

Lackham Farm Guide

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Home Farm

Dairy

The facilities at the Home Farm include an Alpha Laval 16:16 Herringbone direct to line parlour with fabdec cluster flush and loose housing, for a maximum of 180 cows. The herd is managed by the herdsman with assistance relief milking and feeding.

Feeding during the winter period is with a complete diet feeder, using grass and maize silage combined with straights (soya, rapeseed meal, soya hulls, crimped maize, minerals and fats). During the summer the emphasis is on producing milk from grass.

The breeding policy is aimed at longevity, so type is important. The cows are bred with Holstein/Friesian bulls up to the end of March and with Limousin semen to the end of June to produce beef calves to rear in our beef unit. Cogent's "Pinpoint" service provides the semen and Cogent technicians serve the cows. The health of the herd is very important so the vets visit on a weekly basis to monitor health issues like mastitis, fertility and lameness.

We currently have 170 Friesian Holstein cows producing 10,200 litres per cow per year, with milk quality at 4% BF and 3.2% protein, Cell Counts averaging 150 and Bactoscan averaging 10. The herd uses home bred replacements to maintain cow numbers. The milk is sold to Cadbury's through our membership of the Selkley Vale group of 90 farmers.

Dairy Replacements

50 herd replacements are homebred using sexed semen from Cogent and Semex bred bulls. The breeding aim is to improve longevity by breeding for type, legs and udder. The herd introduces replacement heifers at the rate of between 15% and 25% each year.

Calves are fed for four days with dam's colostrum, then reared on whole milk for a further four weeks before being fed once per day on milk replacer. They are weaned when at 75kgs bodyweight or seven

to eight weeks and eating at least 1kg of concentrates. The farm sets annual targets for growth rates with the aim of calving them at 2 years of age.

Beef Production

A range of both intensive and semi-intensive systems are used to provide a wide range of farming practice for beef production, for example:

16-18-month intensive system using Limousin X 1/2 bred from dairy

18-20 month semi-intensive grass using 1/2 bred Hereford or Beef shorthorn crosses

Forage/concentrate system

The farm produces beef from three principal breeds, the Limousin, (a continental breed) Beef Shorthorns and Hereford, (both traditional British breeds). These breeds have different characteristics in many aspects from docility to growth rates and carcass confirmation. The pedigree herds provide a facility for the students to look beyond just producing beef. Students experience:

- Following a system of production
- Selecting breeding animals
- Carcass selection and grading
- Growth rates and K.O %
- Meat processing
- Selling of the product
- Marketing live animals
- Marketing meat

The beef finishing unit takes calves from the dairy unit. Additional calves are purchased from Meadow Quality calves to rear the same way as the home bred calves; this enables us to supply local outlets at regular times throughout the year.

During the rearing and finishing stages the animals are fed a range of diets; protein content starts at 18% and reduces to 14%, allowing the bones and structure to develop at an early stage. As the animal matures the energy in the diet increases and lays down the muscle and fat ready for sale. The target is to finish the animals according to their ability to mature depending on breed, but always as quickly and efficiently as possible. The liveweight range will be 520kgs to 650kgs; killing out % varies on the breed, so the deadweight target is 280kgs to 420kgs.

Pedigree Limousins

This project was started in 1999 in conjunction with the British Limousin Cattle Society. The aim of the project is to breed heifers and monitor traits of the breed. This enterprise also produces pedigree offspring for replacements and sale.

The use of AI has had a significant role to play in developing the herd over the last few years. A selection of bulls with good qualities improves herd profitability, and serve cows not taken to AI. Bulls used are Grahams Poncho, Haltcliffe Ullswater, Brontemoor Illkley, Sympa, Imperial, Nobel, Ionesco, Otan, Ronick Hawk, Ronick Member, Sarkley Topknot and Mynach Sporty. More recent bulls used have been Wilodge Fastrac, Regal, Wilodge Cerberus, Oxygene, Gerrygullinane Glen, Mereside Lorenzo, Tomschoice Jet, Powerful Louis and the more recently purchased Foxhillfarm Jumpingjackflash.

Each breed has a different temperament and requires different handling. Students are encouraged to gain experience working with the herd to develop their skills within the various breeds. Showing at local shows is a target that students are encouraged to aim for: we have recently shown at the Bath and West Show, and gained several rosettes for the herd. The herd won the best medium sized herd in the South West competition.

The herd is managed along commercial lines as groups, but some individuals will be selected for additional handling and showing at shows such as the Bath and West and Berkshire Agricultural Shows.

Pedigree Herefords

Following the successful establishment of the Limousins as a continental breed, it was decided to have a traditional breed alongside in order to make comparisons and demonstrate to students the difference between breeds. The Hereford was the chosen breed, renowned for its ability to convert forage to meat, and we were delighted to work with a group of enthusiastic local breeders who donated the 10 heifers and a bull for its establishment.

The objective of the herd is to produce beef from cheap feed and utilise permanent pasture on the farm. Comparisons can be made on various levels, from temperament to conversion rates, and killing out % to meat, bone ratios and flavour of meat. The herd is a mix of polled and horned females; a home bred bull, Lackham Park Nacho, is used on all the cows except one.

Pedigree Beef Shorthorns

The herd has been purchased by Whitehall Garden Centre for supplying their outlets with shorthorn or shorthorn crosses. They are showing quality and will be shown by the students with the Limousins. Calving this year was successful with some well-bred calves born, hence the same bull, Diamond Lord Belmont, has been used to serve them. A new bull, purchased by Whitehall from Carlisle, has been running with the cows to cover those not served with AI.

Notton Farm

Notton Farm is the home of our flock of 900 ewes. They are home-reared Lleyns, half of which are owned by Whitehall. The flock lambs in March to Lleyn, Charolais, Beltex and Berrichon Rams.

High health status is paramount for the flock, with no reported cases of Enzootic abortions, Maedia Visna Accrediations, vaccinations with Heptavac P for clostridial diseases and vaccinations for Orf.

The ewes are bred for prolificacy and meat quality to supply Whitehall, local butchers and high-quality supermarkets and to have fresh young lamb available all year round.

The rams are introduced to the ewes on the 5th October for 34 days; any ewes not in lamb after that date are sold as culls.

The ewes and lambs are turned out after lambing onto grass for finishing from 12 weeks of age; any remaining lambs are weaned at 14 weeks and can stay on the farm for a further 16 weeks until finished. January and March ewes are housed in winter and fed on forage and concentrates. Lambs are sold at 36-40kg live weight aiming for an 18-20kg lamb on the hook. All lambs are graded at the abattoir; the majority of our lambs grade at O and Rs 2 and 3L.

The flocks provide excellent hands-on, practical experience for a wide range of courses as well as agriculture. Students experience lambing, foot trimming, injecting vaccines, fitting rubber rings and shearing.

Lackham hosts Lambing Weekends in March, drawing up to 10,000 visitors to see lambs being born. During their visit they can also see cows milked and other animals kept at the farm. The dates for these weekends can be found on our website.

Pigs

The pig herd, based at Home Farm, consists of 15 sows and a boar. The unit breeds pigs for slaughter, all to be sold on contract to Downland Produce.

The sows are artificially inseminated using semen from Heritage Seaborough, with a boar on hand to cover repeats and produce heavy weight pigs at 110kg.

A mix of breeds is used in the herd such as Large White, Landrace, Duroc and some Pietrain. The herd is housed outdoors while conditions allow. The weaners are housed in small paddocks with shelters. Once the finishers get close to their weight they are brought indoors for closer monitoring.

Crops

The Agronomy at Lackham centres on a long-term, sound but flexible rotation, with the aim of maximising the areas of highest margin crops, namely winter wheat and winter Barley.

Maize is an essential part of the dairy ration and incorporates conveniently into the rotation on some soil types. On heavier, more difficult fields where maize could present a harvesting problem, grass leys and stubble turnips are also incorporated into the arable rotation and there are areas suitable only as permanent pasture.

As a teaching establishment, occasionally unusual crops are tried out for student interest: red wheat, soya and OSR have been grown in recent years. The cropping has been blocked for more efficient planning and management of labour and machinery, especially important at peak times.

A well-planned rotation should be able to maintain itself whilst allowing for unforeseen requirements and area changes that occur largely to accommodate the movement of livestock and their requirements.

As well as preventing diseases such as 'take-all' in cereals and sclerotinia in OSR/pulses, a sound rotation aids cultural weed control. The loss of long-established and valuable agrochemicals means that cultural techniques will become increasingly important. Finally, long-term use of inputs can be planned and targeted at the most effective point in the rotation. These inputs include for example 'Roundup' pre-harvest in OSR, organic manures prior to maize, and lime as grass is ploughed out.

Agronomic advice is provided by John Clark of Agronomy One and is independent from commercial purchasing. Arable inputs are purchased through Crop Advisors, an independent buying group. 267 hectares are rented on a farm business tenancy, enabling the farm to grow a wider range of crops.

Machinery

It is essential to have a wide range of machinery available on the farm, both to guarantee the smooth operation of farm enterprises and to provide students with up to date, modern machinery to use which will enhance their experience and prepare them for when they work in the industry.

The students are trained on site in order to ensure they have hands-on, practical skills and experience on all the machinery whilst here at the College.

Campaigns are designed to get them working as a team with all the equipment, in tasks such as:

- Autumn cultivations and drilling
- Maize harvest
- Manure spreading
- Grass silage 1st and 2nd cuts
- Spring cultivations and Maize ground preparation

Learning on the Farm

First year students on the Extended Diploma in Agriculture engage in practical routine duties, spending a week with staff in two main areas, namely Dairy and calf-rearing. Practical sessions revolve around work associated with the Sheep, Beef and Pig enterprises. Although the arable unit is a seasonal one, students from the Extended Diploma in Farm Mechanisation spend one day a week with the tractor driver and Level 2 Agriculture students spend some afternoons with the stockman each week, providing each student with experience in each area to complement their theory work.

Dairy students are involved with milking and its related activities. These include tractor driving when scraping out feed passages, and working with feeding and bedding once they have a Loadall certificate. Students will also be involved with the weekly visits by the farm appointed vet. If they are on beef duties, students could be feeding calves or feeding housed animals at Home Farm in the morning and in the afternoon handling animals – weighing, injecting, fencing, disbudding or carrying out any other tasks associated on the units.

Practical sessions with lecturers and farm staff range from tasks on tractors, manure hauling and field operations to all livestock tasks. Students get hands-on as a group and are given detailed explanations on the task in hand: why It Is crucial, the consequences If It Is not and the need for accuracy when doing the task.

We aim to impress on students the importance of accurate record-keeping across the whole of the business, as well as instilling a tidy, safe and thorough way of working in our industry.

Student Projects

Students explore a wide range of subjects through live projects on the farm. Undertaken in their 2nd year on the Extended Diploma in Agriculture, the projects encourage students to develop skills in teamwork, budget responsibility, leadership and negotiation, customer care and many other aspects of management. They also work with industry feed companies, slaughterhouses, marketing and suppliers of stock.

In addition to these projects, students investigate various aspects of the farm such as fertility, mastitis and lameness within the dairy herd; showing animals, designing a breeding programme, looking into carcasses and studying the meat-to-bone ratios of various purebreds or crosses, and looking after a flock and recording results and problems associated with the flock.

Students have the opportunity to monitor all aspects of these enterprises, looking at records and concluding with a way forward or recommendation and giving presentations on these subjects.

An example of a project is exploring the benefits of treating ewes with a mineral drench before lambing. Students then followed the lambs born from those ewes right through to sale, to see if there were any financial or health benefits for the sheep. We have also had a group of students investigating the same process in beef systems.