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Knowledge Transfer

Fertilising for second-cut silage

Second-cut silage will be an important crop on many farms in 2023 to replenish and build silage reserves for the coming winter. This crop tends to be lower yielding compared to first-cut silage. Where the first cut has been harvested, it is important to ensure that second-cut crops are fertilised adequately to ensure a good yield of grass. Where cattle slurry is available it will be a valuable source of phosphorous (P) and potassium (K) to replenish soil reserves on silage fields. Aim to apply cattle slurry after first-cut silage and empty slurry tanks before the winter period. Using low-emission slurry spreading (LESS) increases the recovery of nitrogen (N) by three units per 1,000 gallons compared to splash-plate spreading. It also reduces N losses as ammonia.

How much chemical N, P and K you apply per acre will depend on the yield of silage you are aiming for and the amount (if any) of cattle slurry you are spreading. Also if the field is below your target



Use second-cut silage to rebuild fodder reserves.

index levels, you may be looking to apply additional P and K for soil fertility build-up. For a typical yield of 6.0 tonnes of fresh grass per acre with 2,000 gallons of cattle slurry applied using LESS, you would need to apply 1.2 bags of protected urea per acre. Including sulphur (S) with the protected urea would also be important. S plays a key role in increasing grass yields, improving N use efficiency and reducing N leaching. For second-cut silages apply 6-12 units of S per acre.

Breeding season tips

How is your breeding season progressing so far? Where a stock bull is being used it is still important to record when cows are showing heat so that the number of repeats can be measured. Up to 25% of breeding bulls are sub-fertile, with around one in 20 being completely infertile. The sooner these bulls are identified the less damage they will inflict on a herd. Have

you decided when you are going to finish breeding? Cows served in the last week of June will not calve until well into April next year. A suckler calf born in the middle of April compared to one born in the middle of February will be worth €200 less at weaning. If you have a very long breeding season consider pulling it back by two weeks per year.

Weaned calves at grass

Keeping calves thriving at grass is the priority once they have been weaned off milk replacer and turned out to grass. Continue to feed calves a ration throughout June. If they are eating a lot of meal while indoors this will need to be gradually reduced over a couple of weeks while they adjust to eating grass. Aim to be feeding no more than 1.0kg per day. This can be reduced further or cut out completely in July. Vaccination against the clostridial diseases is extremely effective and inexpensive to administer (two injections, four weeks apart) and should be part of your herd plan annually. Calves should not be grazing heavy swards if target weight gains are to be achieved. Short leafy grass with calves moved regularly to fresh grass is the aim.

Many farmers are now also offering calves a small amount of straw while at grass for the first three to four weeks after turnout. This source of long fibre is beneficial as the calf transitions to a 100% ruminant diet. Finally, parasites in the form of stomach worms and lungworms need to be watched for. A selection of pooled faecal samples sent in every two weeks to a lab will tell you when you need to dose for stomach worms. You may be surprised how long it is before you have to treat them. Listen out for calves coughing as a possible sign of lungworms (hoose). In a typical year this should not be until later in the summer but it depends on the weather – damp, warm conditions are ideal for its spread. If you suspect it, treat immediately.

DairyBeef 500 walk

The first of this year's DairyBeef 500 farm walks takes place on the farm of Ciaran Bartley, who operates a dairy calf-to-beef system on 74 hectares in Boher, Co. Limerick. The event is on Thursday, June 29, at 6.00pm. The main focus will be to demonstrate the improvements made on the farm in recent years and how this has had a positive effect on the financial performance of his enterprise. Those in attendance will see the grassland

infrastructure improvements and how land drainage and the incorporation of a paddock system has benefited grassland management on the farm. Calf sourcing, herd health plans, cattle housing design and Targeted Agriculture Modernisation Schemes (TAMS) 3 will also all be discussed. This is a free event and all are welcome to attend.





HEALTH & SAFETY

Organise to stay safe

So far in 2023, three farm workplace fatalities have been reported to the Health and Safety Authority (provisional data at May 15). A Teagasc National Farm Survey study has shown that over 4,500 farm workplace injuries occur annually, with 80% requiring medical treatment. During June, farm work gets busy, especially with tractor and machinery and livestock-related work. Organising work is crucial to prevent injuries. This involves keeping safety to the fore by having all guards in place and using safe work practices.

Contractors play a huge role in farm work, and it is vital that farmers and contractors communicate closely about schedules and safety, especially when there is a backlog of work due to adverse weather. In this newsletter pack we include a health and safety newsletter on safety with bulls. These animals present a constant hazard on farms and vigilance is necessary, especially as the breeding season progresses. As June progresses, school holidays arrive, so make preparations for childhood safety over the summer months.

12 STEPS TO REDUCING EMISSIONS

Over 12 months, the Teagasc advisory newsletters will outline actions farmers can take to reduce their emissions.



Step 7: Improve animal health

How does this reduce emissions?

Poor animal health contributes to poor efficiency and productivity, which results in an increase in greenhouse gas emissions (GHG) per kg of milk or meat produced. For example, a finishing animal challenged by disease will take longer to reach its finish weight than a healthy animal, emitting more methane because of the longer finishing period. Improvements in health will reduce GHG emissions per unit of meat or milk.

Is there a gain for me?

Reducing health problems will improve efficiency, reduce costs and increase

profitability. For example, on average, heifers with liver fluke were 40 days older at slaughter than those without observed evidence of liver fluke, while for steers this difference was 46 days. In terms of pneumonia lung lesions, affected heifers and steers were 14 days and 12 days older, respectively, at slaughter compared to healthy animals.

What action do I take?

Implement a health plan/vaccination programme in consultation with your vet for your farm. Use the decision support tools available to you to make decisions including processor reports and dung sampling.

RESEARCH UPDATE

Forage or concentrate?

PETER DOYLE, EDWARD O'RIORDAN, MARK MCGEE, PAUL CROSSON and AIDAN MOLONEY of Teagasc Grange Research Centre report on the effect of forage- or concentrate-beef production systems on farm profit, carbon footprint, land use and meat nutritional value.

The effect of contrasting suckler weanling-to-beef production systems on steer performance, land use, farm economics and GHG emissions was evaluated. Post-weaning, eight-month-old, spring-born, Limousin and Charolais steers (333kg) were assigned to one of three systems: (1) grass silage plus 1.2kg concentrate dry matter (DM) over the first winter (148 days), followed by pasture until August (123 days), then finished indoors on *ad libitum* concentrates for 120 days and slaughtered at 21 months of age in December (GRAIN); (2) as in (1) above but remained at pasture until October (196 days), then finished indoors on grass silage *ad libitum* plus 3.5kg concentrate DM for 124 days and slaughtered at 24 months of age in March (SILAGE+GRAIN); or, (3) grass silage-only over the first winter (148 days), remained at pasture until October (196 days), silage-only over the second winter (140 days) and finished on pasture in June (97 days) and slaughtered at



Different steer production systems have distinct advantages and disadvantages.

28 months of age (FORAGE). The mean target carcass weight was 390kg for each system. Total concentrate DM intake was 1,187, 606 and 0kg/head for the GRAIN, SILAGE+GRAIN and FORAGE systems, respectively. Profitability was greatest for the FORAGE-only system and it did not differ between the GRAIN and SILAGE+GRAIN systems. The FORAGE-only system required the greatest land area and the meat produced had the highest concentration of desirable omega-3 poly-unsaturated fatty acids. The GRAIN-finished system had the lowest GHG emissions per animal and per kg of carcass weight, and required the least area of land. In conclusion, there were inverse relationships between profitability, land use and GHG emissions intensity among different steer production systems, with each system having distinct advantages and disadvantages.

