Opportunities in the agri-tech sector

In partnership with Suffolk County Council, Business East Monthly is running a series of reports aimed at informing young people about the career opportunities that exist in the region and the skills required to make the most of these openings. This month features an overview of the agri-tech sector.

Agri-tech sector overview

There has never been a better time for young people to consider working in agriculture and the agri-tech sector, says David Nunn, vice chairman of the Suffolk Agricultural Association.

For reasons to do with demographics, technology and politics there are more opportunities for young people to forge out rewarding and well-paid careers in agri-tech than at any other time that I can remember.

First the demographics: people working in agriculture and agri-tech are on average aged in their mid to late 50s and getting older. The sector needs an intake of new blood and it has been projected that across the UK 60,000 young people will need to come into the industry in the next ten years.

And the majority of the jobs will offer good careers from science-based roles to do with the environment, agronomy and food production, to engineering roles operating and maintaining farming machinery.

This is where the technology comes in - modern tractors, for example, are all computerised and are far more advanced than the average car these days. A role looking after machines like this would suit a young person seeking a challenge but many people don’t even know these types of careers exist.

As the jobs become more technical, so the sector will need skilled, computer-literate people with a good education - many who have gone onto further education and have studied part or full-time courses in college.

Apprenticeship schemes are also becoming more popular in agri-tech - enabling people to study to a high level while also giving people the chance to learn on the job as they earn. For many people this is a good way forward.

Another trend I’ve seen is that many of the jobs in agri-tech these days have a lot more scope than they traditionally have had - there are a lot more opportunities for job progression and for young people to improve themselves and earn a better salary.

As for the politics, Brexit is approaching. This will be a huge leap into the unknown but I’m optimistic. There will be opportunities for our sector, so it’s important we attract bright and well-qualified young people to consider a career in agri-tech.

For more information on the sector, please see the Agriculture, Science and Food section on icanbea.org.uk

WHAT IS AGRI-TECH?

Agri-tech is the sector description defining the new opportunities for technology and products that will assist in the feeding of the projected 9bn global inhabitants by 2050. These developments are creating many opportunities for young people with a wide range of skills.
The Employers

**Q&A: DEBBIE JENSSN, HR DIRECTOR AT BRITISH SUGAR**

What is the current state of the UK beet sugar industry? We firmly believe that our business is well placed for the future. Today we are one of Europe’s leading sugar producers and as a homegrown success story, we value our partnerships with the 3,500 growers that supply sugar beets to our factories. Every winter during our ‘campaign’, we process crop harvests as well as on-farm storage. The job that is used as an ingredient across the food and drink industry.

2017 is a milestone for our business. We are facing big changes in the way in which sugar quotas are managed on a global level. Although the removal of quotas will increase the intensity of our competition, there are no longer any constraints on our growth opportunities – either here in the UK or abroad. We are seeing this as an exciting challenge and as a result, attracting future talent into our diverse business is crucial to our success.

What specific skills are you looking for? We have a diverse range of roles which offer stretch and opportunities to learn. The skills we look for include agricultural and agronomics; mechanical, process and electrical engineering; and various aspects of science. In our head office we also look for skills in commercial and supply chain roles, procurement, HR/HR, health and safety, communications and project management.

How do you recruit this talent? We employ a mix of apprentices, graduates and skilled, experienced workers. Our award winning apprentice scheme has been in place for the past 40 years. Over the last 10 years we have appointed over 100 graduates and over 90 apprentices. We like to train and develop our people in house, promoting internally wherever possible. Two out of our four factory managers are former apprentices and one is a former graduate scheme participant.

Apprentices on our four year scheme attend residential training in Middlesborough and also work within one of our four advanced manufacturing plants. We are keen to provide opportunities to work towards professional qualifications, with a competitive salary on successful completion.

Both our apprentice and graduate schemes are tailored to meet British Sugar succession planning objectives.

Information about apprentice opportunities and a chance to register an interest can be found on the British Sugar website: www.notjustsugar.com

**Q&A: ANDREW WILLIAMS, FARM DIRECTOR, HOME FARM NACTON**

Home Farm Nacton comprises 1,900 hectares of high quality agricultural land on the north bank of Suffolk’s Orwell estuary. The farm is used for organic vegetable production as well as conventional vegetables and cereals.

What skills do you have on the farm? Because we are so diverse, we need people who are multi-skilled and can fit into as many roles as possible.

The team comprises people in charge of specialised departments such as spraying, mechanical maintenance and fabrication, skilled machinery operators, muck spreading and general farm workers. We also have people in management roles.

The business employs in the region of 50 regular staff as well as seasonal workers who swell the number to over 100 on a busy day. We have recently seen a number of staff in key roles take up more senior roles. This has meant that we are now approaching retirement age and the next generation key is to ensuring the sustainability of the business.

Do you use apprenticeships? We have taken on around 10 people through apprenticeships over the past decade, where they have learnt on the job and then attended college on a day or block release. This approach gives them both facets of knowledge - they learn the practical skills to do a job and this is undertaken by an understanding of why something is done and what we are trying to achieve.

We have several staff who joined us from school and are now in their 20s and 30s working in key roles such as drilling, spraying, fertiliser spreading, harvesting and maintenance. To ensure that we will have the skills required to maintain a very complex farming system and the equipment needed to operate it we have to encourage and train the next generation.

Is farm work becoming more technical? Yes - competence with computers and satellite systems is now an essential, as well as all the previous machinery operating skills.

From a technological point of view farming is an exciting career and I expect to see greater mechanisation in the future. For instance, I can see robotics being used more. At certain times of the year we employ menial staff in the field to pick and collect and in the years to come I can see that all being carried out by robots.

What kind of people would enjoy a job in farming? Agri-tech suits people who have a tendency to want work outdoors, are technical and good with their hands, and enjoy seeing things grow. It can be demanding because it is sometimes a physical job and working in agriculture you are beholden to the weather. This means you might not be able to get on during the week because it is raining but then you must work long hours at the weekend when the sun shines. It doesn’t suit all people but some enjoy the cut and thrust.

Agri-tech is crying out for bright, young people

Chief executive of Fram Farmers Richard Anscombe says agri-tech offers many career opportunities.

There is a popular misconception among parents that if you are not doing well at school, someone might introduce you to a farm where you will learn to use a shovel.

Nothing could be further from the truth. Increasingly, agriculture is becoming highly technical, hence the term agri-tech, and offers practical people who are both good with their brains and their hands a challenging and rewarding career.

Workers in the agri-tech sector are also well paid compared with the national average. The sector is crying out for bright, young people who want to work outside – maybe they have been to university and realise that an office-based job is not for them.

Maybe they are looking for an apprenticeship that offers a challenge, good career prospects and good pay. This type of career would suit a lot of people down to the ground. The problem is that many young people aren’t made aware of these opportunities because agri-tech is still an area overlooked by some schools and colleges.

But with world population rising and predicted to hit 9 billion by 2050 we have to get smarter at the business of farming and all that that entails.

If we look at my organisation Fram Farmers, a farming cooperative that serves 1,400 farms, we employ a team of 50 people many of who are real specialists in their field – from buying electricity and animal feed commodities to advising farmers on crop nutrition and the use of agichemicals.

They are professional people with interesting jobs, earning significantly above the national average, and working in good conditions with access to training.

If you look wider to the agricultural sector, for example – this is a trans-global commercial operation that employs economists and mathematicians.

These jobs are every bit as challenging and rewarding as those found in the Big Four accounting consultancies - just currently they don't have as higher a profile.

I would say to people with ambition: come and look at our sector and see how many good opportunities exist at the moment.

agri-tech businesses at www.icanbea.org.uk


Sector skills report: Agri-tech

The Employees

'HOW I GOT A JOB IN THE AGRI-TECH SECTOR...'

Laura Buckingham, aged 30, is an arable inputs manager and agronomist at Fram Farmers, a national farming co-operative buying group based in Framlingham, Suffolk.

What does your current job entail?
I manage a team of five – we purchase arable inputs including seeds, fertilisers and crop protection products on behalf of our farmer members.

How did you get into the agri-tech sector?
My dad and grandad were farm managers in East Anglia, so I was brought up on farms and spent a lot of time in the fields with my father. I have always loved the rural landscape and from about the age of 15 was certain that I wanted to work in it and to be part of the rural community. I had a good idea that I wanted to be an agronomist, but at that time there were fewer opportunities for young people to get into agriculture, so I decided to be fairly open-minded about my A-Level choices and keep my options open.

I attended Debenham High school and choose to study biology, French, English literature and music A Levels at Thomas Mills, Framlingham. Whilst biology was the option that opened doors for my career, looking back English and French helped me. In my job, it’s not just about what you know; the ability to communicate well is also vital.

I then went on to study agriculture at Aberystwyth University. There are plenty of specialist agricultural colleges but I wanted to be part of a wider community of students. For example, last year I lived with students studying international politics and computer science. I feel this situation was useful in that it didn’t hinder me and allowed me to take in the wider student experience.

Every summer holiday I worked for Fram Farmers as a grain runner, which saw me visit farms to collect grain and then analyse its quality. It was a really useful experience and was the start to becoming part of the industry and to get to know farmers that I still talk to now.

I even tied this summer work in with my dissertation which was based on the data I got from analysis of the grain and the farmers who grew it.

How did your career develop?
So, when I left university I had a great CV, some really good contacts, and several job offers. I started working for Frontier Agriculture out of their Diss office in August after graduating in June. Frontier offer support services to growers as well as trade and buy commodities from farmers. The company supported me in my training to become an agronomist and paid for me to attend the respected Harper Adams University in Shropshire to obtain my BASIS certificate in crop protection – the industry standard qualification for agronomists.

The easiest way to explain what an agronomist does is to say I am a crop doctor. We walk the fields on behalf of clients and as a grain runner, which saw me visit farms to collect grain and then analyse its quality. It was a really useful experience and was the start to becoming part of the industry and to get to know farmers that I still talk to now.

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What advice would you give to a young person considering a job in agri-tech?
It would say you must be prepared to be patient if they decide to enter the agri-tech sector. You have to be prepared to start at the bottom and work your way up – you can’t simply come in and expect to be driving a combine harvester within two weeks.

Working in agri-tech you need to have a varied knowledge across many areas and that can take years to build up.

You also have to be prepared to work when the weather allows - if the weather is good you can’t say I have a haircut booked at 4pm, so I must go. That will have to wait until you have a day off.

At certain times we work seven days and 16 hours a day – it doesn’t bother me but you have to have an understanding family.

'start at the bottom and work your way up – you can’t simply come in and expect to be driving a combine harvester within two weeks.'
Agri-tech sector - at a glance

Agri-tech includes agriculture, food production and all the associated technology companies. It is part of the total food chain which includes food retailers and catering and is the UK's largest industry employing 3.9m people and generating sales of over £200bn per year.

Norfolk and Suffolk Agri-tech:

East Anglia is home to major national brands such as Silver Spoon (British Sugar), Colmans, Adnams, Greene King, Robinsons drinks, Gressingham Duck, Bernard Matthews, Mars, Heinz, Kinnerton, Linda McCartney Foods.

Production:

- 52% of the UK's sugar beet
- 20% of its cereals
- 21% of the pig herd
- 21% poultry

Over 7,800 companies

50,000 jobs (92,000 including food retailers and catering)

The biggest demand for new skills is now at Foundation degree level and above, with a predicted 6,700 jobs available at this level between 2014-2024.

Average salaries:

- Farm machinery operators: £41,000
- Conservation professionals: £57,000
- Managers and Directors: £35,000
- Scientists: £25,500

What is the state of the agri-tech sector?
It is growing with new innovation emerging from less traditional sectors, including IT, AI, robotics and aerospace. Skills in demand include engineering, automation, production, crop improvement, agronomy, health-nutrition-food.

What are the best routes into a career in agri-tech?
There are increasing training opportunities at Easton and Otley College and the University of East Anglia up to degree level. Both have excellent careers teams that can guide and support careers.

AgriTech East is a business and research network that runs events and posts information that provides insights and opportunities to meet and engage with employers.

The regional research centres including the John Innes Centre, the Quadram Institute, The Sainsbury Laboratory and the University of East Anglia host year 10 student placements and Nuffield Fellowship placements and events providing insights into research careers.

Useful websites:

- www.icanbea.org.uk
  - Follow and learn about leading employers in the sector.

- www.newanglia.co.uk/new-anglia-youthpledgemarque
  - The Youth Pledge Marque is awarded to businesses in Norfolk and Suffolk who are committed to supporting the future workforce.

- www.apprenticeshipssuffolk.org
  - Find out about apprenticeship opportunities.

- www.its-mygo.co.uk
  - Mygo is a modern youth employment service for 16-24 year olds looking for training or education-based in Ipswich and across Suffolk.

- www.newanglia.co.uk/new-anglia-enterpriseadviser-network
  - Find out more about the benefits of becoming a New Anglia Enterprise Adviser - working with schools and colleges to help raise career ambitions and work prospects for young people in Norfolk and Suffolk.
‘I haven’t found a job, I’ve found a career…’

Craig Thompson, 24, was named Apprentice of the Year by the Suffolk Agricultural Association last year. He currently works on a farm run by RJ Nunn and Sons in Stowupland and studies at Easton and Otley College.

What apprenticeship are you doing? I’m currently working towards a Level 3 apprenticeship in arable agriculture having completed the Level 2 last year.

I go to the Otley campus outside Ipswich on day release once a week where we learn both practical skills and knowledge to back it up, such as science-based learning around the nutrients, crops and vegetables require, how to control pests and the legislation relating to arable farming.

How did you get into farming? I don’t come from a family with an agricultural background, so I’ve come to the sector a bit late.

I originally attended Thurston Community College where I took A Levels in physics, psychology and politics. I had thought about going to university after that and also wanted to join the Army as an officer but that didn’t happen. Before I started my apprenticeship I’d had a number of jobs such as being a window cleaner and working in a pub.

Then I saw this apprenticeship advertised, so I applied and was successful. I really haven’t looked back since.

How are finding working in agriculture? I keep saying to friends that I haven’t found a job, I’ve found a career.

I really do love it because it is so varied and no two days are the same. One day you could be carting fertiliser, the next working on machinery. I also like the different seasons where you could find you are working intensely over the harvest period but then things are less busy in the winter, which is more a time to carry out maintenance on vehicles and repair fencing. I also love being outdoors no matter what the weather.

How would you like your career to progress? I would either like to go into farm management as I like seeing the bigger picture. Another possibility could be teaching. I’d like to gain some experience in agriculture and then maybe use that to inspire other people.

I intend to go on and work towards my Level 4 because it will give me a good foundation in agriculture and we’ll see where things take me.

What advice would you give to a young person considering a career in the agri-tech sector? Go for an apprenticeship and learn on the job while getting paid.

Put in the work to find a good employer and consider studying at Easton and Otley College as it is excellent.

Agri-tech is a growing sector because with Brexit there will be a necessity for us to grow more food and import less. We need new people to come in and once you are in work hard and you’ll get along well.

People seem to think that farming is all about wearing checked shirts and chewing straw but that couldn’t further from the truth.

Farming machinery today are computers on wheels - the precision that they work to is incredible - we need young people to come into the workforce and be trained in the science and new techniques that are emerging.

The pay is OK – certainly above the national living wage – which is good considering I am on an apprenticeship. Within my first six months I’ve managed to save for a wedding and get together a deposit for a house.

‘Ten years from now, the industry will be unrecognisable from how it is today…’

Nicola Currie, Easton & Otley College employer liaison officer for farming apprenticeships

What courses are available for young people wanting to work in the agri-tech sector? When it comes to choosing courses, it is very much down to the individual in terms of the path that they follow. We have a wide variety of courses here at Easton and Otley College for people of all ages to consider. We teach short technical courses, full and part time vocational options as well as degrees. We have a new degree in agri-biosciences starting in September 2017. As an ambassador for agricultural apprenticeships, I would recommend that those with an interest in farming take a good hard look at this route of study.

What are the routes into the agri-tech sector? The routes in are many and varied. I would always recommend that those who decide to leave school after their GCSEs go on a full time college course. You will get a good overview of the industry and have time to gain both practical, hands on experience and technical knowledge and it will give time to get that all important driving licence. For those with A Levels there is the apprenticeship route or Higher Education.

How do apprenticeships fit in? With the last government’s drive to get more people on apprenticeship programmes and the introduction of the new standards I can only see this route increasing in popularity. Recently we have been recruiting more candidates who have very good A-level results to do apprenticeships. I expect this trend to continue as more bright minds are being attracted into the industry.

Are you seeing more opportunities for young people in this area? Yes we are. Any industry that is changing at such a rapid rate will inevitably create more opportunities. East Anglia is seen by many as being the bread-basket of Britain. Numbers on all of our agricultural courses are generally increasing – particularly in Suffolk - so the future looks good in terms of opportunities for young people as far as we are concerned.

We have an expanding population all of whom need to eat. Couple this with the challenges coming up with Brexit, pressures from climate change, the need to optimise water use and soil management and at the same time care for the environment and our ecosystems. It’s a career with an enormous amount of opportunity and responsibility. Ten years from now, the industry will be unrecognisable from how it is today and this is very exciting.

What advice would you give to young people looking to enter the agri-tech / agricultural industry? I’d say go to your local college. Come to our Big Day Out event at Otley on 21 May. Talk to a local farmers on Open Farm Sunday or visit the Suffolk Show. The best way to get an understanding of the complexities of an industry is to see how it works for yourself.

www.eastonotley.ac.uk
Edward Bales is managing director of Poultec Training Limited, an apprenticeship training company that specialises in agriculture and food manufacturing.

**What routes are there into the agri-tech sector?**
There are a number of options, such as talking to training providers and colleges, researching online and attending careers events. Government websites such as www.findapprenticeship.gov.uk and local careers websites such as icanbea are also valuable sources of information.

We have invested in resources to provide young people with advice, including targeted publications and an information vehicle, which is regularly in attendance at local events. We help match employers with young people wanting to become an apprentice.

Routes into the sector may be a traditional college based education or an apprenticeship in agriculture or food manufacturing. We have seen an increase in young people wanting to earn while they earn and complete an apprenticeship. We have also seen former apprentices progress onto senior roles within businesses.

**How do apprenticeships fit in?**
Apprenticeships provide an excellent route into the agri-tech sector, including farming or food and drink production. Poultec has established relationships with local farming and food manufacture businesses where they help recruit apprentices – we currently have 30 vacancies across these sectors alone.

Apprentices work within an organisation where they develop work-based skills and attend training sessions with the training provider – these are delivered both at the workplace and at industry specific Academy sessions at Poultec’s training centre. For example, our apprentice butchers attend a monthly training session with our master butcher to learn techniques that they would not normally learn on the job. Apprentices gain valuable transferrable skills during their training. We regularly see young people starting on an intermediate apprenticeship before progressing onto an advanced apprenticeship as their career develops.

**Are you seeing more opportunities for young people in this area?**
The East of England is a hub for both agriculture and food manufacturing, providing an extensive and diverse range of opportunities for young people. Opportunities are not limited to solely production and apprentices can specialise into roles such as quality assurance, technical or engineering.

The poultry sector sees apprenticeships as an ideal way to develop the farm managers of the future. The aging agricultural workforce, combined with the growth in UK poultry production, provides many opportunities for young people. Manufacturing continues to be strong with organisations looking for young people to develop into leadership and management roles.

**What advice would you give to young people looking to enter the agri-tech sector?**
The businesses that Poultec works with are continually looking for young people who are keen to learn about the sector. Businesses are able to develop the skills that they require a young person to have through the apprenticeship programme. Speak to organisations like Poultec about the opportunities available – our team are here to help you on your first steps towards a career in the farming and food industry.

*www.poultec.co.uk*

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**The East of England is a hub for both agriculture and food manufacturing...**

There is a contradiction at the heart of the agri-tech sector at present. While the move towards Brexit is forcing farmers and growers to focus on the short-term repercussions of leaving the EU, what is really important is planning ahead five to ten years and bringing in young people now so they can learn the skills required in the future.

This is because the agriculture sector is becoming increasingly technical.

The technology found in modern tractors is state-of-the-art; automation and the use of drones is becoming more widespread; precision farming is now the norm and the science behind providing crop nutrition and pest management is increasingly sophisticated.

Looking across the industries that support the farming sector, such as manufacturing and engineering, quality jobs also abound. There’s a need for engineers, agronomists, traders, marketing professionals and scientists.

The trend is towards fewer more highly skilled people - meaning we need to attract high calibre people into the sector and have to compete with other industries for the best and brightest.

This means we have to work harder to promote our sector to young people by going into schools and colleges. At the moment the agri-tech sector is more fragmented than other sectors - such as oil and gas, renewables, telecoms - who are making better use of their resources in this regard, and reaching out to young people and their parents.

That’s why we need more people from the agri-tech and food sectors to sign up to The New Anglia Enterprise Adviser Network, a wonderful initiative that works to connect senior, local business leaders with senior leaders in local schools and colleges, to help motivate and inspire young people and make a major impact on their work prospects.

This is not a sector specific scheme and many business leaders from across all industry sectors have committed to volunteer their time to work with schools and colleges.

If more people from agri-tech got involved it would give the sector a boost and alert farmers and growers to focus on the short-term repercussions of leaving the EU, what is really important is planning ahead five to ten years and bringing in young people now so they can learn the skills required in the future.

There’s a lot of evidence to show that young people who engage in initiatives like this at an earlier age are more likely to find a job earlier than those who don’t.

To find out more about becoming an enterprise advisor, go to http://www.newangliaenterprise-adviser-network/