THE MORLEY AGRICULTURAL FOUNDATION

Morley Agricultural Foundation News

Farming Education Research

Autumn 2017

In this issue

Morley Business Centre
Deopham Road
Morley
Wymondham
NR18 9DF
Tel: 01953 859630
www.tmaf.co.uk

Registered charity No. 1097177

How 'Natural' Should We Be?

By John Wallace

Watching the latest fascinating Blue Planet II documentaries on television, one is again made aware that mankind is polluting the planet and that we should restrain some aspects of human behaviour and practice.

This is relevant to us as farmers and TMAF in particular, for our main purpose is to 'promote the study and knowledge of agricultural science and the application of modern scientific techniques to agriculture and husbandry in all its branches'.

A theme in current popular thinking is to say how wonderful the natural world is and what a pity farming cannot be more natural too. Whilst it is easy to sympathise with this view we must be careful of things 'natural'. Natural events are not always beneficial to us. Most of modern medicine is devoted to altering the naturally occurring illnesses which afflict our bodies.

Further, it could be argued that all farming is unnatural. As soon as you plough a piece of virgin prairie or fell a clearing in a wood, you have acted unnaturally. Over the centuries, our activities have been refined into the systems we use today, but they are not natural. Nor should we want them to be. Our farming systems produce yields which far exceed anything produced in the past, drastically reducing our need to bring more land in to cultivation to feed a growing world population.

Science itself, in spite of having, in its various forms, hugely contributed to our standard of living, is often distrusted and ignored in favour of a yearning for natural solutions to our problems. Yet it is clever science with processes such as gene editing which will be most likely to bring yield increases which are at the same time environmentally sustainable.

With considerations of this sort to deal with, I was pleased that NIAB hosted a final meeting in October in our Morley Business Centre of the Sustainable Intensification Platform set up by the Department of Environment, Food and Rural Affairs which was charged with examining how levels of production can be maintained or increased whilst minimising our effects on the natural world. Our Morley farm was used in this nationwide study.

Finally, and in the same vein, there is a move towards more 'wilding' of our countryside and whilst in our more remote areas that may be appropriate, I suspect we would miss our managed landscapes if that policy went too far. Shakespeare himself described unmanaged meadows as growing

'Hateful docks, rough thistles, kecksies, burs,
Losing both beauty and utility'.

This argument is not a new one!

Intrinsic On-Farm Learning: The Benefit of Field Scale OSR Strip Trials

Replicated small-plot trials provide a backbone to decision making for both agronomists and growers, producing large data sets and statistical analysis. But a weakness can be their relevance to your farm system, soil type and local weather conditions. Now there is a trend for some farmers to be involved with larger-scale on-farm trials to help truly recreate a 'real-life' scenario specific to their farms. This is particularly useful for judging oilseed rape varieties, testing them using the establishment methods on the soil types and microclimate of your farm. These trials also help give a clear understanding of the varieties on offer, adding to the information provided by research organisations and official testing.

On-farm, Site Specific Trial

Therefore, it was decided that in collaboration with Bayer an OSR variety strip trial should be set-up for the 2017/18 season at Morley Farms. The trial includes 10 varieties, drilled in 12m x 300m strips across the field. These varieties include 9 hybrids (40 seeds/m^2) and 1 conventional standard (80 seeds/m^2). The Farm Manager, David Jones, is using his tried and tested min-till establishment method and fertiliser regime to see which varieties perform best.

What will we Learn?

A huge amount of information on these varieties can be collected through modern aerial drone mapping, green area assessments, on the ground plant counts and yield maps. An untreated area will also give us an indication of fungicide responses and return on investment. Already, we have ascertained which varieties have the best autumn vigour, Phoma resistance and herbicide tolerance. Later on in the season we will be able to ascertain how light leaf spot and lodging resistance has varied between the varieties, as well as their spring vigour and maturity. Ultimately, the final yield of each individual strip will tell us which variety has performed best. All this information, in conjunction with the small plot trials data, will allow David to make an informed decision on OSR varieties for future seasons.

If you wish to have a look at the trial, please keep a look out for future Open Days to find out more.

Michaela Canham joins TMAF

I started working for The Morley Agricultural Foundation on the 10th July 2017. I had previously worked alongside TMAF as the accountant for The Arable Group, but left when the position moved to Cambridge under NIAB.

When I saw the advert for the position advertised I jumped at the chance as it was the ideal role to use my skills as a Farm Secretary and a qualified Accountant. My duties can range from preparing accounts, dealing with auditors, organising board meetings, along with managing and dealing with tenant issues and fixing the coffee machine!! I am hoping that in the coming months I will be able to get a better understanding of the grants/funding that is awarded and how that funding is used.

Outside of work I am busy with my family, I enjoy walking our rescue border collie Buddy and looking after our 2 horses Lucky & Maggie. My son is often out racing karts (with my husband as chief mechanic!) at weekends and my daughter and I take the horses out competing, so never a dull moment in our household!

I am looking forward to working with the TMAF Trustees and David Jones in the future and seeing what I can add to the charity in regards to information and help with grant and funding applications.

For any enquiries regarding TMAF, including funding, please contact me in the office at Morley on 01953 859630 or by e-mail michaela.canham@tmaf.co.uk.

Could Flower Margins Improve Crop Yields?

By David Jones

The oil seed rape crop, like every other, requires pollination to produce seed, because of its bright yellow flowers we assume that it requires bees and other insects for pollination. In fact a crop of OSR can mostly pollinate itself in the wind. Studies have found that pollination can be increased where more insects and of different types are present. Some French research found that if a diverse range of flowering plants were adjacent to a field of OSR the crop yield could be enhanced.

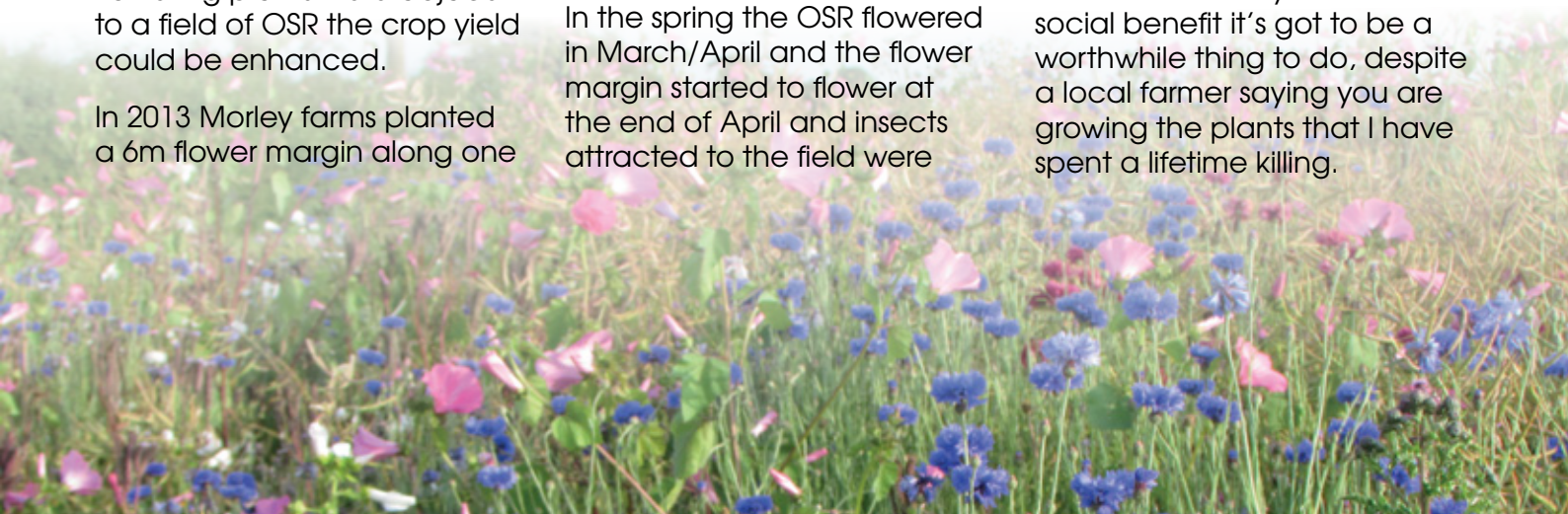
In 2013 Morley farms planted a 6m flower margin along one side of a field. It was planted on the same day as the OSR with the intention of it being sprayed off with the crop.

The mix included;-

- 10% Phacelia
- 10% Borage
- 2% Cornflower
- 5% Berseem Clover
- 10% Sainfoin
- 2% Marigold
- 1% Mallow

In the spring the OSR flowered in March/April and the flower margin started to flower at the end of April and insects attracted to the field were 6 weeks too late. However from April until we planted the following crop in September the display of flowers and insects was spectacular.

Although there was no immediate benefit to the OSR crop, the benefit to the landscape can only be a positive one. The further benefit is the message it gives to the community. As people drive or walk past the flowers it can't help but put a smile on their faces. In subsequent years we have again planted an annual flower margin next to OSR, and the flowering periods have slightly overlapped but still there are no measurable differences. If only for the social benefit it's got to be a worthwhile thing to do, despite a local farmer saying you are growing the plants that I have spent a lifetime killing.



New Head of Farming Systems Research at NIAB

After over 15 years working for NIAB TAG (including TAG and Morley Research Centre), and very closely with the Morley Agricultural Foundation, Ron Stobart moved on in May 2017 to take up a position in Agronomy Strategy at Sainsburys.

Elizabeth Stockdale has now taken over the role of Head of Farming Systems Research at NIAB. Elizabeth joined NIAB from Newcastle University, where she was Senior Lecturer in the School of Agriculture, Food and Rural Development. She has been involved in farming systems, soils research and knowledge exchange for more than two decades. You may have already come across her in or close to "holes in the ground" at farmer events over the years.

Elizabeth began her training playing with mud alongside her father (gardener and groundsman) as soon as she could walk. More formally, she studied Soil and Land Resource Science at Newcastle University (1987-1990) and went on to gain a PhD studying nitrogen cycles in crop rotations at SAC (now SRUC) and the University of Edinburgh. She spent 10 years working in the Soil Science department at Rothamsted, where she led trials to test decision-support systems for fertiliser recommendations, studied whole-farm nutrient budgets and also investigated the interactions between roots, soil and micro-organisms at microscopic scales. Whilst at Newcastle as a lecturer (2004 -2017), she also led work to bring together the best scientific knowledge of soil biology and farmers' experiences of managing soil health in practice for Natural England - this report is available freely on-line as Natural England Commissioned Report 100.

At NIAB, Elizabeth is responsible for delivering research, evaluation, demonstration and knowledge exchange activities on combinable crops and forage, including soils, rotations, agronomy and varieties. Elizabeth is the lead scientist for the AHDB-BBRO Soil Biology and Soil Health partnership, which is bringing together the best research and the most effective practical approaches to soil management on-farm to develop a "toolkit" for measuring and managing soil health. Working with Nathan Morris and David Clarke who are based in the NIAB team at Morley, Elizabeth is looking forward to working with TMAF to develop our understanding of how site, soil and rotations interact to drive crop productivity, farming system resilience and environmental benefit. On a recent visit to Morley, Elizabeth said: "The long-term New Farming Systems trials at Morley are a great resource and together with the experience of the TMAF members should allow us to develop an exciting programme of research and knowledge exchange over the next few years".