

TILLAGE

January 2023

CAN versus protected urea

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There is increasing interest among tillage farmers in switching from CAN to protected urea this season. Based on current fertiliser prices, there are significant financial benefits to using protected urea. Currently protected urea costs 30% less than CAN.

The environmental benefits of protected urea are well proven with lower nitrous oxide emissions than CAN, a reduction in ammonia emissions when compared to urea, and urea has lower levels of nitrate leaching compared to CAN.

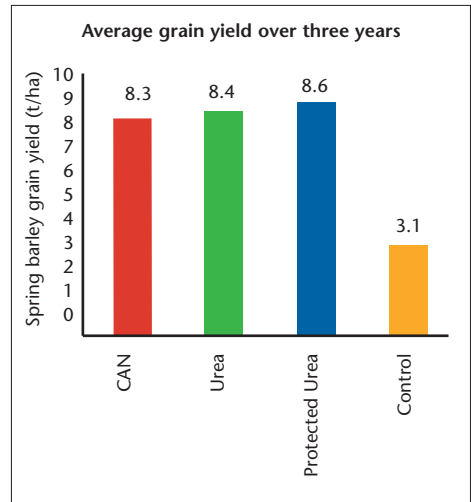
But the question many growers are asking, what effect will switching from CAN to protected urea have on grain yield?

To answer this question, Roche *et al.*, 2016, conducted field experiments in a long-term free-draining loam spring barley site in Co. Wexford. The trial was conducted over three seasons, 2013, 2014 and 2015. Three nitrogen (N) sources were compared, CAN, urea, protected urea (urea plus NBPT) and an unfertilised control. A total of 150kg/ha N was applied in two splits: 30kg/ha at

sowing; and, 120kg/ha at mid tillering.

The results showed that grain yield was similar for all fertilisers but on average protected urea yielded 0.3t/ha more than CAN (**Table 1**).

Table 1: Results of three-year study on grain yield.



Spreading

Urea is less dense than CAN making it more difficult to spread evenly at wide bout widths. Therefore it is crucial that the fertiliser spreader is set up correctly

in line with manufacturer's recommendations for the specific product being used. Trays should always be used to check the spread pattern in the field.

Nitrates Directive

There are a number of changes to the Nitrates Directive that will affect tillage farmers this spring. Some of the key changes for are included in the following list.

- No soil test report, no phosphorus (P) allocation. The Directive states: "From January 1, 2023 all occupiers of holdings on all arable land shall take soil tests and shall assume P index 4 until soil tests are taken." Maximum area 5ha per sample.
- No herbicide is allowed on land not subject to shallow cultivation post harvest (20-25%) before February 1. (Only applicable to Nitrates Zone A counties plus Louth, Meath and Westmeath.)
- There is no change to the ploughing commencement date of December 1.
- Low emission equipment shall be used to apply livestock manure to arable land or the livestock manure shall be incorporated within 24 hours. Pig slurry is low emissions only.
- Ploughing or cultivating for non-grassland crops within 3m of watercourses that are identified on the modern 1:5,000 scale Ordnance Survey Ireland (OSi) mapping or better, is prohibited (Figure 1).
- For late-harvested crops, a minimum uncultivated buffer of 6m shall be put in place to protect any intersecting watercourses. Late-harvested crops include vegetable crops harvested after September 15, as well as fodder beet, sugar beet, main crop potatoes and maize excluding cereal crops and beans.
- There is an additional 4m buffer in the case of forage crops grazed in situ where the forage crop itself is adjoining to a water feature. Note: as part of GAEC 4 the application of chemical fertilisers and pesticides within 3m of a watercourse will be prohibited.

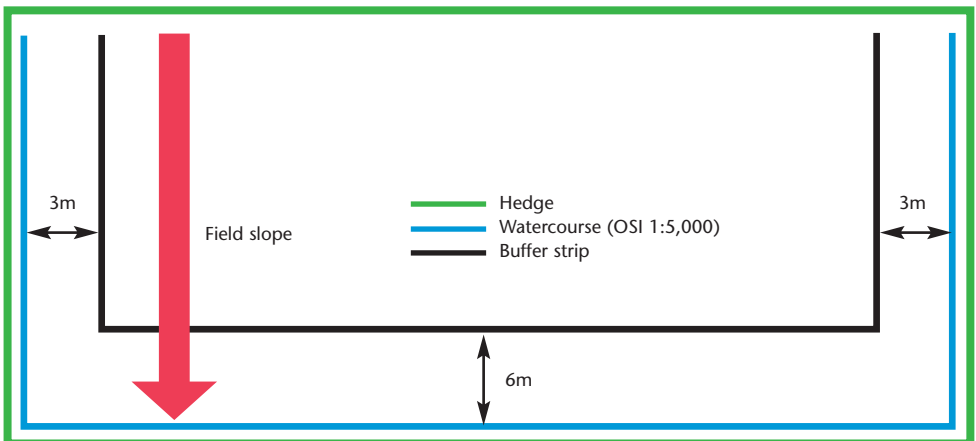


FIGURE 1: Illustration of how buffers work in a field with a defined late harvested (non-grass) crop.

Beans

An increase in the protein payment, the high cost of fertiliser, and rotational benefits of beans are some of the reasons why the area of beans is expected to increase in 2023.

In the new Common Agricultural Policy (CAP), protein aid has increased from €3m to €7m per annum. Depending on the area planted growers can expect to receive a protein payment of between €350 and €500/ha in 2023. This guaranteed payment offers security in a time of uncertain grain prices and makes beans very competitive when compared to feed barley this spring. Teagasc experiments have shown that there is no significant yield difference between establishment methods but direct drill methods

offer savings over the traditional plough/one pass system.

Aim to establish 30 plants/m².

Five tips to achieve high yield in spring beans.

1. Choose a high fertility site with medium/heavy soil.
2. Plant early (February/March). April-planted beans can be successful but risks are higher.
3. Ensure pH >6.5.
4. Test seed. Department of Agriculture, Food and the Marine (DAFM)-certified seed ensures ascochyta levels are less than 1% and seed is free from stem nematode.
5. Use pre-emergence herbicide. Very limited post-emergence options.

National Tillage Conference 2023

Date: January 25, 2023

Time: 9.00am – 4.00pm

Venue: Lyrath Convention Centre, Paulstown Road, Kilkenny. Eircode: R95 F685



After being delivered virtually for the last two years, you can attend the 2023 Conference in person.

There is also an option to connect virtually for certain sessions that will be available online.

National Tillage Conference 2023 will provide updates and outputs from the latest research underway at Oak Park, in collaboration with our national and international partners. Split across five sessions, content delivered will relate to:

- cereal disease management;
- Barley yellow swarf virus (BYDV) survey and insights on viral transmission;
- future added value opportunities in the plant protein space;
- integrated weed management;
- research insights providing a snapshot of

additional projects underway; and,

- each 45-minute session will conclude with an interactive discussion with audience engagement.

In addition, there will be a poster session in the main foyer throughout the day with posters providing additional insight across the Teagasc crops research programme.

Irish Agricultural Supply Industry Standards (IASIS) points will be available.

Pre-registration is required by all attendees, whether you are physically attending the Conference at the Lyrath or plan to tune in for the online sessions. Check the Teagasc website or use the QR code for registration details.

CAP – direct payments

The new CAP starts in January 2023 and it brings with it some changes but also some similarity with the previous regime. It is crucial to make an early appointment with your advisor to ensure you can draw down your full payment.

Basic Income Support for Sustainability

The Basic Payment Scheme (BPS) and Greening Payment Scheme become the Basic Income Support for Sustainability (BISS). The number of entitlements stays the same but convergence will continue, so values will change. This is very important when agreeing leases.

Eco-scheme

The Eco-scheme (ECO) rewards farmers for undertaking actions beneficial to the climate, environment, water quality and biodiversity. Farmers have the opportunity to opt in or out on

an annual basis and this is paid on every eligible hectare. Farmers must deliver at least two of the following agricultural practices.

1. Space for nature (non-productive areas and landscape features).
2. Extensive livestock production.
3. Limiting chemical N usage.
4. Planting of native trees/hedgerows.
5. Use of GPS-controlled spreader and/or sprayer.
6. Soil sampling and appropriate liming.
7. Planting a break crop.
8. Sowing a multi-species sward.

Other schemes

Complementary Income Support for Young Farmers (CIS-YF) – new young farmer scheme. Complementary Redistributive Income Support for Sustainability (CRISS) – a new scheme called front loading. Coupled Income Support (CIS) – protein aid.

Spring seminars 2023

A series of spring tillage seminars will take place during January and February (**Table 2**). Topics covered will include the following:

- CAP and ECO scheme measures;
- Nitrates Directive – key changes;
- spring crop choices; and,
- local agronomy issues.

Table 2: Venues, dates and times of spring tillage seminars 2023.

Waterford	Park Hotel, Dungarvan	January 20	11.00am
Wexford	Riverside Park Hotel, Enniscorthy	January 23	8.00pm
Cork	Munster Arms Hotel, Bandon	January 24	7.30pm
Kerry	Ballyroe Heights Hotel, Tralee	January 26	7.30pm
Tipperary	Teagasc office, Nenagh	January 31	11.00am
Galway	Teagasc office, Athenry	January 31	7.30pm
Laois	Portlaoise Advisory office	February 1	7.30pm
Wicklow	Arklow, Bay Hotel	February 2	7.30pm
Wexford	Horse & Hound, Ballinaboola, New Ross	February 2	7.30pm
Carlow	Mt Wolseley, Tullow	February 7	7.30pm
Kilkenny	Teagasc office, Kilkenny	February 8	7.30pm
Offaly	Tullamore Court Hotel, Tullamore	February 15	8.00pm
Donegal	An Grianán Hotel, Burt	February 23	8.00pm