x	
Construction Fire-resistant construction? Collapsible roof? Fireproof door? (>30 minute burn life) Walls-floors sealed? Impermeable floor? Lightswitch outside?	✓ ✓	 x x x x	
Ease of use Adequate shelving? Capacity for peak stocks? Adequate lighting? Rinsed cans and cardboard separated? Capacity for rinsed cans and cardboard? Products out of direct sunlight? Clean and clutter-free? Clean water available nearby? Adequate ventilation?	✓ ✓	x x x x x x	Lighting inoperable But entry for vermin
Security & Safety Bunding for 110% stock capacity? Lockable? Warning sign? Vermin proof? Segregated storage for harmful chemicals? Safety equipment close at hand?	✓ ✓	x x x x	
Management Set procedures for emergencies, spills, in place? Emergency contacts clearly visible? Different chemical classes separated?		x x x	

Summary

This building is totally unsuitable as a pesticide store.

It is:

- Unsecure (never locked)

- Dangerous/ hazardous to work in
- The farmer is in breach of cross-compliance regulations and will be risking significant deductions to single payment income if inspected. The risk of water contamination from pesticides is significant.

Even benefitting from a good clean up and disposal of unwanted chemicals, plastics and cardboard packaging by a licensed waste disposal contractor, this building would still be unsuitable for use as a pesticide store, since it is:

- Constantly passed by farm and residential traffic.
- It has mains services running through it
- Its roof is not collapsible, and fire may spread to it from buildings on either side.
- It opens onto a rainwater drain.
- It has an inadequate door made of flammable material.
- There is no bunding to contain any spillages
- Or clean-up materials to cope with them
- Pesticides are stored on floor and spillages have not been cleared.
- They are not segregated and there is no separate, secure storage for particularly harmful chemicals.
- There are no stock records.

Conclusions

By reviewing the legislation that affects pesticides storage on farms, the guidance issued by the relevant authorities, and by examining two real-life case studies, it is possible to draw the following conclusions.

- Careful planning is required when preparing or selecting adequate pesticide storage
- It is often difficult to adapt existing farm buildings for use and chemical stores
- Not any building will do

- Best practice does not cost significantly more to observe
- Cutting corners increases the risk of serious environmental damage and legal action
- Safe, tidy storage means fewer hazards – therefore fewer risks to farm staff and sprayer operators

Recommendations

However, in the second case study there is no obvious alternative. It is a tenanted farm with poor quality buildings and the current store is the only building with a lockable door. Few tenants will either have the funds or the inclination to invest in building new stores from scratch, nor will a landlord consider this an attractive option as it will yield no obvious extra return on investment.

A suitable alternative chemical store for the second case study farm is one that is growing in popularity on many farms, not just smaller or tenanted units. Steel shipping containers are strong, cheap, mobile (they can often be moved with farm machinery). They are secure and come ready-assembled. Some suppliers offer tailor-made converted shipping containers as chemical stores, with bunding and ventilation.

In the Figure 17, adequate bunding (110% of contents) has been achieved through welding a steel plate inside the door.

Figure 17: shipping container as chemical store (1) Photo by CS Shipping Containers



To determine the amount of banded space needed, it is important to calculate the total quantity of pesticide likely to be on the farm at peak time (be generous). It is also worth allowing some extra space should stocks rise unexpectedly – eg running down stocks of chemical products within their use-up periods or to cope with holding additional quantities delivered in error.

Another example of a steel shipping container adapted for use as a chemical store is shown in Figure 18. The bund is clearly visible in the foreground. Steel shelves provide easy access and segregation for chemical groups. Louvred ventilation (top left).

Figure 18: shipping container as chemical store (2) Photo by Secure Space Containers



Shipping container stores can be easily sited away from watercourses, etc. Planning permission may not be necessary but advice should always be sought. The Health & Safety Executive and the local fire authority should always be notified in writing of any new pesticide store. The roof is not collapsible – but since the structure should maintain its integrity in most incendiary situations this may not be critical. Steel roofs can absorb heat and may cause temperatures inside the store to alter the chemical products properties or even lead to fire. Placing the container in a shaded spot, or obscuring the roof surface from the full force of the sun are useful ways to avoid this. Wooden pallets are a favourite option for this purpose.

One drawback to the ease of access to this store is the steel plate which serves as the bund's 'dam'. This, at ankle or knee height at entry to the store, could constitute a hazard under COSHH assessment, particularly as sprayer

operators or other staff are likely to be carrying chemical cans on entry to or exit from the store.

The HSE guidance – AIS 16 – makes the following recommendations on DIY bunds for chemical stores:

- The bund should be soundly constructed of non-fragile materials resistant to the permeation of liquids, e.g. metal (not foil).
- The bund should comprise, or extend around, the whole periphery of the Bunding may be achieved by standing your pesticides in a metal container, e.g. a redundant water tank.

The shift in the EU's approach to approving agricultural pesticides from risk-based to hazard-based threatens the use of many key tools used in crop management, and makes responsible use and storage of pesticides ever more important. Much can be achieved by a professional approach to managing the chemical store. In many cases there is no building suitable and/or available for this purpose, and here the adapted shipping container offers a relatively cheap way of putting in place a compliant structure for pesticide storage that meets HSE, CRD and cross-compliance requirements.

About the author

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