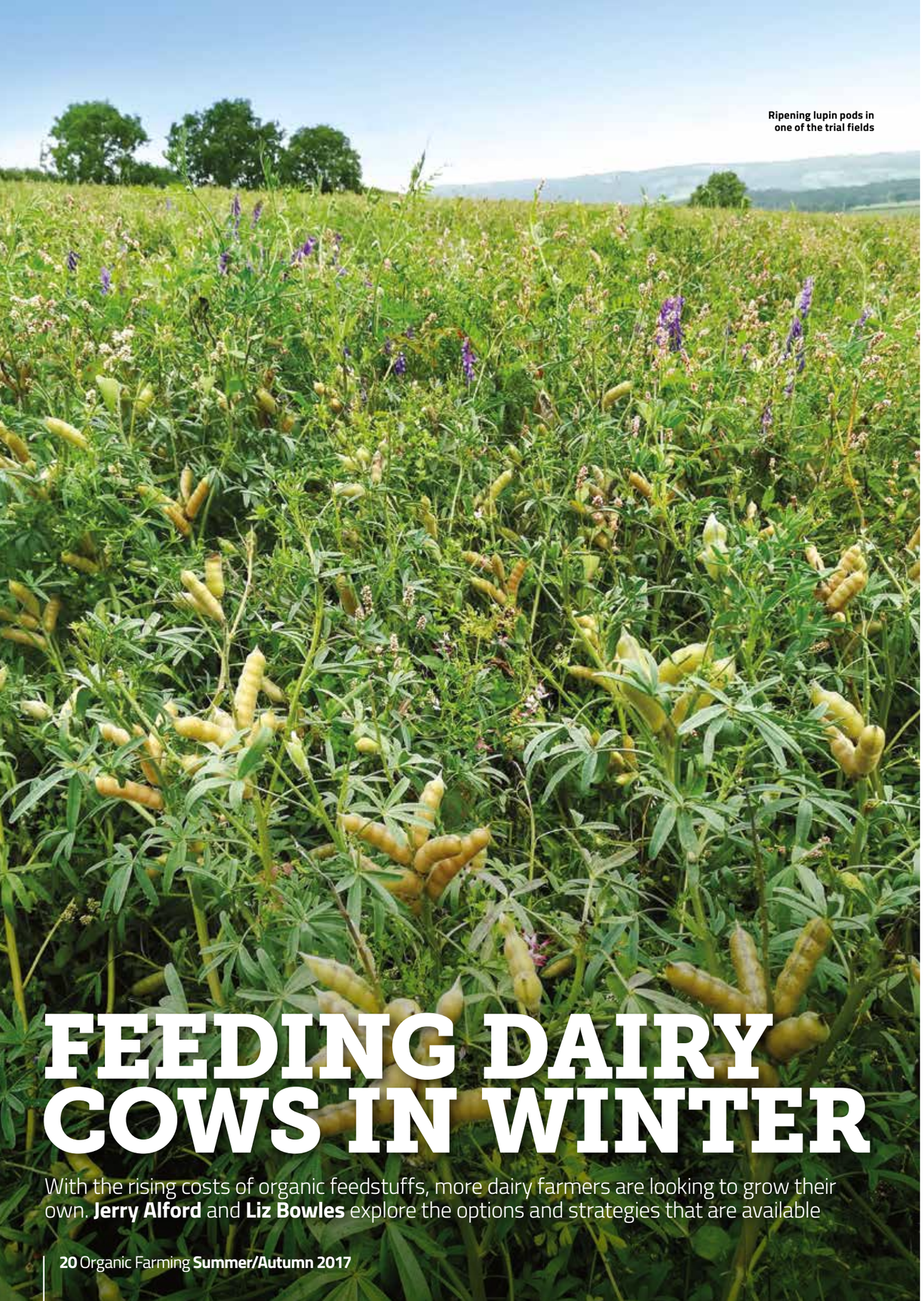

Ripening lupin pods in one of the trial fields

FEEDING DAIRY COWS IN WINTER

With the rising costs of organic feedstuffs, more dairy farmers are looking to grow their own. **Jerry Alford** and **Liz Bowles** explore the options and strategies that are available

For many organic dairy farmers the rising price of organic feedstuffs is of concern. Prices are rising mainly as a result of the unfavourable supply-demand ratio in operation at the moment. This is unlikely to change for the foreseeable future as demand for feedstuffs continues to rise, fuelled partly by the sky-rocketing demand from the US, together with the reduced availability from Eastern Europe, especially of protein feeds. Many dairy farmers have already changed to grow more wholecrop cereals, sometimes with legumes, as a way of reducing their requirement for concentrate feeds.

Devon-based organic dairy farmer Henry Gent is doing just this. Feeding his herd of cross-bred cows is a tricky balance, juggling rainfall, location and a desire for a simple system which fits him and his farm. The 120-hectare holding on the edge of Exeter is a mix of river meadows and sandy red soils and, with only 800 mm of rain, it's prone to drought. Needing a steady milk supply without a guaranteed consistent grass supply, and not wanting a high-input silage-based system, Henry has split his herd into spring and autumn calving blocks and built a system using both wholecrop cereals and their aftermaths. Both herds produce annual yields of around 6,500 litres with 4,000 litres from forage. The autumn calvers are fed a grass and wholecrop silage-based diet, and the spring calvers are grass-based. All cows are grazed outdoors as much as possible and the spring calvers stay out all winter.

Whole-crop silage

Wholecrop silage is where the clever part of his system comes in. Fields on which the cows are overwintered are ploughed and sown with a spring barley and pea mix, which is undersown with a hybrid kale mix. The kale grows with the crop and the leafy material helps to lift the protein content of the wholecrop silage. The stubble is given a coating of slurry after harvest and the kale regrows quickly to produce a clean, relatively weed-free stand of kale, providing winter feed for the outwintered spring calving herd and young stock. This process can be repeated the following year with kale replaced occasionally with grass reseeds to give the fields a break, to improve soil organic matter, and provide clean fresh grazing for the spring calving cows.

Maize was grown before organic conversion and, although Henry grew it organically for some years, the difficulties of weed control and the inconsistent yields meant the decision was taken to concentrate on summer-harvested crops. Spring crops were chosen to give the opportunity to undersow with the additional benefit of producing silage containing 18 per cent starch and, potentially, up to 14 per cent protein, which requires less bought-in dairy cake to balance it.

Organic prime wheat and pea combicrop

The benefit of the extra protein from the peas started to have a monetary value as the price of organic concentrates began to rise, as well as boosting the nitrogen supply, which helped the crop grow. Protein supply to the herd has always been of interest to Henry and early experiments with planting beans with maize were of mixed success. The spring barley and pea mix fits the farm, but moving on Henry is looking at the potential of a spring oat and bean mix, which could provide a higher protein mix but might shade out the kale.

Target lower milk yields

Other options for dairy farmers include amending winter diets where forage quality and quantity allow. Targeting slightly lower milk yields can significantly reduce the concentrate feed required, where forage quality is good enough. For instance, moving from the Kingshay average milk from forage of 3,203 litres in the year to March 2016 (organic farmers) to their top 25 per cent club by milk from forage could allow for reductions in feed usage per litre of 0.02 kg/litre. Across a herd of 150 cows yielding 6,800 litres, this could save up to 20 tonnes feed over the year.

However, it is worth noting that Kingshay figures report a MOPF per litre for the year to March 2016 of 28.74 ppl (average milk price of 37.12 ppl) some 10 ppl higher than the top 25 per cent performance of non-organic dairy farmers in the same period. This suggests there is some scope for organic dairy farmers to withstand higher feed costs whilst milk prices remain above 36 ppl.

Growing protein crops

Organic feed manufacturer and farmer cooperative Mole Valley Farmers has taken the initiative on future organic protein feed supply through sponsoring a field lab (part of Innovative Farmers), which is investigating the practical aspects of growing organic protein crops in the UK. Organic adviser Nigel Mapstone is coordinating the trial with research support from Reading University and Soya UK. Organic farmers in the South of England have rallied to the call with more than 10 growing lupins and peas/ beans as part of the trial. Other crops may be trialled next year as part of the trial. Year 1 trial crops will be harvested soon, which should yield valuable information on the techniques required to grow such protein crops successfully in the future. The trial has already yielded valuable information with the farmers involved learning about the need for an inoculant for lupins and an increased understanding of the pests and diseases which can affect the crop.

Dairy heifer rearing

Other related enterprises such as dairy heifer rearing could help to reduce reliance on bought-in feeds. One option is working with organic arable neighbours to rear heifers on grass leys within arable rotations and grow cereals on the land released. This can bring benefits for both parties and can lead to better cereal crops produced by specialist producers, higher levels of soil fertility building for the arable farmer and a chance to crop grassland and reduce weed burdens for the dairy farmer.

Looking ahead

Now is the time for dairy farmers to be thinking of different strategies for next year, since organic livestock feed prices are likely to remain at or above current levels for the foreseeable future. Consideration could be given to growing more wholecrop cereals for ensiling or even reducing farm stocking rates to allow for higher levels of milk production from forage and reduced reliance on bought-in feeds. Now could also be a good time to start talking to your organic neighbours who grow organic cereal crops and discuss future joint ventures for cereal production to provide an assured supply. OF

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