

Guidelines on how to use



Surface water

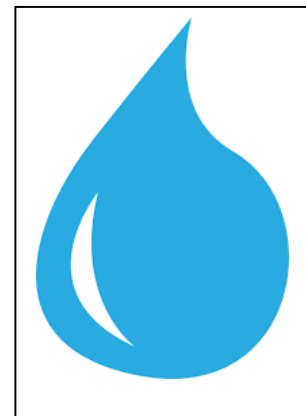
Tool for

Reducing the

Impact of

Pesticides on the

Environment



Pilot Initiative (January 2015)

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1.0 Background

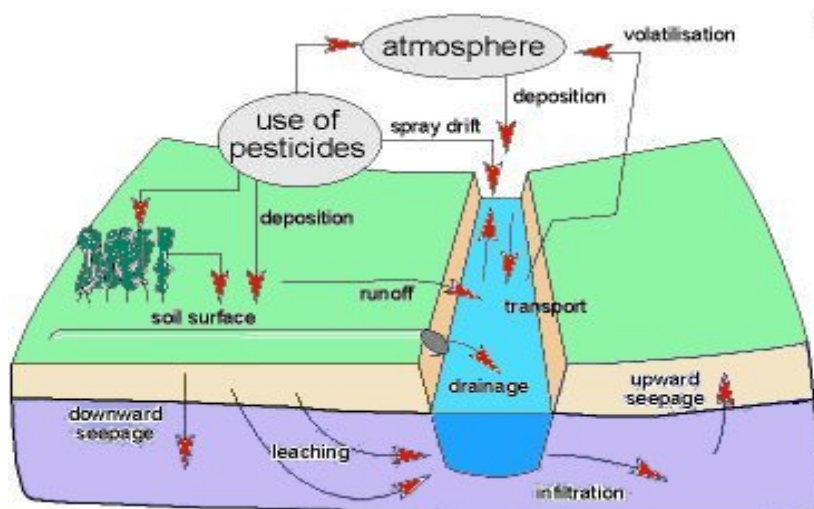
1.1 Introduction

One of the key goals of the Department of Agriculture, Food and the Marine (DAFM) is to lead the way in the development of an economically viable and environmentally sustainable agri-food sector (Food Harvest 2020). To that end DAFM has progressed an initiative to design and develop the STRIPE. This initiative incentivises farmers to adopt the best practice measure using spray drift reducing technology to reduce the impact of pesticide exposure on the environment while concurrently increasing farm efficiency. The initiative allows farmers to reduce the size of mandatory untreated areas of land near water course courses (buffer zones) which in turn allows farmers to make more effective use of their agricultural land while helping to protect aquatic life from pesticide contamination by reducing exposure.

1.2 Preventing Water Contamination

Pesticides in the form of Plant Protection Products (PPPs) are sometimes applied to crops to prevent them from being destroyed or adversely affected by pests (plant pathogens, insects or weeds). To ensure that the application of PPPs does not adversely affect either non target organisms or water quality, we establish minimum distances between the treated area and bodies carrying water (buffer zones). While Ireland does not have any appreciable problem with pesticide contamination of water, risk mitigation measures such as the use of buffer zones and use of low drift application technology are employed to minimise the possibility of negative effects on the aquatic environment and to ensure consumers enjoy an uncompromised supply of quality water. PPPs are only registered in Ireland if a risk assessment proves that the products can be used safely with no unacceptable affects to the human health and the environment.

Professional users/farmers can adopt other responsible practices such as minimising the likely hood of PPPs entering either ground water or surface water by either run-off or drainage



1.3 Buffer zones

Buffer zones can be either areas adjacent to water (mainly) or hedgerows which cannot receive direct application of a particular pesticide(s). In recent years, the majority of products being authorised in the EU require an unsprayed area to be maintained adjacent to rivers, lakes and drains etc... The extent and size of these buffer zones vary considerably and can range from 1m to 70m. In all instances PPPs must not be applied within 1m of any surface water body, i.e., a minimum buffer zone of 1m applies to all PPPs regardless of rate of application, type of nozzles used and whether water is present in the surface water body. **(A surface waterbody is a feature which is capable of holding water permanently or at any stage during the year.)**



1.4 Low Drift Nozzles

Low drift nozzles are designed to produce larger spray droplets than ordinary nozzles. The production of these larger droplets is achieved by either incorporating air into the droplets or by using a pressure reducing chamber inside the nozzle itself. These larger droplets are heavier and are less prone to drift and so reduce the loss of valuable PPP from the target area.



1.5 Buffer zone reduction by using drift reducing nozzles and reducing product application rate

It is frequently the case that product authorisations require a buffer zone of greater than 1m to be left between the edge of the application area of the crop and the surface water body (river, lake, drain, ditch, gripe, sheugh etc.). Where a product authorisation attracts such a buffer zone, professional users/farmers are required to respect this buffer zone in its entirety.

When using the STRIPE there are only three instances where this is not necessarily the case.

1. When using DAFM approved drift reducing nozzles
2. When using reduced application rates
3. When using DAFM approved drift reducing nozzles and reduced application rates

For example

Case 1

Product label requires the professional user/farmer to leave an unsprayed buffer zone of 10m. If the farmer is using drift reducing nozzles it may be possible to reduce this 10m buffer zone.

e.g., Professional user/farmer wishes to use “**Product XYZ**” and the label indicates that a 10m buffer zone is required. However, the professional user/farmer is using “**Super Low Drift**” nozzles on his sprayer, capable of reducing the drift by 90%, consequently by following the STRIPE instructions, the professional user/farmer is able to reduce this buffer zone width down to 1m or 2m.

Case 2

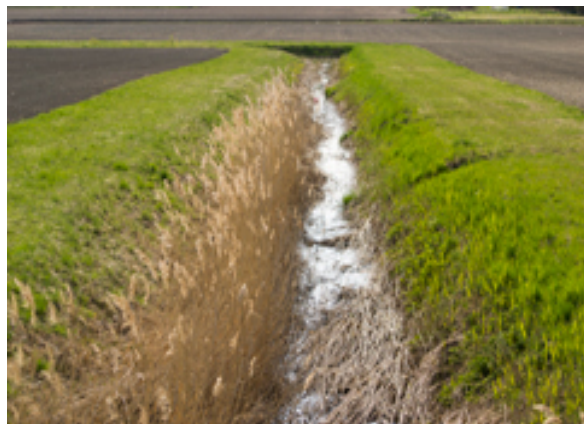
Product label requires the professional user/farmer to leave an unsprayed buffer zone of 10m. If the farmer is using a reduced application rate it may be possible to reduce this 10m buffer zone.

e.g, Professional user/farmer wishes to use “**Product XYZ**” and the label indicates that a 10m buffer zone is required. However, the professional user/farmer is using “**Ordinary**” Nozzles on his sprayer, which has no drift reduction capacity. However, the professional user/farmer is using this product at half the recommended rate (50% rate), and consequently, by following the STRIPE instructions, the professional user/farmer is able to reduce In this instance, this buffer zone width down to 5m i.e., as a “rule of thumb” ~50% reduction in application rate will lead to a 50% reduction I the buffer zone. (However, in some limited cases this will not be possible)

Case 3

Product label requires the professional user/farmer to leave an unsprayed buffer zone of 10m. If the professional user/farmer is using a reduced application rate, and is using drift reducing nozzles it may be possible to reduce this 10m buffer.

e.g, Professional user/farmer wishes to use “**Product XYZ**” and the label indicates that a 10m buffer zone is required. However, the professional user/farmer is using “**Low Drift**” Nozzles on his sprayer, capable of reducing the drift by 75%,. The professional user/farmer is also using this product at just half the recommended rate of application and consequently by following the STRIPE instructions the professional user/farmer should be able to reduce this buffer zone width down to 1m.



1.6 Scope of STRIPE

STRIPE is ONLY applicable to spray applications to field crops that are applied using horizontal boom sprayers i.e., not applicable to granular applications.

STRIPE assumes that all necessary planning for the crop, the spray operation and product selection has been done in advance and best practice measures are followed throughout e.g.,

- **Be aware of locations of water bodies and if they are used to for drinking water.**
- **Wind direction away from sensitive area**
- **Wind speed < 2.5 m/s**
- **Moderate temperature (< 25 °C)**
- **Humidity (>50 %)**
- **Observe weather conditions and forecast**
- **Boom height should be adjusted correctly and should not be higher than 50 cm**

It should also be noted that statutory ‘no-use’ zones (called safeguard zones) apply around all drinking water abstraction points (public and private boreholes and rivers/lakes), ranging

from 5 metres to 200 metres depending on the size and extent of the supply. Each Local Authority or The National Federation of Group Water Schemes can advise on precise locations of such abstraction points. Irish safeguard zones are set out in S.I. No. 155 of 2012 (Sustainable Use of Pesticides Regulations) and can be found on the Departments website <http://www.pcs.agriculture.gov.ie>.

Please note that these “safeguard zones ” cannot be reduced using STRIPE.

Nitrates Regulations S.I. No. 31 of 2014

Regulation 17 of S.I. No. 31 of 2014 (European Union (Good Agricultural Practice for Protection of Waters) Regulations), requires that no chemical fertiliser be applied to land within 2m of any surface waters. Regulation 17 further requires that no cultivation shall take place within 2m of a watercourse identified on the OSI 1:10560 map except in the case of grassland establishment.

Please note the following:

1. Where such an uncultivated 2m strip exists adjacent to a watercourse, it shall utilisable for the purposes of STRIPE. See examples

- a. If a STRIPE buffer of 1m is required and the farmer has left a 2m uncultivated strip adjacent to the watercourse, no further buffer is required.**
- b. If a STRIPE buffer of 5m is required and the farmer has left a 2m uncultivated strip adjacent to the watercourse, a further 3m will be required to be left unsprayed.**

2. STRIPE applies to all surface waterbodies, including those not included on the OSI 1:10560 map.

(A surface waterbody is a feature which is capable of holding water permanently or at any stage during the year.)

2.0 How to use STRIPE

2.1 “Low Drift Nozzles” Step by Step

Step 1

Identify pest problem, e.g., mildew and crown rust in winter oat crop.

Step 2

Check if appropriate that pest problem has breached recognised thresholds for damage. In this case the application will be made preventatively.

Step 3

Identify all possible solutions. In this case it is determined that there are no satisfactory cultural or biological control solutions.

Step 4

If chemical control is deemed the appropriate crop protection measure, choose product. In this case the product(s) chosen are Proline (PCS No. 03786) and Frelizon (PCS No. 04913)

Step 5

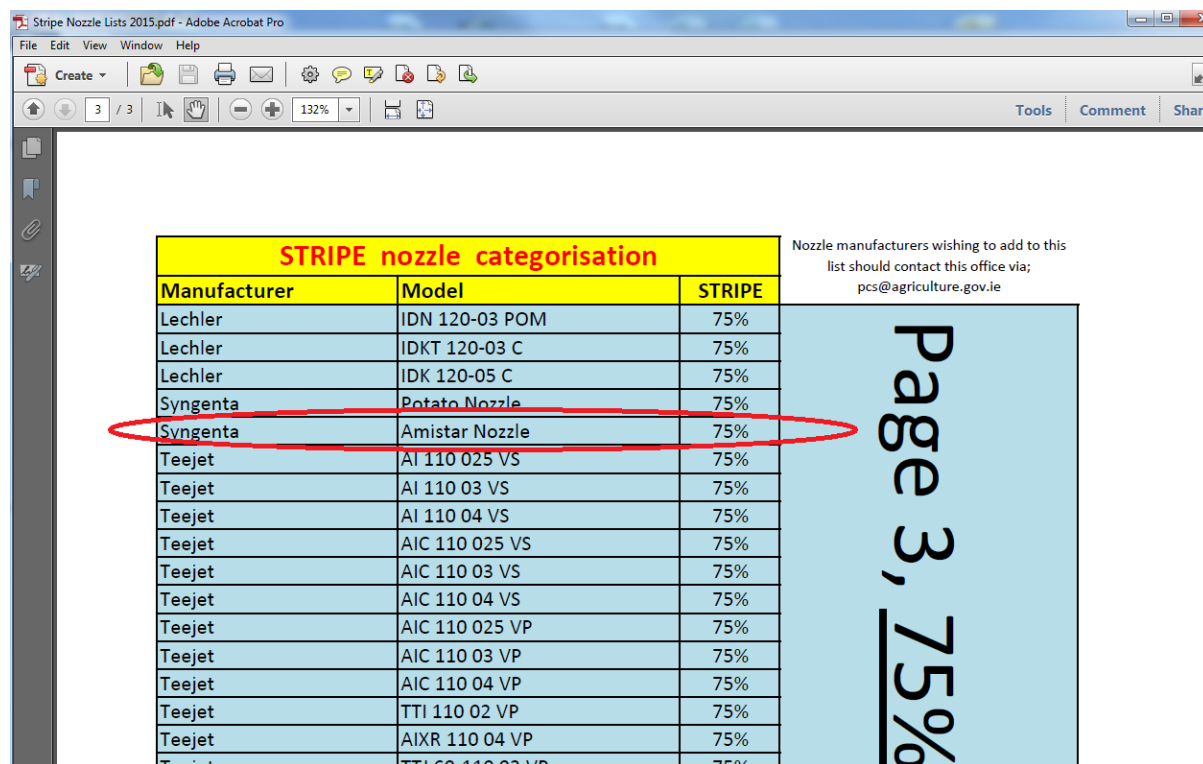
Identify what nozzle you have on your sprayer.
The sprayer is equipped with Amistar nozzles

Step 6

Examine the “STRIPE Nozzle Lists”. Does the nozzle you are using appear on these lists?

In our example the farmer’s sprayer is equipped with Amistar nozzles and these are in the STRIPE 75% category, i.e., they achieve a reduction in spray drift of 75%.

If your nozzle does not appear on the DAFM “STRIPE Nozzle List” you must adhere to the buffer zone prescribed on the product label unless farmer/professional user is using reduced rates of application. Please use “Ordinary Nozzles” Step by Step (pages 11-13)



STRIPE nozzle categorisation		
Manufacturer	Model	STRIPE
Lechler	IDN 120-03 POM	75%
Lechler	IDKT 120-03 C	75%
Lechler	IDK 120-05 C	75%
Syngenta	Potato Nozzle	75%
Syngenta	Amistar Nozzle	75%
Teejet	AI 110 025 VS	75%
Teejet	AI 110 03 VS	75%
Teejet	AI 110 04 VS	75%
Teejet	AIC 110 025 VS	75%
Teejet	AIC 110 03 VS	75%
Teejet	AIC 110 04 VS	75%
Teejet	AIC 110 025 VP	75%
Teejet	AIC 110 03 VP	75%
Teejet	AIC 110 04 VP	75%
Teejet	TTI 110 02 VP	75%
Teejet	AIXR 110 04 VP	75%
Teejet	TTI 60-110 03 VP	75%

Nozzle manufacturers wishing to add to this list should contact this office via;
pcs@agriculture.gov.ie

Page 3, 75%

Step 7

Choose the correct product and check the PCS No., e.g., Proline (PCS No. 03786) and Frelizon (PCS No. 04913)

Step 8

Knowing both the nozzles your sprayer is equipped with, and the Plant Protection Product(s) you wish to apply, proceed to the “STRIPE Product Tables”.

Step 9

Choose the appropriate STRIPE Product Table e.g., Herbicide, Insecticide, Fungicide etc...

Step 10

Proceed across the page (of the “STRIPE Product Table”) and identify the mandatory buffer zone prescribed on the product label.

In the worked example the mandatory buffer zone required for Proline is 5m and for Frelizon is 10m.

FUNGICIDES				Buffer zones									
				Mandatory (non drift reducing nozzles)	When using 90% drift reducing nozzles	When using 75% drift reducing nozzles at various application rates				When using non drift reducing nozzles and various application rates			
				Non STRIPE	STRIPE 90%	Stripe 75%				Non STRIPE nozzles			
				Full Rate	Full Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate
Abringo	04239	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Adexar	04324	Epoxiconazole & Fluxapyroxad	62.5 g/L & 62.5 g/L	5	1	2	1	1	1	5	4	3	1
Amistar	01351	Azoxystrobin	250 g/L	5	1	1	1	1	1	5	4	3	1
Arizona	04555	Folpet	500 g/L	5	1	2	1	1	1	5	4	3	1
Balear 720 SC	04411	Chlorothalonil	720 g/L	5	1	2	1	1	1	5	4	3	1
Barclay Avoca	04458	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Bravo 500	03452	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Cavaterra	05059	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Chlorthalis	05193	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
CT 500	04862	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Frelizon	04913	Penthiopyrad & Picoxystrobin	160 g/L & 160 g/L	10	1	3	2	1	1	10	8	5	3
Joules	04784	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Jupital	04503	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Orchid B	04612	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Phyton	05019	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Proline	03786	Prothioconazole	250 g/L	5	1	1	1	1	1	5	4	3	1
Rover 500	04467	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Supreme	04841	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1

Step 11

Find on the table headings the STRIPE 90% or STRIPE 75% columns.

We are using Amistar nozzles which are STRIPE 75% nozzles, so the minimum buffer zone required for Proline is now 1m and for Frelizon is 3m.

FUNGICIDES				Buffer zones									
				Mandatory (non drift reducing nozzles)	When using 90% drift reducing nozzles	When using 75% drift reducing nozzles at various application rates				When using non drift reducing nozzles and various application rates			
				Non STRIPE	STRIPE 90%	Stripe 75%				Non STRIPE nozzles			
Product Name	PCS No.	Active Substance	Concent- ration	Full Rate	Full Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate
Abringo	04239	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Adexar	04324	Epoxiconazole & Fluxapyroxad	62.5 g/L & 62.5 g/L	5	1	2	1	1	1	5	4	3	1
Amistar	01351	Azoxystrobin	250 g/L	5	1	1	1	1	1	5	4	3	1
Arizona	04555	Folpet	500 g/L	5	1	2	1	1	1	5	4	3	1
Balear 720 SC	04411	Chlorothalonil	720 g/L	5	1	2	1	1	1	5	4	3	1
Barclay Avoca	04458	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Bravo 500	03452	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Cavaterra	05059	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Chlorthalis	05193	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
CT 500	04862	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Frelizon	04913	Penthiopyrad & Picoxystrobin	160 g/L & 80 g/L	10	1	3	2	1	1	10	8	5	3
Joules	04784	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Jupital	04503	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Orchid B	04612	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Phyton	05019	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Proline	03786	Prothioconazole	250 g/L	5	1	1	1	1	1	5	4	3	1
Rover 500	04467	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Supreme	04841	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1

2.2 Combining use of “Low Drift Nozzles” with reduced application rates Step by Step

Step 12

Proceeding across the table headings, we see options for reducing the buffer zone by reducing the rate of application and by combining the use of STRIPE 75% nozzles and rate of application reductions.

We are using Amistar nozzles and we are using the product Proline at $\frac{3}{4}$ rate (0.6 L/Ha) and we are using the product Frelizon at $<\frac{1}{2}$ rate (0.6 L/Ha).

This means it is possible to reduce the buffer zone to 1m for both Proline and Frelizon.

FUNGICIDES				Buffer zones									
				Mandatory (non drift reducing nozzles) Non STRIPE	When using 90% drift reducing nozzles STRIPE 90%	When using 75% drift reducing nozzles at various application rates				When using non drift reducing nozzles and various application rates			
				Full Rate	Full Rate	Stripe 75%				Non STRIPE nozzles			
Product Name	PCS No.	Active Substance	Concent- ration	Full Rate	Full Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate
Abringo	04239	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Adexar	04324	Epoxiconazole & Fluxapyroxad	62.5 g/L & 62.5 g/L	5	1	2	1	1	1	5	4	3	1
Amistar	01351	Azoxystrobin	250 g/L	5	1	1	1	1	1	5	4	3	1
Arizona	04555	Folpet	500 g/L	5	1	2	1	1	1	5	4	3	1
Balear 720 SC	04411	Chlorothalonil	720 g/L	5	1	2	1	1	1	5	4	3	1
Barclay Avoca	04458	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Bravo 500	03452	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Cavaterra	05059	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Chlorthalis	05193	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
CT 500	04862	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Frelizon	04913	Penthiopyrad & Picoxystrobin	160 g/L & 80 g/L	10	1	3	2	1	1	10	8	5	3
Joules	04784	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Jupital	04503	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Orchid B	04612	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Phyton	05019	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Proline	03786	Prothioconazole	250 g/L	5	1	1	1	1	1	5	4	3	1
Rover 500	04467	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1
Supreme	04841	Chlorothalonil	500 g/L	5	1	2	1	1	1	5	4	3	1

Step 13

Repeat the process for each product in your tank mix.

Step 14

Having completed the process for each product included in your tank mix, you are required to apply the largest buffer zone for your spray application, i.e., if one product in your tank mix requires a 2m buffer zone, while the others required only a 1m buffer zone, you must adhere to the larger 2m buffer zone.

e.g., When examined, both products when applied at the rates we have chosen, using STRIPE 75% nozzles require a buffer zone of 1m to be adhered to.



2.3 Combining use of “Ordinary Nozzles” with reduced application rates Step by Step

Step 1

Identify pest problem, e.g., annual grasses and broadleaf weeds in winter wheat.

Step 2

Check that pest problem has breached recognised thresholds for damage. Application will be made post-emergence.

Step 3

Identify all possible solutions. In this case it is determined that there are no satisfactory cultural or biological control solutions.

Step 4

If chemical control is deemed the appropriate crop protection measure, choose product. In this case the product(s) chosen are Diflanil 500 SC (PCS No. 04358) and Fieldguard (PCS No. 02458).

Step 5

Identify what nozzle you have on your sprayer.

The sprayer is equipped with Ordinary nozzles with no capacity to reduce drift.

Step 6

As our sprayer is not equipped with “low drift nozzles” and instead is equipped with “ordinary nozzles”(not capable of reducing drift), there is no need to consult the “STRIPE Nozzle List”. However, by consulting the “STRIPE Product Tables” we can calculate the buffer zone necessary using different application rates.

Step 7

Choose the appropriate STRIPE Product Table e.g., Herbicide, Insecticide, Fungicide etc...

Step 8

Choose the correct product and check the PCS No., e.g., **Diflanil 500 SC (PCS No. 04358)** and **Fieldguard (PCS No. 02458)**.

Step 9

Proceed across the page and identify the mandatory buffer zone prescribed on the product label.

Using **Diflanil 500 SC** and **Fieldguard** we are required to observe a **5m buffer zone**, while using full rate.

HERBICIDES				Buffer zones													
				Mandatory non drift reducing nozzles	When using 90% drift reducing nozzles	When using 75% drift reducing nozzles at various application rates						When using non drift reducing nozzles and various application rates					
				Non STRIPE	STRIPE 90%	Stripe 75%						Non STRIPE nozzles					
				Full Rate	Full Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate	Full Rate	3/4 Rate	1/2 Rate	1/4 Rate				
Product Name	PCS No.	Active Substance	Concentration														
Diflanil 500 SC	04358	Diflufenican	500 g/L	5	1	1	1	1	1	5	4	3	1				
Digital	03147	Flumioxazin	300 g/L	5	1	2	1	1	1	5	4	3	1				
Dow Shield 100	03861	Clopyralid	100 g/L	1	1	1	1	1	1	1	1	1	1				
Farmco IPU	04522	Isoproturon	500 g/L	5	1	1	1	1	1	5	4	3	1				
Fieldguard	02458	Isoproturon	500 g/L	5	1	1	1	1	1	5	4	3	1				
Firebird	04221	Flufenacet + Diflufenican	400 g/L + 200 g/L	5	1	2	1	1	1	5	4	3	1				
Flight	02524	Pendimethalin + Picolinafen	330 g/L + 7.5 g/L	5	1	2	1	1	1	5	4	3	1				
Fusilade Max	01472	Fluazifop-P (-butyl)	125 g/L	1	1	1	1	1	1	1	1	1	1				
Guillotine	03146	Flumioxazin	300 g/L	5	1	2	1	1	1	5	4	3	1				
Herbaflex	05032	Isoproturon + Belfluthamide	500 g/L & 85 g/L	5	1	1	1	1	1	5	4	3	1				

Step 10

Proceeding across the table headings, we see options for reducing the buffer zone by reducing the rate of application.

However, by choosing to apply Diflanil 500 SC at $\frac{3}{4}$ rate (0.18 L/ha) and Fieldguard at $\frac{1}{2}$ rate (1.5 L/ha), the “STRIPE Product Tables” show us that we can reduce the buffer zone required to 4m and 3m respectively.

HERBICIDES				Buffer zones																	
				Mandatory non drift reducing nozzles Non STRIPE	When using 90% drift reducing nozzles STRIPE 90%	When using 75% drift reducing nozzles at various application rates						When using non drift reducing nozzles and various application rates									
						Stripe 75%						Non STRIPE nozzles									
						Full Rate	Full	Rate	Full	Rate	3/4	Rate	1/2	Rate	1/4	Rate	Full	Rate	3/4	Rate	1/2
Product Name	PCS No.	Active Substance	Concentra- tion																		
Diflanil 500 SC	04358	Diflufenican	500 g/L	5	1		1		1		1		1		5	4	3		1		
Digital	03147	Flumioxazin	300 g/L	5	1		2		1		1		1		5	4	3		1		
Dow Shield 100	03861	Clopyralid	100 g/L	1	1		1		1		1		1		1	1	1		1		
Farmco IPU	04522	Isoproturon	500 g/L	5	1		1		1		1		1		5	4	3		1		
Fieldguard	02458	Isoproturon	500 g/L	5	1		1		1		1		1		5	4	3		1		
Firebird	04221	Flufenacet + Diflufenican	400 g/L + 200 g/L	5	1		2		1		1		1		5	4	3		1		
Flight	02524	Pendimethalin + Picolinafen	330 g/L + 7.5 g/L	5	1		2		1		1		1		5	4	3		1		
Fusilade Max	01472	Fluazifop-P (-butyl)	125 g/L	1	1		1		1		1		1		1	1	1		1		
Guillotine	03146	Flumioxazin	300 g/L	5	1		2		1		1		1		5	4	3		1		
Herbaflex	05032	Isoproturon + Beflubutamide	500 g/L & 85 g/l	5	1		1		1		1		1		5	4	3		1		

Step 11

Repeat the process if you have additional products in your tank mix e.g., if you include an aphicide or maybe a fungicide.

Step 12

Having completed the process for each product included in your tank mix, you are required to apply the largest buffer zone for your spray application. In this example Diflanil 500 SC when applied at $\frac{3}{4}$ rate requires us to leave a 4m buffer zone, while Fieldguard when applied at $\frac{1}{2}$ rate requires us to leave a 3m buffer zone unsprayed.

Therefore, you must adhere to the larger 4m buffer zone.

N.B., if we used STRIPE 75% nozzles we could reduce our buffer zone down to 1m (even using both products at full rate).

3.0 Record Keeping

3.1 Records on farm

Farmers who avail of the STRIPE initiative to reduce the applicable buffer zones are required to maintain the following records in addition to the usual pesticide usage records:

- Type of nozzle fitted to sprayer
- Whether STRIPE has been applied or not

See IPM and Pesticide Application Record sheets.

<http://www.pcs.agriculture.gov.ie/PlantProtectionProducts.htm>

3.2 Advisory

The Department of Agriculture, Food and the Marine recommend that all pesticide advisors include information on buffer zones when making pesticide recommendations to their clients. This information could take the form of specifying the size of buffer zone required when applying a tank mix recommendation. It could also indicate the mandatory buffer and / or base advice on a STRIPE 75% nozzle etc., for each product recommended.

4.0 Pilot Phase

4.1 System under development

DAFM is still developing and fine tuning the operation of this initiative. While DAFM has made available “STRIPE product tables” for herbicides, insecticides, fungicides, plant growth regulators etc., the number of products present in these tables is currently not exhaustive, therefore before using STRIPE always check DAFM website for updated tables. DAFM are adding to these tables monthly and will endeavour to ensure that all products are included as quickly as possible. Meanwhile, if STRIPE information on a particular product is urgently needed please make contact with the Department of Agriculture, Food and the Marine, using the contact details in this document. This initiative is a pilot and will be subject to revision resulting from experience gained in 2015.

4.2 Where to find the mandatory buffer zone on the product label

In Ireland each PPP label has a front panel and a rear panel. The rear panel may also be in leaflet form. The front panel has a risk and safety box which has certain hazard and precautionary statements but frequently has a buffer zone statement as seen in the example below. The rear panel/leaflet has much of the application information and often has additional risk and safety information which includes a buffer zone statement if not included on the front panel.

If no buffer zone is to be found on the product label or in the “STRIPE product tables” this product has no statutory buffer zone and the standard 1m buffer zones applies. Buffer zones can never be reduced to less than 1m regardless of the drift reducing nozzles being employed or the rates of application being used.

It is important to stress that the definitive documents on buffer zones are the “STRIPE product tables”. While a product may not have a wide buffer zone requirement this year, a more extensive buffer zone may be applied to the product next year or thereafter. Therefore, before applying the STRIPE principles you should

check the appropriate most up to date “STRIPE product tables” provided on the DAFM website

A systemic fungicide for use in winter wheat, spring wheat, durum wheat, winter barley, spring barley, triticale, rye and oats.

An emulsifiable concentrate containing [REDACTED] and [REDACTED].

Danger:
Causes serious eye irritation.
Harmful if swallowed.
May cause an allergic skin reaction.
Suspected of causing cancer.
May damage the unborn child. Suspected of damaging fertility.
Very toxic to aquatic life with long lasting effects.

Wear protective gloves and eye/face protection.
Avoid breathing mist.
If exposed or concerned: call a poison centre or doctor/physician.
If in eyes: rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do.
Continue rinsing.
Store locked up.
Dispose of contents/container to a licensed waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

To avoid risks to human health and the environment, comply with the instructions for use.

10 Le

PCS No: [REDACTED]

or

PRECAUTIONS

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP AWAY FROM FOOD, DRINK AND
KEEP OUT OF REACH OF CHILDREN.

VERY TOXIC TO AQUATIC ORGANISMS, may cause long-term adverse effects in the aquatic environment. Do not contaminate surface waters or ditches with chemical or used container.

Do not contaminate water with the product or its container. (Do not clean application equipment near surface water / Avoid contamination via drains from farmyards and roads).

To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

~~IF SWALLOWED, seek medical advice immediately and show this container or label.~~

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

STORAGE

STORAGE
Store in a suitable pesticide store, keep dry and protect from frost.

FOR USE ONLY AS AN AGRICULTURAL FUNGICIDE, as directed below:				
Crops	Maximum individual dose	Maximum Number of	Maximum total dose	Latest time of application

4.3 Product efficacy, water volumes and nozzle choice

The surfaces on which PPPs are applied vary considerably. Application may be made to bare soil, to dense prostrate foliage or to open erect canopies. It is also the case that all spray nozzles produce an array of droplet sizes (fine, medium and coarse) and as a rule of thumb, when droplet size is halved, the number of droplets produced increases 8 fold while the area receiving coverage may be up to 4 times greater.

Consequently, when choosing which nozzle to use, you must consider if coverage is most important (e.g., residual herbicide, or ear spray on cereals) where a finer droplet size is required, or whether a nozzle producing coarse droplets would produce acceptable results (e.g., use of a systemic herbicide).

Another important consideration is the amount of water used. Most of the product development field work completed by research and development companies for broad acre field crops is conducted at a water volume of 200L/ha. It is recognised that while the majority of farmers use water volumes in or around 200L/ha, some use volumes more than this and others use less than 100L/ha. It should be noted that in certain circumstances product performance at lower or higher water volumes may not be optimised.

Therefore, to prevent loss of product efficacy and biological performance, professional users/farmers should be careful when considering the following:

- 1. Nozzle choice**
- 2. Water volume**
- 3. Product application rate**

Farmers/professional users are encouraged to consult their advisors/agronomists in relation to the above choices.

Be aware that when using nozzles producing coarser droplet sizes in conjunction with low water volumes and reduced product application rates, the efficacy of some products may be reduced depending on the situation. Consult the authorisation holders of the products in question.

Useful reference material includes a "Nozzle Selection Chart" produced by the UKs HGCA & AHDB. <http://www.hgca.com/media/179976/p05-nozzle-selection-chart-2010-2014-reprint-.pdf>

5.0 Contact Details

Using the contact details below please make any queries/anomalies known to us.

Pesticide Controls Division

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