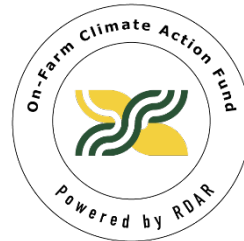


NITROGEN MANAGEMENT – FERTILIZERS



The RDAR On-Farm Climate Action Fund (OFCAF) program supports the adoption of new Beneficial Management Practices (BMPs) that improve nitrogen (N) fertilizer use efficiency. Improved N-fertilizer use efficiency decreases the opportunity for losses of N, such as nitrous oxide (N₂O), a greenhouse gas, nitrate runoff and leaching, or loss through ammonia emission.

OFCAF applicants may choose some or all the BMPs listed below and other BMPs related to Nitrogen Management, Cover Cropping, or Rotational Grazing. Costs of multiple new BMPs within each of the three activity categories can be combined to a maximum total grant payment of \$75,000 from all OFCAF funding sources for the period April 1, 2022, to March 31, 2028.

The BMPs supported by OFCAF must be new to your farm or field. Applicants may request funding to support eligible practices listed in the [OFCAF Program Guide](https://rdar.ca/funding-opportunities/resources#forms-guides) (rdar.ca/funding-opportunities/resources#forms-guides). Please outline how you will apply these practices on your farm using the BMP Action Plan on page 3 of this form, including labelled maps that show field boundaries on an aerial photo or imagery. The [Guide to Locating and Labelling BMP Action Plans](https://rdar.ca/funding-opportunities/resources#forms-guides) (rdar.ca/funding-opportunities/resources#forms-guides) provides further details. Your completed BMP Action Plan must be recommended by a qualified third-party adviser who is a Professional Agrologist (PAG) or Certified Crop Advisor (CCA); please reference the [Guide to Accessing Agricultural Recommendations in Alberta](https://rdar.ca/funding-opportunities/resources#forms-guides) (rdar.ca/funding-opportunities/resources#forms-guides). Your BMP Action Plan must be approved **in writing** by RDAR.

Please note: Invoices must be dated after April 1, 2025, and not paid before receiving RDAR's written approval of your application. Paid invoices must include Legal Land Descriptions (LLDs) of approved project fields and with proof of payment by November 30, 2025. Photographs with date stamps and GPS coordinates are required to document conditions before and after completing your project.

Eligible beneficial management practices

1) Nitrogen stabilizer products and Environmentally Smart Nitrogen (ESN)

- Nitrogen stabilizer products can improve N-fertilizer use efficiency by slowing the conversion of urea to ammonium and the conversion of ammonium to nitrate.
 - Urease inhibitors¹ help to allow sufficient time for rainfall or irrigation to move urea into the soil and reduce the risk of N-losses through ammonia volatilization. Urease inhibitors can also decrease ammonia volatilization when N-fertilizer is banded at less than 3-inch depths.
 - Nitrification inhibitors² slow the conversion of ammonium to nitrate (nitrification), helping to reduce N-losses by runoff and leaching as well as by nitrous oxide emissions.
 - Dual** inhibitor products listed below provide both urease and nitrification inhibition and are the only products that qualify for OFCAF funding.
- ESN (Environmentally Smart Nitrogen) is a polymer-coated urea fertilizer product designed to gradually release urea in moist soil conditions. It is often applied in combination with straight urea, with the ESN gradually releasing a portion of the N-fertilizer following application. A maximum of \$4,800 in 2025 is an eligible cost to cover the average increase of \$160/MT for ESN compared to urea at the time of purchase. The ESN maximum is achieved with the purchase of approximately 30 metric tonnes or 66,138 lbs of product. Guidelines and eligible costs
- Only applies if the practice is new to the farm or new to the field
- It must be a **dual** inhibitor product

Eligible products include:

Dual Urease and Nitrification Inhibitor Products					Fertilizers
Active Stabilizer Plus	ArmU Advanced	SylLock Plus	Tribune	Excelis Maxx	Triple Kick (38% actual N)
NEON Soil	NEON Surface	NEON Air	Lynx	Nlock Advanced	Super U (46% actual N)
Trident V	Nitrolizer Duo	N-Forced Dry Duo	Secure	Vault 15/15	
Eclipse Plus	Eclipse ND				

- Only the increased cost per pound of actual N treated with N-stabilizer product(s) is eligible. Amounts treated must be clearly specified on your invoice.
- ESN has a maximum eligible amount of \$4,800 per applicant for 2025, based on the average increased cost for ESN compared to urea. In consultation with the industry, RDAR has estimated the extra cost to be \$160 per metric tonne in spring 2025. This value may be adjusted for seasonal market premiums for ESN over urea.
- Applying both ESN and dual inhibitors on the same land area is **not** an eligible cost since the emissions reductions gained for each of the practices individually are higher than if they are applied together.

¹ [Urease Inhibitors](https://ipni.net/publication/NSS-25). Nutrient Source Specifics. IPNI publication No. 25. NSS-25 Urease Inhibitors.pdf (ipni.net) (https://bit.ly/3yXSM6d)

² [Nitrification Inhibitors](https://ipni.net/publication/NSS-26). Nutrient Source Specifics. IPNI publication No. 26. NSS-26 Nitrification Inhibitors.pdf (ipni.net) (https://bit.ly/3yXSM6d)

2) Shifting from broadcast to banding or side dressing N-fertilizer

Moving N-fertilizer application from broadcast to banding before or during the seeding of annual crops improves N-use efficiency and is considered a BMP for N-fertilizer application. Side dress rather than broadcast application for row crops is also a BMP to improve N-use efficiency for row crop systems.

Guidelines and eligible costs

- This only applies to farms or field situations where the routine practice is broadcast, and the shift is to a banding or side-dressed application method for N-fertilizer
- Eligible costs include:
 - Custom fertilizer banding or side dressed application from a third-party operator³
 - Equipment rental costs (for project acres only, does not include lease-to-purchase arrangements)
 - The maximum eligible amount for changes from broadcast to either banding or side dressing N fertilizer is \$15,000 per applicant.
 - Spring banding only (no Fall banding).

3) Split application of N-fertilizer

Split application refers to applying an additional portion of the N-fertilizer needed following crop emergence to better match nutrient availability with crop uptake during the growing season. This is especially the case with long-season crops like corn but is also common with potatoes and other row crops where side dressing is the preferable method for split N-fertilizer application. Winter cereals are another situation where split application is a common practice, with a portion of the N-fertilizer applied at seeding and the remainder in spring after the winter cereal resumes growth. In-crop, surface-applied urea (46-0-0) or UAN (28-0-0) must be combined with both a urease and nitrification inhibitor to decrease the risk for N-loss. Single foliar application mid-season is ineligible.

Guidelines and eligible costs

- Only applies to farms or field situations where split application of N-fertilizer is not a routine practice
- Urea or liquid UAN fertilizer must be combined with a dual N-fertilizer inhibitor (see list of eligible products in the Nitrogen inhibitor section). The increased cost of the dual inhibitor is eligible for reimbursement.
- Eligible costs include:
 - Custom fertilizer application from a third-party operator³
 - Equipment rental costs (for project area only, does not include lease-to-purchase arrangements)
 - Diagnostic testing for in-season rate adjustments, e.g., soil and tissue testing at an accredited lab. Please apply using the N Management - Soil Testing and Mapping template available on the OFCAF website.

4) Increasing perennial legumes in annual crop rotations (must be at least 50% legumes, up to \$85/ac for seed costs)

Another BMP to improve soil health and reduce the need for synthetic fertilizer N is to expand annual crop rotations to include perennial legumes. Nitrogen-fixing legumes like alfalfa, birdsfoot trefoil, cicer milkvetch, sainfoin, or alsike clover are examples of forage species adapted to Alberta growing conditions that can be included in a crop rotation as a component of grass-legume mixes for hay or grazing or as a pure stand for hay production (e.g., alfalfa). Information on how perennial legumes can be integrated into crop rotation can be obtained from industry experts or online⁴. Please note that land rolling and biological products, such as inoculants, are **not** eligible costs.

Guidelines and eligible costs

- Only fields that are currently in annual crop rotations are eligible.
- For information on improving existing perennial pastures in OFCAF, check the Rotational Grazing template and OFCAF Program Guidelines.
- The perennial legume species must be at least 50% of the forage seed mixture. Maximum of \$85/ac for seed costs
- Fall seeding must be completed by September 15th to allow adequate time for crop growth before winter.
- May include custom seeding from a third-party operator or seeding equipment rental⁵ (for project area only, does not include lease-to-purchase arrangements). Please describe in the "Other" box in the BMP Action Plan, including costs.
- If red clover is to be seeded it must be part of a perennial legume mix with a maximum of 50% red clover.

³ Allowable custom rate range for in-crop surface applied N: Up to \$12/ac; fertilizer banding: Up to \$25/ac. Rates are adapted based on information from the 2022–23 Farm Machinery Custom and Rental Rate Guide. Saskatchewan Agriculture. Saskatchewan.ca/agriculture; and Alberta Custom Rates 2017 Custom Rates 2017 – Seeding | Alberta.ca (<https://bit.ly/3zr38gs>).

⁴ Perennial Forage Establishment in Alberta. Agdex 120/22-3. Alberta Agriculture, Forestry and Rural Economic Development. 2005. Perennial Forage (gov.ab.ca) (<https://bit.ly/3Pvx6Wb>)

⁵ Eligible custom rate range for drill or direct seeding: Up to \$30/ac; for broadcast: Up to \$12/ac. In-kind labour by the applicant is not eligible. Rentals are eligible for the area and duration of the project only (no lease or rent-to-own). Other important details about ineligible BMPs and cost limits are listed in the [OFCAF Program Guide](#) and the following table.

NITROGEN MANAGEMENT FERTILIZERS - BMP ACTION PLAN

Please note: all costs must exclude GST. Use extra forms to add information, as needed.

Applicant Name:									
New BMP Objective – check or fill (Y/N) as appropriate:									
Improve N source (product)	Improve N placement (banding or side dress)	Improve N timing (split in-crop)*	Confirm BMP is on Annual Cropland:						
			Planned N use date:						
Are BMPs new to the field?		Yes	No	Are BMPs new to the farm?			Yes	No	
INCREASED COST OF NEW N PRODUCT***									
Inhibitor Brand Name:		Rate (L/MT of urea or L/MT of UAN Sol):			Extra Cost (\$/L or \$/MT):				
Field	Seeded Area	N Source	N Source Rate		Total BMP	Increased Cost***			
(LLD)	(ac)	(Urea, UAN 28, ESN, etc)	(lb/ac or US gal/ac)		(lbs or US gal)	(\$/field)			
Total Area		A) Total Product Cost*** \$							
COST OF SEED MIX (at least 50% legume, up to \$85/ac), CUSTOM APPLICATION OR EQUIPMENT RENTAL^									
Planned Seeding Date (mo/yr):									
Field	Seeded Area	Confirm Field is Currently in Annual Crop	Cost per acre for seed	Seed Mix (%) ^	Cost^ Custom Seeding or Equipment Rental	Cost^ per Field			
(LLD)	(ac)	(Y or N)	(up to \$85/ac)	(type)	(up to \$30/ac direct and \$12/ac broadcast)	(\$)			
Total Area		B) Total Cost of Seed, Custom Application or Equipment Rental \$							
		C) Cost of Other (PAG or CCA costs incurred) ** \$							
		D) Total Cost of Project (A + B + C) \$							
Is this Plan recommended by a Professional Agrologist (PAG) or Certified Crop Advisor (CCA)?			Yes	No	Have you included a labelled map?		Yes	No	
Name and designation:			PAG/CCA		Phone number:		Date:		
					Email:				

*Split (in crop) – If surface applied, UAN or urea must include dual N stabilizers. **May include the cost of BMP Action Plan recommendation of up to 10% of the total cost of all eligible BMPs, to a maximum of \$2,000 per applicant (total over all years of the OFCAF program). ***Eligible costs for dual inhibitors and for ESN (the extra cost of \$160/MT to a maximum of \$4,800 in 2025). Note: Applications of ESN and dual inhibitors on the same acres are not eligible costs. ^Field must currently be in an annual crop rotation; seed must be 50% legume, \$85/ac maximum for seed cost; custom rate for banding: up to \$25/ac to a maximum of \$15,000 in 2025; for in-crop surface applied N: up to \$12/ac; Seeding perennial legumes - for drill or direct seeding: up to \$30/ac; for broadcast: up to \$12/ac. In-kind labour and lease or rent-to-own arrangements are not eligible costs.

Map on an aerial photo or image showing the project fields, legal land locations, and field boundaries. Any method of outlining and labelling fields may be used as long as the fields are visible beneath. Further details are available in [Guide to Locating and Labelling BMP Action Plans](#) (rdar.ca/funding-opportunities/resources#forms-guides).

