

A Nuffield Farming Scholarships Trust Report

Award sponsored by

Central Region Farmers' Trust

Innovative Women in Today's Agriculture

Tanya Robbins

August 2014

NUFFIELD FARMING SCHOLARSHIPS TRUST (UK) TRAVEL AWARDS

"Nuffield" travel awards give a unique opportunity to stand back from your day to day occupation and to study a subject of interest to you. Academic qualifications are not essential but you will need to persuade the Selection Committee that you have the qualities to make the best use of an opportunity that is given to only a few – approximately 20 each year.

Awards are open to those who work in farming, growing, forestry, or otherwise in the countryside, and sometimes to those working in ancillary industries, or are in a position to influence those who do. You must be resident in the UK. The normal age range is 25 to 45 but at least one younger candidate each year will receive an Award. You must have spent at least 2 years working in a relevant industry in the UK. Pre- and post-graduate students are not eligible for an Award to support their studies.

The Nuffield Arden Award is unique in that there is no age restriction and the subject is set by the Selection Committee. An Arden Award is offered every 2 years.

Full details of all Awards can be seen on the Trust's website: www.nuffieldscholar.org. Application forms can be downloaded and only online submission is accepted.

Closing date for completed applications is the 31st July each year.

A Nuffield (UK) Farming Scholarships Trust Report

Date of report: July 2014

"Leading positive change in agriculture. Inspiring passion and potential in people."

Title Innovative Women in Today's Agriculture

Scholar Tanya Robbins

Sponsor Central Region Farmers Trust

Objectives of Study Tour To speak to successful women in developed and developing nations involved in agriculture.

To encourage families to involve female family members in their farm

business.

To encourage girls to believe that agriculture is a fantastic career.

To find direction for my own farm business.

Countries Visited

Isle of Man, Ireland, Canada, Norway, Kenya, Uganda and India

Findings

- Women are more involved in food production in developing nations but generally do not have rights to land/business ownership.
- Women in developing nations have to work so hard for basics we take for granted, i.e. water, food, education.
- My preconceived ideas of different cultures have been changed by travelling to Kenya, Uganda and India.
- The perceived view of the 'farmer's wife' is changing we are farmers in our own right.
- Women are reaching new heights in agriculture there is a ground swell of support but we must have the confidence to forge ahead.
- There are successful women entrepreneurs who mentor others.
- The importance of networks in developing careers.
- The most innovative, inspirational women I met are the ones who help and mentor others to succeed as they have.

Contents

1.0.	Introduction	1
2.0.	The background to my study subject	2
3.0.	Countries visited for the study	3
4.0.	Isle of Man	4
4.	1. Mrs Clare Christian, BSc – the President of Tynwald, Parliament of the Isle of Man	4
4.	2. Belinda Leach	4
4.	3. Fiona Brumby	5
4.	4. Ramsey Grammar School	5
5.0.	Ireland	7
5.	1. Karen Brosnan, NSch	7
5	2. Grainne Dwyer, NSch	7
5	3. Katherine O'Leary	8
5.	4. Betty Murphy	9
5	5. Val Kingston	9
5.	6. Ann Moore	10
5	7. Catherine Lascurettes, NSch	10
5.	8. Margaret Healy	10
6.0.	United Kingdom	12
6	1. UK Nuffield Briefing 6 th –7 th March, Union Jack Club, London	12
6	2. Baroness Hazel Byford	12
6	3. Christine Tacon	13
6	4. Minette Batters	14
6	5. Sian Bushell	15
7.0.	Canada	16
7.	1. Contemporary Scholars Conference – Guelph and Niagara Falls	16
7.	2. Judy Shaw	16
7.	3. Carolyn Fuerth	17
7.	4. Anna Mastronardi	17
7.	5. Leslie Huffman	17
7.	6. Tanya Mitchell	18
7.	7. Nikki Tayler	18
7.	8. Carol Taves	18
7	9. Izabela Muzzin	18

8.0. Norway	20
8.1. Allodial Act	20
8.2. Hildegunn Gjengedal and the Norwegian Farmers Union (NFU)	20
8.3. Kathrine Kleveland	21
8.4. Lise Thorso Mohr	22
8.5. Tone Vaag	22
8.6. Berit Hundaala	23
8.7. Stine Bjornstads	23
8.8. Torill Midtkandal	24
8.9. Tove Andersen	24
8.10. Dr. Marit Haugen, PhD	25
9.0. Kenya	26
9.1. Farm Africa	26
9.2. Zemach Getahun	26
9.4 Farm Africa Project in Kitui, Kenya	27
9.5. Louise Labuschagne – Real Integrated Pest Management (Real IPM)	31
9.6. Kenana Knitters	32
10.0. Uganda	33
10.1. Farmers Overseas Action Group (FOAG)	33
10.2. The Village of Kasita	33
10.3. Women farmers in the County of Makuutu	34
10.4. Victoria Kakoka Sebagereka	36
10.5. Anna Ebong – Brownstone Country Home, Lira	37
10.6. Dr. Theresa Sengooba	38
10.7. Mara Bua Johnson	39
10.8. Nora Eubukalin	39
11.0. India	41
11.1. Dr. Sarala Gopalan	41
11.2. The Punjab Agricultural University, Ludhiana	43
11.3. P.A.U. Kisan Club (Farmers Club)	43
11.4. Nehrumathi Kamaraj	44
11.5. Jeya Kunari	44
11.6. Mrs Lagha	45
11.7. Velmani Santhakumar	45

11.8. Latha Kannan	. 45
11.9. Shentara Ramasamy	. 45
11.10. Mrs Nagalakshmi	. 45
11.0. Key influencing factors	. 48
12.1 . Education	. 48
12.2. Infrastructure	. 48
12.3. Marriage	. 49
12.4. Healthcare	. 49
12.5. Domestic Violence	. 49
12.6. Ugandan Convention, London Sept 2013	. 49
11.0. Conclusions	. 51
14.0. Life post my Nuffield Farming study	. 52
15.0. Executive summary	. 54
16.0. Acknowledgments	. 55
17.0. Appendix 1	. 57
18.0. Appendix 2: Professional Boards Forum "Woman Directors of FTSE 100 Companies"	. 65

DISCLAIMER

The opinions expressed in this report are my own and not necessarily those of the Nuffield Farming Scholarships Trust, or of my sponsor, or of any other sponsoring body.

CONTACT DETAILS

Mrs Tanya Robbins Nosehill Farm Chalk Hill Stow-on-the-Wold Gloucestershire GL54 1HB

Home: 01451 850325 Mobile: 07929 525054

Email: tit.robbins@gmail.com

Twitter: Ta_Rob

Nuffield Farming Scholars are available to speak to NFU Branches, Agricultural Discussion Groups and similar organisations.

Published by The Nuffield Farming Scholarships Trust Southill Farmhouse, Staple Fitzpaine, Taunton TA3 5SH Tel: 01460 234012

email: <u>director@nuffieldscholar.org</u> www.nuffieldscholar.org



1.0. Introduction

What do you do when, in mid 40s, passionate about farming but the business is struggling and needing to be challenged and inspired? Apply for a Nuffield Farming Scholarship.

I farm in partnership with my husband Tom on a 220 acre tenanted farm in North Gloucestershire and we own 65 acres. Our landlord is a Cotswold stone quarry owner and much of the farm is re-claimed land that has an abundance of wildlife. This is managed with a private environmental agreement with the Landlord and we are part of the national environmental schemes, Entry Level and Higher Level Stewardship.

We began with 50 ewe lambs about 25 years ago and have bred our own replacements so we now have 500 Easycare/Lleyn ewes, finishing the lambs on stubble turnips and fodder beet. These catch crops are followed by spring barley and extra grazing is taken on neighbouring farms.



Me, Tanya Robbins

At this time in my life three mornings a week were spent at my father's farm, book-keeping carried out at other small businesses, caring for our two daughters, trying to help my grandmother cope - as well as working on our farm. I was involved with our local pony club and was an active National Farmers Union (NFU) member. In January 2012 I took part in the Challenge of Rural Leadership course run by the Worshipful Company of Farmers by The Duchy College. This is a two-week residential course and it gave me the confidence to apply for a Nuffield Farming Scholarship.

I am now the Deputy Chair of Gloucestershire NFU, a livestock delegate for my county to the South West Regional NFU Livestock Board, a Foundation Governor at our local Church of England Primary School, Gloucestershire committee member for the Royal Agricultural Benevolent Institute (R.A.B.I.) and recently appointed to the National NFU Livestock Board.

Time away from our business and the family has helped me to realise we must concentrate on our core business. Attention to detail is vital and we must look to achieve the most out of each acre, whether that is through production or environmental work. This is in addition to providing a loving, caring family home.



2.0. The background to my study subject

I believe family farms are vital to the environment and rural communities. Having been brought up on one and involved with our own family business I noticed that the go ahead family farms around our home area are being driven by the women of the family. They appear to be looking outside the normal, expected routes for farms, diversifying into marketing directly to the public through tourism, garden centres and farm shops. These women are juggling dynamic, forward thinking family concerns while still providing a great home life for their families. The families are not stuck in their ways of 'doing it as it has always been done' and there does not seem to be a problem with the older generation unable to retire.

My husband, Tom, had the farm tenancy transferred to him a number of years ago. We had been forward thinking enough to buy a small property in a local village to let out, and a few years later we took out another mortgage to purchase 47 acres of land

I noticed that the go ahead family farms around our home area are being driven by the women of the family.

adjacent to our farm. My family helped us financially with the land purchase and we paid them back over a few years. The opportunity to rent a neighbouring farm was taken and the children arrived. So why was our business not thriving now? Looking back, when the neighbouring farm was sold and we were paid to relinquish the tenancy, we should have kept the money separate from the farm account and looked to invest it elsewhere. As it happened, that money propped us up for a while and, without realising it, we had slipped into complacent practice.

For fifteen years I had worked part time on my father's family farm, taking it into the Countryside Stewardship Scheme, always hoping I would become a partner in the business with him. Trying to juggle our own farm business, my dad's, plus children was never easy, but deadlines were met and as long as neither the children nor I became ill, we coped. The turning point was the Challenge of Rural Leadership course where I faced up to the major issues and realised the only person who could sort it out was me. I had to find the confidence for a serious talk with father.

For years I had been aware of Nuffield Farming Scholarships and encouraged others to apply. However, when I found out the upper age limit, I realised if I did not have the guts to apply straight away I would be too old. Therefore, there was no time to worry about it but just to get on with it. Would the Nuffield Farming panel let me study innovative women in agriculture? Research showed most studies to be on commodities but my mentor, Simon Weaver, NSch, said if I really wanted the Scholarship then - to stand out - I would need to research thoroughly and visit different countries to the usual Nuffield Farming route. The internet revealed an abundance of incredible women I wanted to meet around the world and the problem then would be to keep the travel within budget.

When the letter arrived to say I had been awarded the Scholarship, I really was scared. What on earth would my husband and father say? Both were aware I had applied but, to be honest, they, and indeed I, did not really believe I would be successful. Well, if the Nuffield Farming Scholarships Trust believed in me, it was definitely time for a family meeting. If Dad was not going to grant me a partnership then, I now had the opportunity to travel the world and work out what I was going to do. The answer from Dad was no, so my sisters agreed to take over my role at his farm so I could study.



3.0. Countries visited for the study

I wanted so much to have the opportunity to talk to innovative, successful business women and thought it a good idea to narrow the countries down to a couple of developing nations, as well as 2 or 3 developed counties, to find out what the different challenges are that women face. So I decided on Uganda, India, Ireland and Norway as well as our own country. Kenya was later added too.

Isle of Man	February 2013	An invite from Paul Costain to the island, are women important to agriculture there?
Ireland	February 2013	Grainne Dwyer, NSch was the first Irish woman to be awarded a Nuffield Farming Scholarship. The European Innovative Woman Farmer of 2011 competition had two finalists from Ireland with Ann Moore winning. Could I meet these women?
Canada	March 2013	Contemporary Scholars Conference Guelph/NiagaraFalls Ontario – Carolyn Fuerth, NSch with an on farm abattoir
Norway	June 2013	Norwegian Farmers Union conference. How had the Allodial Law affected women involved in agriculture?
Kenya	July 2013	The charity Farm Africa was instrumental in allowing me to visit two of their projects around Kitui
Uganda	July 2013	The charity Friends Overseas Action Group (FOAG) helped with contacts. Could I meet Mrs Victoria Kakoko Sebagereka?
India	October 2013	A more developed country than Kenya and Uganda but why are there more high powered business women here than in the UK?
United Kingdom	Ongoing	Throughout 2013/2014 wherever I went there were innovative women to find – NFU meetings/agricultural shows/discussion groups



4.0. Isle of Man

4.1. Mrs Clare Christian, BSc – the President of Tynwald, Parliament of the Isle of Man

My Nuffield Farming study began with a 'Challenge of Rural Leadership' reunion invitation from Paul Costain, a Manx farmer and one of the students on this course, who kindly arranged this meeting on the Isle of Man. This was how I met Mrs Christian. Politics now dominate her life so whilst she also runs her 180 acre farm, 100 acres are leased to her niece for beef and sheep. Breeding Clydesdale and Shire horses is Mrs Christian's passion, a hobby she shared with her late father, Sir Charles Kerruish. The stud continues with its success, winning the Heavy Horse Championships at the 2014 Isle of Man Heavy Horse Society and Southern District agricultural shows; being highly placed at the Royal Highland Show and winning two Championships in Scotland this summer.

Mrs Christian kindly showed us round Tynwald, the Parliament of the Isle of Man. There has been a continuous parliament here for over 1,000 years making it the oldest continuous parliament in the world. As well as Mrs Christian, who is the Presiding Officer, there are 2 other women members at present - out of 33 - and they are half way through the current 5 year term. The space industry is a niche part of the economy and Manx manufacturing business; they provided the specialised optics for the first 'rover' on the moon. The island was the first place to give women the right to vote, for women with property, and Emily Pankhurst's mother came from the Isle of Man. Their tax system is completely independent of the United Kingdom's and they are not a member of the European Union (EU) although they have an EU trading agreement, hence the island does not receive any EU funding. Our Queen is the 'Lord of Man' making the island a Crown Dependency. The basic rate of income tax here is 10% with the Value Added Tax (VAT) rate being the same as the UK (20%). There is a VAT sharing agreement, with the UK being their main trading partner. The island has the same rules and structures for customs as the UK and all VAT is pooled with a proportion paid to the island in line with a formula agreed between the UK and the Isle of Man. There is an increasing, and aging, population of 80,000 people here from 70 different nationalities. They have enjoyed 25 years of financial growth up to now, but the world recession has meant cuts being made to government services, which is not popular. A job vacancy has to be advertised locally and if there is a suitable "local" person the job has to be given to the resident. Only if no local person is suitable can the position be offered to a non-resident on a work permit system.

4.2. Belinda Leach

Belinda Leach is the General Secretary for the Manx National Farmers Union (MNFU) and kindly invited us to attend a meeting and helped with other introductions. Energy, plus a passion for agriculture, emanates from Belinda. She takes pride in organising school visits to farms. At a vegetable farm she starts the tour in the potato seed store, then to see the potatoes being planted and ends up in the pack house. Every child is given a piece of homemade carrot cake to take home, together with a recipe card for it, as well as a small pack of vegetables. A school nativity play is performed in a barn on a farm with live animals. On one sheep farm there were some collie pups so the farmer brought along one of the pups and told the story of a day in the life of the pups, taking



the children on a tour of what the puppies see. They set up a mobile handling system, put sheep masks on the children and tagged them into the 'mask ear', also sticking on some wool. They then invited the children to go through the race and the children loved it! Some of the farms have a suitable barn for wheelchairs where visits are arranged for special care and disabled people.

At agricultural shows Belinda and members of the MNFU build a 6 foot high larch panel maze that they have constructed themselves. It is bolted together with a display of beef calves, dairy calves, lambs, chickens and turkeys and information boards are attached. The public and press love it. Manx NFU run the Manx Farming and Food Matters Facebook page. This champions the providers of quality Manx produce, raises awareness of food- and farming-related issues and encourages new enterprise with 'ready to print' posters, videos showcasing farming from field to plate and downloadable activities that can be used during and after the farm visits. MNFU group meetings are arranged on the island and Belinda had organised a women-only meeting to provide information on the Government Farm schemes. There was a good turnout and the women felt more confident to ask questions without the menfolk there.

4.3. Fiona Brumby

Through Belinda I met Fiona and Brian Brumby who share-farm 400 acres on the island at Ballakillingan Farm. Fiona started her career working as a dairy consultant for ADAS in Devon and Brian was farm manager on a dairy farm. They wanted to farm in their own right and were drawn to the Isle of Man as there was no dairy quota here. They successfully applied to form a share farming partnership with a landowning family in 1998. The milk price was better on the island compared to the mainland and they conventionally milked, supplying milk to the local creamery. However they were concerned for the future of this industry and a couple of years ago changed tack completely. Fiona explained that they rear pedigree Holstein heifers that are milked for 3 weeks after calving then sold at auctions on the mainland in Cheshire and Lancashire. Even with transport costs they reach a higher value than selling just on the island. They use single sexed semen from Semex and Genus, with the heifers calving over a 6 month period when they are about 2 years old. A few older cows are kept for the heifers to follow through the parlour and the calves are reared at home.

They have diversified, forming a campsite on 12 acres that is completely full for the annual TT motorbike race and they provide catering. They have 2 maize mazes plus an Animal Centre Attraction open for the school summer holidays, all beautifully set out on their website www.sillymoos.im. Last year they had 29 schools visit the farm, taking visitors out on tractor and trailer rides, displaying all the produce from the farm and explaining how it is grown and made into food. The children have a go at making butter and flour. Fiona is incredibly busy and driven but makes time to help Belinda on the Manx NFU show stand and with meetings.

4.4. Ramsey Grammar School

Here I met Marion Cottier, teacher of Rural Science, who used to feed the lions at Longleat Safari Park! This school was one of the first in the UK to have a school farm and it was the first one to achieve Farm Assured status. Every Key Stage 3 pupil studies Rural Science twice a week and the



children were obviously enjoying this subject, with many choosing to continue when they decide on their subject options.

Mr David Trace, headmaster, kindly showed us round and quickly you realise their school farm is an integral part of life here. In the school canteen they are proud to have their own produce feature on

the menu and any surplus meat is sold by a butcher in Ramsey. They have specially designed buildings for their own sheep, pigs and chickens that allow safe access for the children and wellbeing for the stock. The children are involved in the day-to-day care of the animals and the pupils' wheelbarrows, overalls, etc. were all stored away neatly. Vegetables are grown too, and eaten in the canteen.

The (school) takes a 'roadshow' round every primary school on the island featuring the farm, as well as their academic and sporting achievements.

They take a 'roadshow' round every primary school on

the island featuring the farm, as well as their academic and sporting achievements. I believe this school should be used as a blue print for other schools throughout the UK, giving pupils the life skills of growing and producing their own food.



5.0. Ireland

5.1. Karen Brosnan, NSch

Karen grew up on a dairy farm in County Kerry, the eldest child with 5 younger brothers. She now lives in Dublin, Senior Partner of Wright Consulting advising Government departments and businesses on cultural and structural change within. We had a wide ranging discussion in a short time on various programmes Karen has worked with, and I was not surprised to see Karen's skills being utilised at the Nuffield Contemporary Scholars Conference at Guelph, Canada in March during the international directors' meetings. I had never met anyone before who questioned thoughts and ideas from all sorts of angles, leading you to draw your own conclusions. Karen had a big impact on how I was to conduct my study.

5.2. Grainne Dwyer, NSch

At the very beginning of my study John Stones, NSch, the former Director of the UK Nuffield Farming Scholarships Trust, told me Grainne was the first Irish woman to be awarded a Nuffield Farming Scholarship in 1999 when she studied 'Women; Access to Agriculture and Farming Succession'. One of the most striking items in her Nuffield Farming report was the Allodial Law in Norway, which is why I wanted to visit that country to meet female farmers who have the right of succession on their family farm. Access to agriculture for women became an issue for Grainne when first married as she did not want to go on a residential course at a college and could not find a course locally. I realised farm succession can be very complicated in Ireland as each acre of land is shared amongst the owners.

Grainne grew up on a small farm in Kildare and on leaving school worked for a solicitor in Newbridge. Her next job was in the accounts department of the Incorporated Law Society of Ireland in Dublin and she was then appointed to administer to the Law Society's professional indemnity scheme for lawyers - the Solicitor's Mutual Defence Fund. Luckily for agriculture, I found out from Mary Carroll's wonderful book 'Women Drive Tractors Too', that Grainne joined the young farmers' organisation called Macra Na Feirme. During her time in the organisation she became County Secretary and County Chairperson and in 1986 she represented Ireland at a European young farmers rally in Germany where she met a fellow Irish young farmer, Jim, who became her husband. When Grainne married she left her job in Dublin and went to live on the farm in County Laois. Grainne worked with Jim, who was her mentor and taught her a great deal of what she now knows about agriculture. When I arrived a cow was due to calve and as Jim was at a meeting, Grainne was popping out to check on progress while cooking supper and chatting to me. Having completed her Nuffield Farming studies Grainne became secretary to the Irish Grasslands Association and has organised major national and international agricultural events in Ireland. Communications and Events Manager for Animal Health Ireland (AHI). Her role at AHI is to engage and liaise with industry and Irish farmers in the promotion and provision of up to date information on AHI's 4 national programmes - Bovine Viral Diarrhoea (BVD); Cellcheck (the national mastitis programme); Johne's disease; Infectious Bovine Rhinotrachetis (IBR) plus AHI's own projects -Calfcare, Parasite Control and biosecurity.



We discussed the people Grainne had met on her travels to Australia, New Zealand, Norway and France and the impact they had on her thinking and study. In Australia, Grainne found the women involved in agriculture were at a more advanced stage of recognition for their involvement, especially in the dairy industry. They were involved in all levels of management, except at the top level.

5.3. Katherine O'Leary

My next stop was Carrigrohane, County Cork to meet Katherine O'Leary, who had been at work all day cooking pancakes, (it was pancake day), at school in her role as home economics teacher. Katherine has been a features writer for the Irish Farmers Journal (IFJ) over the last 8 years, with her own page 'Katherine's Country'. That week's article was encouraging women to highlight their achievements in agriculture. The IFJ launched the annual 'Women and Agriculture Awards' in this edition to find women who are making a difference on their own farms or in agri-business, and Katherine is a judge for this.

Katherine trained as a Farm Advisor for Women and met her husband Tim through Macra na Feirme. In 1981 Katherine was Macra Miss Cork going on to be awarded Macra Miss Ireland. She is a campaigner for disabled rights, brought about by the challenges that 2 of their 4 children face and she talks to groups about this with passion, and about farm life, all over Ireland. Their farmhouse was designed and built in the mid 1990s centred on the needs of all the children and is a beautiful, welcoming place. Katherine is a board member of Inclusion Ireland - National Association for People with an Intellectual Disability. In 1997 Katherine's husband Tim was awarded a Nuffield Farming Scholarship and while he was travelling Katherine ran the farm, a hands-on approach she has always adopted if Tim is attending Irish Farmers Association (IFA) meetings.

One of her proudest moments was on her 40th birthday when Tim presented her with the legal papers for their partnership in the farm. She was instrumental in starting the Farm Women's Conference in 2008 and was the keynote speaker which was attended by 600 women. This has been held annually since then with 650 women at this year's event in Killarney. With so much going on in this busy lady's life I was amazed they also have farm tours on Wednesdays when Katherine is not at work. Some of Katherine's most cherished memories come from the Irish Women's visit to Australia in 2004. Leaving the family and the farm was a difficult decision but, with family backing, Katherine went and gained so much from the visit – getting to know fellow Irish farm women and connecting with Australian farm women, making lifelong friends.

At suppertime, neighbours Michael and Evelyn Kearny and John and Betty Murphy joined us. We had intense discussions on the merits of European membership, working with Government, bovine tuberculosis policy, animal health schemes, when to involve children in farm businesses and the role of women within agriculture.



5.4. Betty Murphy

Betty had been chair of the IFA Farm Family Committee from 1998-2002 and was instrumental in lobbying Government for the right of farm women to have a state pension. I read on the Irish Farmers' Association (IFA) website that up until this point, spouses of self-employed farmers who assisted in the farm work, but who were not operating a partnership structure, did not qualify to make social insurance contributions. The hard work and determination of Betty and the IFA Farm Family Committee resulted in an agreement with the Irish Government Department of Social and Family Affairs to recognise the need for these pensions, and brought in a change of policy in 2008. This change allowed women working on family farms to pay social insurance contributions towards a contributory pension. Then in 2010 this facility was removed but thankfully after strong lobbying and discussions, the policy was reinstated.

Betty made a big impression upon me. In later life she returned to college studying for a degree in Accounting followed by a master's in Management Information and Managerial Accounting Systems. For the last 5 years Betty has worked full time off the farm but still helps with the milking when necessary. She has a passion for lifelong learning and education for the younger generation. Betty and John have 5 children and all of them have been to college amassing degrees in maths, chemistry, paediatric and general nursing, electronic engineering, with their youngest child studying physiology and health science.

On the internet I came across the Innovation Prize for Women Farmers 2011 that was organised by the European Farmers Union, COPA. There were 2 finalists from Ireland, both from County Cork, Val Kingston and Ann Moore with Ann becoming the overall European winner. I was thrilled to be able to meet both of these remarkable women.

5.5. Val Kingston

Val Kingston, a dairy farmer's daughter, took a Food and Technology Degree at Cork University, worked for Dairy Gold Co-operative for 4 years, and then spent 2 years on a dairy development project in Burkina Faso, West Africa. In 1997 she married Alan and settled into life as a farmer's wife on a dairy farm, but Val could see they could gain extra money by making products from the milk and selling directly to the public adding value to their liquid milk. They bought a milk separator and began by making cheese, followed by cheese cakes, yoghurt, cream and butter, to sell at local farmers' markets. The business took off - increasing the value of their liquid milk tenfold by selling the food products - and 3 children arrived too. For 5 years Val worked from her kitchen and then in 2002 they built their own dedicated dairy. Bord Bia, the Irish Food Board, brought buyers to view their products and the business rapidly grew. All their products are based on feedback from their Farmers' Market customers and they now employ 32 staff.

The farm has been leased so they can fully concentrate on the food business and therefore another business is benefiting by supplying milk to Val and Alan. Their brand name is 'Glenilen Farm' and now their products are sold throughout Ireland and, from last year, in a growing number of UK stores – Waitrose, Tesco, Booths and Morrisons. They have a great website www.glenilenfarm.com and do farm tours as well. All their products are completely free from additives or preservatives.



5.6. Ann Moore

Ann Moore and family have been at Ballyspillane for 14 years now. She grew up on a beef suckler farm and she and her husband David are progressive dairy farmers. They travelled to New Zealand to see best practice for themselves and implemented changes into their own system.

They began with 28 cows on 30 hectares, moving on by buying a 65 hectare farm. They could not find a way to expand where this farm was situated so they sold and moved to Ballyspillane in 1999. This was a momentous year as David was diagnosed with multiple sclerosis and Ann took over running the farm. To expand their holding Ann bought 18 hectares with milk quota and a few years later a further adjoining 15 hectares using the same method.

To start with Ann continued with their routine of twice a day milking but with 2 children and lots of other work to be done on the farm and in the home, Ann decided to move to milking just once a day. The cows and Ann have adapted well to this system, milking 20 at a time, and they have put in an automatic cluster removal system. Now the herd is 200 Friesian x Jersey x New Zealand happy cows, grazing the grass produced on their low cost system, with kale grazed over winter and silage fed.

Ann and David have 2 children aged 19 and 20 – their son is at agricultural college and their daughter is training to be a nurse. Ann makes time to be involved with the Irish Farmers Association and even helps with a soup run for the homeless around Cork.

My final day in Ireland was spent in Dublin at the headquarters of the Irish Farmers Association (IFA) at the kind invitation of Catherine Lascurettes, NSch.

5.7. Catherine Lascurettes, NSch

Catherine has been with the Irish Farmers Association for 20 years as Executive Secretary of the Dairy Committee. She was awarded a master's degree in International Commerce at Toulouse University and first worked in Ireland for a company exporting beef carcases into France. Catherine told me about her work and explained about Irish agriculture.

There are 130,000 farmers in Ireland and 90,000 of them are IFA members. 90% of Irish beef and dairy produce is exported and the toughest market to trade in is the UK. The Irish government is looking to agriculture as their way out of the current economic difficulties and the IFA has excellent access to Government. Developing relationships with Members of the European Parliament (MEP) is gaining importance, with Ireland still operating a historical model of Common Agricultural Policy (CAP), but they are moving towards flat payments. The major dairy co-operatives are so important to the dairy industry with the main players being well known names in the UK, such as Glanbia, Dairygold, Kerry and Lakeland. Within the cooperatives, shares are linked to production.

5.8. Margaret Healy

Margaret Healy came into farming through marriage to a dairy farmer, and has been involved with the Irish Farmers Association in her local county of Wexford for 25 years. In 2009 Margaret was elected to the role of national chair of the IFA Farm Family and Social Affairs Committee for a 4 year



term. With this role Margaret represents Ireland at the European Committee of Professional Agricultural Organisations (COPA) on the Women's Committee.

The main areas of work for Margaret and her team are raising awareness of farm safety, with talks, leaflets and a National Farm Safety Awareness Day. This is where they ask families to take time to review the safety on their farms, raising the profile of mental health issues and stress and pensions. Margaret is also involved in a project bringing children from Chernobyl to visit Ireland.

Margaret was extremely generous with her time and introduced me to a great many people that day. The sheep committee was having a meeting and the chairman, Mr James Murphy, invited us to join them.



6.0. United Kingdom

6.1. UK Nuffield Briefing 6th-7th March, Union Jack Club, London

All 22 of the 2013 UK Nuffield Farming Scholars met in London for 2 days of meetings and discussions before we all flew to Guelph in Canada for the Contemporary Scholars Conference. Here we met up with all the Nuffield 2013 Farming Scholars from the other participating countries. One of our meetings in London was with Baroness Hazel Byford who has been a working peer in the House of Lords since 1996 and she told us a little about her life, before taking us to see the House in action where the debate was centred on 'International Women's Day'.

6.2. Baroness Hazel Byford

Baroness Byford has devoted her life to duty and, in this, agriculture has played a significant part. From the Worshipful Company of Farmers' autumn 2013 newsletter I learnt of her life up until now. After school, Hazel went to Moulton Agricultural College and then became a poultry farmer, with a particular care for the welfare of rural communities and the conservation of wildlife. In 1962 she married Barrie Byford and continued her role in the Women's Royal Voluntary Service (WRVS) until 1976. Now Baroness Byford is the President of LEAF (Linking Environment and Farming) and Patron of the Women's Farming Union.

Her father had been a Conservative Member of Parliament in the UK for 25 years and she has followed in his footsteps with a political life. To begin with Hazel was Chair of the East Midlands Women's Conservative Committee, going on to chair the National committee which is the oldest women's political organisation in the world. She then became President of the Conservative National Union Committee in 1996 and chaired the Conservative Conference. This same year Baroness Byford became a Life Peer and was appointed Shadow Minister in the Lords with responsibilities for the Government Department of the Environment, Food and Rural Affairs (DEFRA). She held this office for 10 years and is now a backbencher and member of the EU Agriculture Select Committee. Professor Campbell from Leicester University said in an oration to Baroness Byford at the time of her receiving a degree of Doctor of Laws 'Lady Byford is renowned for promoting the progress of talented women and whatever organisation she becomes involved with, rises to the top with commitment backed by incredible talent'. Now Baroness Byford has become the 62nd Master of the Worshipful Company of Farmers.

The Baroness took us into the chamber to see part of the debate on International Women's Day where they were discussing:

- Ways to encourage women into sport
- Under representation of women on FT 100 Boards
- Violence against women
- Human rights



We heard Dame Tanni Grey speak, asking mothers who might have been put off sport as children, to encourage their daughters to play as much sport as their sons. UK Sport and Sport England want to encourage up to 25% representation by women on boards by 2017. Only 50% of schools take part in

competitive games. The UK women's team at the 2012 London Olympics was outstanding. Another peer informed the debate that only 6 women were currently on the boards of the top 100 FT Index companies. For equality more women are needed on boards and black and minority women especially needed encouraging. They wanted to find out what provision there is for mentoring and

In 2012 more young women took up apprenticeships than young men.

counselling women to have the aspiration to reach top levels. The debate noted that women still lack confidence and at schools the pupil premium should be used to encourage pupils of poor means to succeed. In 2012 more young women took up apprenticeships than young men.

6.3. Christine Tacon

Mrs Christine Tacon is the first person to hold the position of Grocery Code Adjudicator. This is a UK Government ministerial appointment in response to Competition Commission enquires; to oversee the implementation of the Groceries Supply Code of Practice between UK grocery retailers with a turnover greater than £1 billion and their direct suppliers. I, like many other people in UK agriculture, became aware of Christine when she was the managing director of Co-operative Farms for the Co-operative Group. A woman holding this position for 11 years and not afraid to be high profile, taking tough decisions and seeing them through was, and maybe still is, a rarity in the UK. I had the opportunity to meet Christine at a Ladies in Agriculture dinner at the Farmers Club in London.

When Christine was 14 or 15 she went on a school trip to Rolls Royce and the production manager, a woman, inspired Christine to take science A Levels and go on to an engineering degree. At this point her only association with agriculture was her uncle being a dairy farmer. I have taken some details of Christine's career from her website www.christinetacon.com: Christine began her career at Coats Viyella in Germany as a general trainee looking at all the production aspects of the business from tool design to production, then moving to Dynacast UK as Quality Manager. For the next 6 years Christine was with Mars Confectionery and while there, she completed a Cranfield Executive (i.e. part-time) MBA degree that she began while at Coats Viyella. At Mars, when working in marketing, Christine requested a secondment in sales as their sales training has an excellent reputation. She became regional sales manager for the capital covering 20% of the company's turnover of £473 million. She became senior brands manager and one highlight was the launch of 'Tracker', the first cereal bar on the market. Over the following 5 years Christine worked for Wang UK Ltd, The Great British Lottery Company (as a consultant employed by Vodafone) and Redland Bricks (UK) Ltd, then in 1996 became the Marketing Director of Anchor Foods Ltd (now Fonterra), moving up to becoming their Sales Director and Commercial Director, with the company having a turnover of £300 million. At this time Christine's team began the highly regarded Anchor butter television campaigns raising the brand image as 'Free Range'.



In 2000 Christine was appointed the Managing Director of the Co-operative Farms covering 50,000 acres. When Christine arrived this business was running at a £6 million loss from a turnover of £40

million, and she transformed it into a £6 million profit making business with a turnover of £65 million. To achieve this Christine took the hard decision that the business should stop dairy farming and expand into fresh produce packing plus increase the scale of produce growing.

'If an objective does not have a level of fear in it, it is not good enough'

She had to drive cultural change within the business by

restructuring and removing layers of management. Taking elements of changes she brought from other companies, Christine introduced risk management principles through hedging currency and fuel and selling forward. The farms became integrated with the rest of the Co-operative Group to support the Co-op brand and Christine led the branding of fresh produce packs in store as well as for flour, premium cider and apple juice. In addition, Christine initiated the multi-award winning 'From Farm to Fork' schools education project where over 120,000 primary school children have spent an educationally structured day on a farm.

She has held many influencing roles including; chairing the Oxford Farming Conference; current chair of the British Broadcasting Corporation (BBC) Rural Affairs Advisory Committee; a non-executive Director of Anglia Farmers as well as the MET Office, and a governor of Harper Adams University. Christine was awarded the CBE for services to UK agriculture in 2004.

The main thrust of Christine's business career has been people development, encouraging those in her teams, and she is very proud of what they have gone on to achieve. With regards to setting targets for herself and her team she tells me, 'If an objective does not have a level of fear in it, it is not good enough'. As well as being a successful business woman, Christine and her husband have raised 2 children.

6.4. Minette Batters

In February 2014 Minette Batters became the first woman to be elected to a presidential post within the National Farmers Union (UK). She is the Deputy President: a 2 year appointment. Minette grew up on a farm in Wiltshire that she now holds the tenancy for, but she had to come up with a novel way to secure this. The farm had 2 derelict cottages and Minette negotiated with the landlords that she would pay to renovate the cottages in return for a farm business tenancy. More recently she has renovated an old tithe barn on the farm that is hired out for events, adding another diversification to her business, as well as horse livery. Her family and friends were surprised she wanted to take on the farm as she had built up a very successful catering business. A phone call to her local NFU office re a query about entitlements to the Single Farm Payment scheme, led to her becoming involved with the NFU in her county of Wiltshire. Soon she held the office of Wiltshire county NFU chair and the Wiltshire County Show was reborn, led by Minette who is passionate about the need to reconnect the British public with their food.

On the farm she has a beef suckler herd and finishes cattle on a contract for one of the main supermarkets. She became the Wiltshire delegate on the South West NFU Livestock Board and, concerned by the lack of profitability for suckler herds, Minette was a founder member of 'Ladies in



Beef', along with Jilly Greed. This is a group of female beef farmers from around the country that promote and drive awareness of the quality and versatility of British beef to consumers. Each year around St. George's Day in April, Ladies in Beef run 'Great British Beef Week' and raise money for the rural charity the Royal Agricultural Benevolent Institute (RABI).

"Without the women we would have starved" NFU Online feature on World War 1

6.5. Sian Bushell

Sian has her own business, 'Sian Bushell Associates' with the strapline 'Empowering Family Businesses'. She is an independent facilitator and trainer who specialises in helping family businesses, especially family farm businesses, to plan for succession, retirement, to manage staff, to communicate effectively or to help plan the next stage in a business.

Sian comes from a long line of farmers from West Wales. She has a Master's degree and was a partner, and then a director, of a successful dairy farm for 25 years until a change in her personal circumstances and the farm was sold. This dynamic lady did not sit still and wonder what to do - she jumped on an aeroplane bound for Australia and went to a conference where she heard Lyn Sykes speak on her pioneering and innovative approach to facilitating the process of transferring the family farm. Sian trained with Lyn Sykes and came home to set up her own business. She spoke at local meetings, discussion groups and conferences and is now called upon by lawyers and agents as well as families, to help find an acceptable way to deal with these issues.

Sian is passionate about helping families and is thrilled when they find ways to achieve successful outcomes. The majority of her work comes through word of mouth as families and professional people recommend her to others. It is a great joy to her when the older generation find another 'job' to occupy them in retirement and the next generation is happy and successful in taking the family business forward. Sian does a great deal of work in Ireland as well as the UK.



7.0. Canada

7.1. Contemporary Scholars Conference – Guelph and Niagara Falls, Canada. 10th-16th March 2013

Eighty Scholars from Australia, UK, New Zealand, Canada, Ireland, United States of America, Brazil and France, along with Nuffield Farming Directors from each country, attended. On the opening morning we all gave a 2 minute presentation on ourselves and our study. This was a brilliant way to get an insight into 80 Scholars from Australia, UK, New Zealand, Canada, Ireland, United States of America, Brazil and their lives, and for my study to have access to so many amazing, positive, forward thinking women involved in agriculture - Lisa Harper from New Zealand, Kara Knudsen from Australia, Caroline Drummond and Ali Capper from UK, amongst many others. Each morning began with presentations at 8.30 am ending with a speaker at dinner with passionate and informed debate throughout.

7.2. Judy Shaw

Judy Shaw is the recipient of a prestigious Canadian award - the 2012 Farm Credit Canada Rosemary Davis Award for being an agricultural industry leader, communicator and visionary.

Judy graduated from the University of Guelph in 1978 and joined Syngenta (Ciba Geigy). For a number of years she was based at their head office in Basel, Switzerland, where she worked on the product development team; returning to Canada to manage Regulatory Affairs and Environmental Studies before heading up Corporate and Government Affairs for Syngenta Canada.

... try at all costs not to use any negative words in a sentence connected with a product or company being promoted.

Judy built the Syngenta programme 'Leadership at its Best' and believes leadership means bringing different groups to work together. Syngenta continue to work in areas of new technology where there can be contentious issues. Genetically modified wheat is one such area. Judy mentioned that Syngenta was doing some early research on wheat modified to be resistant to Fusarium, a disease which can infect the grain and producing a very serious animal and human fungal toxin. Farmers are desperate for a solution to this plant pathogen and the research results were very promising. Syngenta used genetic modification to produce this.

Some environmentalists put out an incorrect media release stating there were secret field trials being conducted in Canada and this resulted in a number of hostile media calls. In Canada, such research trial information is available to the public and Judy directed the media through the websites to see that it was not secret and the negative stories were not published. Judy says we must communicate positive messages and try at all costs not to use any negative words in a sentence connected with a product or company being promoted. Always find a way to tell the story and provide sound bites for journalists.



7.3. Carolyn Fuerth

I thought it best to make the most of my time in Canada and I stayed on for a further week once the Conference had ended. The Nuffield International website http://www.nuffieldinternational.org/ is very helpful and on looking up Scholars in Canada I found Carolyn Fuerth, NSch. With husband Rick, Carolyn runs a much diversified agri-business in Ontario with a completely indoor sheep flock of 500, an on-farm abattoir, contracting and farm building construction. The abattoir was built by Rick and their growing market for sheep meat is the Muslim population in the nearby city of Windsor. Carolyn was an incredible host and kindly arranged for me to meet 6 innovative women involved in agriculture. Any spare time Carolyn has is devoted to a charity (Guatemala Hope) that supports a village in Guatemala; twice a year she visits the village to see how projects are progressing, to assist the local committee there and audit the accounts.

While I was staying here the local paper, the Windsor Star, featured the farm and with a Muslim festival approaching, the phone was continually ringing with orders for sheep to go through the abattoir.

7.4. Anna Mastronardi

Carolyn took me to meet Mrs Anna Mastronardi who first came to Canada from Italy in 1975. The family has 34 acres of greenhouses mainly growing tomatoes and cucumbers, with 3 acres devoted to Anna's flowers which she propagates. On my visit Anna and her daughter were preparing to open for the season, having been shut for the 3 coldest months of the year, January to March. Anna has a big demand for wedding flowers and rents out plants and trees in containers for weddings as well. She is well known for coming up with new themes each year for customer's gardens.

7.5. Leslie Huffman

Leslie Huffman is the Apple and Horticulture Crops specialist for the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). Leslie and her husband Doug have their own fruit farm growing apples, cherries, peaches, apricots, plums, pears, raspberries and cut flowers, hereby putting research into practice. They aim to produce apples that are 95% marketable, compared to the 50% that is the norm from traditional orchards. Leslie began her career at Ciba Geigy in the Seed Research Laboratory; taught at Ridgetown College, which is part of Guelph University, for 2 years and in 1981 came to Harrow as a fruit crop adviser. Soon this role included vegetables as well. In 2008 Leslie became the apple specialist. In 2004 the price of apples fell very low due to global over supply. Many older farmers chose to retire and the Ontario Government brought in a transition programme for renewal projects and taking out older less productive varieties. This led to a halving of the apple acreage but as the orchards are more efficient the production levels are the same.

We went on to Harrow Research Station where Leslie is based, along with 25-30 fellow scientists working on soil, horticultural and fruit crops. The soybean for human consumption was developed here in the 1960s and they developed and hold a patent for an automated computerised nutrient system for greenhouses. In 1984 there were 300 acres of glasshouses in this area and now there are 1,693 acres under glass.



7.6. Tanya Mitchell

Tanya Mitchell is the youngest wine maker in Canada – in 2012 the vineyard 'Sprucewood Shores' won 26 awards. The vineyard and buildings is an impressive site beside Lake Erie. 22 years ago the vineyard was planted by Tanya's father as a hobby during his career with Chrysler, and Tanya was always keen to be there working with him and proper production began in 2002. At the beginning the wine was sold to another winery while Tanya undertook her degree in chemical engineering at Niagara and she learnt about the wine business, from production techniques to sales, in Australia. Unfortunately her father died, but the family had already set up a family structure for the business and her 2 brothers and sister all have roles within the business. The first time this vineyard entered for an award they were the gold medal winner and gained a great deal of publicity. Now they are producing 5,000 cases a year only sold in Canada. The modern barn building is used for events and weddings generating a further income stream.

7.7. Nikki Tayler

Nikki Tayler, employed as an agronomist at Setteringtons, is passionate about agriculture. She grew up walking crops with her father and worked for the firm in the school holidays. Now Nikki has been with them full time for 3 years and hopefully she will become a partner.

In the spring and summer she is walking crops 7 days a week with farmers growing tomatoes for Heinz, winter wheat, corn, soybeans being the main field crops, plus fruit orchards, vineyards, carrots, onions and cucumbers. During the winter Nikki organises grower meetings with the aim of maximising yield potential by inviting speakers from Illinois, Maryland and Florida. They arrange 30 acre plots for variety trials and run field product investigations. Nikki organised a 'Customer Appreciation Event' with local food served and 450 of their clients arrived. Modern technology via smart phones is used for sending soil sample results and other information directly to the growers. Computer programmes are used to monitor field performance using data from grid soil sample results and yield maps. Even with modern tools, as Nikki says, 'The farmers and growers still need good agronomy'.

7.8. Carol Taves

Carol Taves is a part of the family business 'Tec-Land Inc', an inspiring story of Carol's grandparents coming from the Ukraine in the 1920s with very young children and now farming owned land, share cropping, renting and encouraging the next generation to take an active role. As well as marketing their own crops they buy in and store grain for other farmers in a purpose built facility with huge grain silos and weigh bridge. The office computers are constantly monitoring the Chicago Grain Trade as they are marketing and shipping grain daily or weekly on the open market.

7.9. Izabela Muzzin

Izabela Muzzin, with husband Mark, owns and runs The Butcher of Kingsville which opened 3 years ago. Iazbela is passionate about local food and connecting her customers with the farms where the meat was produced. They support the provincial campaigns 'Buy Local' and 'Grown Right Here' with



most of their meat sourced from Ontario including duck, bison, chicken, beef, pork and lamb, with bison and duck from Quebec. Their lamb comes from Carolyn and Rick Fuerth and Izabela organises visits for their wholesale customers, i.e. chefs, to the supplier farms. The customers clearly enjoy their shopping experience as Izabela gets to know them and always makes time for a chat with them. A couple of weeks after my visit they were starting a specialist cheese counter and had plans for a fresh sandwich bar



8.0. Norway

8.1. Allodial Act

In 1974 the Norwegian Government revised this Act¹ to give the oldest child, born after 1965, the right to 'reclaim' the farm. This meant the oldest child, whether girl or boy, was entitled to buy the farm from their parents – usually on the retirement of the older generation - at less than the market value to enable them to continue farming without overheads which were too high. If the oldest child did not want to take up this option he or she could sign away their right to a sibling. This has had a huge impact on the role of women in Norwegian agriculture and by 2004 13% of farmers were women. When you have succeeded to the allodial rights to a property, or bought one, usually the new owner has to personally live for 5 years in a building used as a home on the property, and the property itself has to constitute at least 2.5 hectares of cultivated land or at least 50 hectares of productive forest. Dr. Marit Haugen explained to me the aim is to avoid farm holdings and agricultural land being bought for investment opportunities and also to maintain the rural population. The Government brought this change in due to the political aim to work towards equal rights and for laws to be gender neutral.

The Government's ambition was for its own departments and company boards to aim for 40% female representation. Today the Norwegian Government has a female Prime Minister, Mrs Erna Solberg, and 9 women ministers out of a total of 18 - a 50% representation.

I visited Norway in July 2013 and Norges Bondelag (NB), the Norwegian Farmers Union, was holding their annual conference at Leon that I was able to attend. This was the perfect opportunity to meet women farmers who had taken on their family farms.

8.2. Hildegunn Gjengedal and the Norwegian Farmers Union (NFU)

Hildegunn is the well-respected Senior Adviser for the Norwegian Farmer's Union (NFU) with responsibility for:

- International agricultural policy
- Building alliances and contacts with agricultural organisations in other countries
- European and World Trade Organisation
- > Food chain

Allodial right to a property is an old Norwegian legal tradition. Unlike other countries' inheritance rights, Norwegian allodial right is a right to reclaim, not to inherit.

There are two conditions that must be met. The property must be large enough, and a person must have owned it for a certain period of time.

In addition – one person in the family must have owned the property for 20 years. This will probably have been the case a generation or two ago and this condition need only be met once. The first person to own the property for 20 years, establishes allodial rights for him-/herself and his/her descendants.

https://www.slf.dep.no/en/property/allodial-rights#how-does-a-property-become-an-allodial-property-



Hildegunn grew up in the Sandane area, on the West Coast of Norway, a region able to grow crops on the fertile glacial valleys surrounding fjords, before the landscape dramatically rises into the mountains. She began as an agricultural journalist for their Farmers Weekly, owned by the Norwegian Farmers Union, and says, 'I discovered how interesting, basic, important and at the same time, how complex agriculture is. It felt meaningful to work for the right to produce food for our own population.'

Between 2005 and 2009 Hildegunn worked in Brussels for the NFU and agricultural co-operatives before returning to Norway as a political adviser for the Ministry of Agriculture for a year. She then returned to the NFU headquarters in Oslo after a 6 month break.

The Norwegian NFU has approximately 32,000 producer/farm owner members with a further 28,000 farm family members and others supporting the union. They have approximately 25% female farming members. I was intrigued to read one of their main objectives is 'To ensure that Norway does not become a member of the European Union'. The Norwegian Farmers Union is a partnership organisation with the European Farmers Union (COPA) with an office in Brussels.

a recent survey showed that 90% (of the population) accepts the need for financial support to the farmers directly from their own government.

The general population in Norway is very supportive of their farmers with a recent survey showing that 90% accept the need for financial support to the farmers directly from their own government. Hildegunn told me no foreign visitors are allowed onto Norwegian farms for 48 hours after arriving in the country for biosecurity reasons although I didn't see any signs at the airport or on my travel documents.

8.3. Kathrine Kleveland

This lady was the charismatic leader of Norges Bygdekvinnelag, the Norwegian Society of Rural Women, (NSRW), for 6 years until June 2014. Each term of office is for 2 years and it is a testament to Kathrine that she was re-elected twice. The holder of this position sits on the Board of the Norwegian Farmers Union, as NSRW was formed in 1946, when the Women's Group of NFU formed their own society. They have 4 main areas of interest:

- Food and culture
- > The environment
- Women's lives and rights
- Society and entrepreneurship

They are campaigning at the moment to bring in free, healthy school meals for all school children - as happens in Sweden and Finland - and they have a goal to teach children aged 8-14 how to cook. The organisation is running 200 courses all over Norway on cooking everyday food as they are concerned about the lack of knowledge on handling different kinds of meat, fish and vegetables. They do not want the traditional recipes and way of life to be lost.



As the firstborn child Kathrine succeeded to her farm in 2001, and as Kathrine's own daughter is the eldest child of her family - although there are 2 younger sons - her daughter will succeed to the farm as is now the accepted practice following the changes to the Allodial Act in 1974. The farm is south of Oslo in the county of Vestfold with 10 hectares of arable land currently growing barley, plus 33 hectares of forest. The forest here attracts a government subsidy for a special type of native tree. Katherine undertook a 3 year course in graphic engineering before coming home.

Kathrine was one of the main speakers at the NFU conference and even though I could not understand the Norwegian language, it was obvious this lady has great presence on a stage and is highly respected in the farming community. In October 2013 Kathrine spoke at the Associated Country Women of the World (ACWW) conference at Chennai, India. The Norwegian delegation submitted a resolution 'Stop violence against girls and women' which gained unanimous support. The motto of the conference was 'Inspire, Encourage, Educate and Enrich Women around the World'.

Kathrine is a co-ordinator for the Norwegian Network on genetically modified organisms (GMO) - free food and feed and Norway has kept a restrictive policy on GMOs, but their Government and their laws are under pressure. Kathrine states 'We want more independent research and will not exclude the possibility of some day finding useful benefits of GMO'. She is the area leader of a political party, Senterpartiet, for her home district and, through this position, sits on the national board of the same party. I believe it will not be too long before we hear the name Kathrine Kleveland in national Nowegian politics and then on the world stage.

At the conference dinner the majority of delegates were dressed in their national costume, which, I discovered is slightly different for each region. Afterwards with the evening and night staying light, it was a fantastic chance to speak to some women farmers.

8.4. Lise Thorso Mohr

Lise was a city girl living the urban life in Fredrikstad and Oslo in Norway and Cologne, Germany before meeting Gustav and embracing life on their farm, Thorso Manor in Ostfold County, for the last 24 years. There are 70 dairy cows on this farm milked on a robotic system, plus a partnership with a neighbouring dairy farm; 700 hectares of arable and 6,500 hectares of productive forest. They also have a restored holiday rental worker's house originally built in the late 1700s and Lise's dressage horses. Lise writes a regular blog for Norsk Landbrukssamvirke, the Norwegian Agricultural Co-operative, about agricultural policy, party politics, economics, animal welfare and survival strategies for Norwegian agriculture. As Lise says 'Ultimately it's about survival for the Norwegian farmer and the country's cultural heritage'. There is a Government law stating that dairy cows have to go out to grass for a set number of months.

8.5. Tone Vaag

Tone is the first women leader of Norsk Sau og Geit, the Norwegian Association of Sheep and Goat Farmers (NSG). This organisation was founded in 1947 and they have a national breeding programme developing the use of artificial insemination. They say it is important to communicate to



the general population that the landscape has been developed by domestic grazing animals. NSG organise special ram sales around the regions.

Tone and her husband bought their farm in 1988 - it needed renovating - and they bought their first 25 Spelsau ewes in 1990 and now have 150 ewes. The farm is situated in the middle part of Norway, in the county of Nord-Trondelag with 110 hectares, with a further 100 hectares of grazing for the spring and autumn. In the summer months, from June to September, the sheep graze in the mountains until being brought back down in the autumn. Their lambs are all sold to the Nortura cooperative slaughterhouse during September and October when they are aged 5 - 8 months old.

Tone is very proud of their mountain grazing heritage, with very little corn being fed to the sheep. There is an increasing problem with predators, such as wolves, over which issue the NSG and NFU are talking to their Government.

8.6. Berit Hundaala

Berit is a former vice president of the Norwegian Farmers Union. She has 140 Finnish bred ewes over winter and, during summer, has 400 lambs grazing in the mountains. Predator control is her most pressing issue. While I was in Trondheim the newspaper headlines were of wolf attacks on sheep and, with their Government *wanting* wolves in the environment, it is leading to conflict. The Government does pay compensation to the farmers but the farmers do not want their animals attacked, whether they have compensation or not. There are suggestions that the sheep should be fenced in, but this is not practical in the mountains; or that Ilamas should run with flocks to help protect the sheep. Some farmers have been loaned radio bells for the sheep to wear round their necks while out during the grazing season.

Berit breeds her own replacement ewes selling any surplus ewe lambs privately to other farmers. Her finished lambs she takes directly to an abattoir and she is a member of a meat co-operative. All the sheep are double tagged and 30 of the flock wear collars with radio bells or a global positioning satellite (GPS) system to help warn of predators, which Berit says does help. The GPS was grant funded originally and now the upkeep cost of the system is the farmer's responsibility. She makes her own haylage and hay and owns her own wrapper machine.

Berit succeeded to this family farm. She first met her husband when he was on a biking trip in the area of the farm and stopped to ask for directions – he never left!

8.7. Stine Bjornstads

Each year, at the Norwegian Farmers Union conference, an award is presented to an innovative young person under the age of 35 who has a successful rural business. In 2013 the winner was Stine Bjornstads who designs and makes furniture from her family's aspen forest in the county of Ostfold, Norway. The business name is Fru Blom Design and her prize was a cheque for Kr 30,000 (roughtly £3,000). Stine studied design at Akershus University College and was living and working in Oslo at a store that also had a café. When the café needed furniture Stine went home with an idea and returned with a garden table that she had designed and made herself and that customers wanted to



buy. This was the beginning, 4 years ago, and now, with her own website www.frublomdesign.no, Stine has sold her apartment in Oslo and is living and working on the farm where she is the 19th generation to make a living from this land.

8.8. Torill Midtkandal

Torill kindly invited us to visit her dairy farm in the Stryn area. It is now a very modern robotic system with 29 cows. Torill and her husband have been farming for about 20 years on 70 acres and

they have quota to produce 255,000 litres of milk. At the beginning they each worked off the farm while they built their house and improved the farm. Returns were relatively good and all money was invested in the holding. Torill explained that farmers are compensated by their Government for living in a high cost country. She says that if

Norwegian farmers are the most subsidised in the world with 63% of their income coming from subsidies.

Norwegian farmers had to compete with world prices, then all their food would be imported as they cannot compete. Norwegian farmers are the most subsidised in the world with 63% of their income coming from subsidies.

Torill and her husband have recently given up their external work and are fully concentrating on the farm. They took out a grant to install the robotic milking system that they have budgeted to be paid off in 4 to 5 years' time and have kept costs to a minimum by doing the building work themselves.

8.9. Tove Andersen

Tove Andersen is the Head of Marketing and New Business at Yara International. This is a global company that was founded in Norway in 1905 and produces a comprehensive range of fertilisers for agriculture along with products and integrated solutions for industrial processes. The company now sells to 105 countries, with revenues in 2013 of NOK 85.1 billion including fertiliser sales of 23.7 million tonnes. The company employs 9,759 people worldwide with the main board of Yara consisting of 8 people, including 3 women.

Tove has a Master of Science degree and was attracted to Yara knowing it was a global, corporate business which she saw as ideal to develop her own career within. Tove began as a trainee 17 years ago and, now married with 2 children, has reached her position today through 5 job promotions. One of these was heading up the UK division which had only one woman in the team when she joined; this increased to 5 during her time there. 3 years ago Tove returned to Norway to take on her current role which was a new department. 30% of her time is spent travelling abroad, leading for Yara on branding and the development of new products. She says it is important to work in each country; you need good contact to feel ownership for the markets in each country. At the time of our meeting, Tove had just returned from Germany where a woman had taken on a new post for research and development. They are opening new markets for their products in the Philippines, Asia, Vietnam, South Africa, Ghana, Tanzania, Ivory Coast, Cameroon and Kenya. Their biggest growth country is Brazil. In all these countries the limiting factors are finance, infrastructure such as lack of good roads, knowledge and the market place. She is on the board of a small Information



Technology (IT) company in the UK that Yara own a part of, but apart from this outside interest, Tove concentrates entirely on Yara and her own family. To relax she enjoys reading and running.

8.10. Dr. Marit Haugen, PhD

Dr. Haugen has been the Research Manager at the Centre for Rural Research at Trondheim University for 11 years. Her grandparents had farmed and her father was a bank manager. Marit took her first degree in social sciences in 1978 at Trondheim University and 20 years later in 1998 became a Doctor in Sociology. Her husband is a teacher and their 2 daughters have professional careers — one is a lawyer and the other a civil engineer. Marit's first job was as a language teacher for adult refugees in Norway and she first joined the Centre for Rural Research at Trondheim University in 1986. This amazing lady contributed to her first book with 3 others in 1998 for the European Union entitled 'Labour Situation and Strategies of Farm Women in Diversified Rural Areas of Europe'. She has spoken at numerous conferences in Europe and America and has pages of published journal articles on Women Farmers in Norway; Gender Differences in Agriculture; Farm Tourism, and has conducted several research projects on Women Farmers and Marital Settlements.

I was keen to discuss the Allodial Act with Marit and she told me that now 34% of land ownership has been transferred to women, although government statistics show only 14% of farmers as being women. They believe this is due to only one name appearing on the records and, where there are family partnerships the man's name is usually written down first. Also although women own the holding they may have leased it to another farmer.

In an article 'Rural Women, Feminism and the Politics of Identity', the authors Berit Brandth and Marit write that the Norwegian Society of Rural Women (NSRW) was silent about the 1974 Allodial Act revision when it first became law, giving the best right to succession to the eldest child. A vote amongst their members showed that 57% were against the amendment. To their membership, at this time, it represented a break with basic farm values and an old tradition. I am told some women who then had the right of succession were put under pressure to give up these rights to their brother, but now I have met families happy the women had taken on their family farms and, where their eldest child is a girl, they were looking forward to her taking the farm on.

Marit told me that the rise of machinery rings within the rural communities meant it was easier for farmers to hire in machinery and operators when needed on their farms. This meant a freeing up of cash flow, as each individual farm does not need its own machinery. Green Care Farming is being taken up by some farming families as another funding stream. The municipality buy services from these farmers, usually women farmers, to take, for instance, disabled and elderly citizens on farm visits. This provides another income stream to farms and health and well-being benefits to less-abled citizens. We also discussed pensions as, I understand, when a farmer reaches retirement age and the next generation take over the farm, if he, the retiring farmer, has a younger wife she becomes entitled to an early pension if she has only worked on the farm. Nowadays most spouses work off the farm and are not entitled to an 'early' pension. However, within the older generation, farm women have often only worked on the farm with their husbands and had a very low taxable income, if any. This meant they did not build up any pension rights, additional to the minimum retirement pension all citizens receive at retirement age, plus disability pension and sickness benefit.



9.0. Kenya

9.1. Farm Africa

I wanted to get into the villages in Kenya and Uganda and with no known contacts I did not know how I could achieve this. Charlie Russell, NSch, told me of his trip to Uganda with the charity Farm Africa and this proved a great link.

Farm Africa is a UK based charity started in 1985 by Sir Michael Wood and David Campbell in response to the famine in Ethiopia. They began by giving goats on credit to extremely poor widows and their children, and then one of the goat's kids was returned to Farm Africa to be given to another family. Their entire work is focused in the countries of East Africa – Kenya, Tanzania, Ethiopia, Uganda and South Sudan. Farm Africa believes that Africa has the power to feed itself and the smallholder farmers are key to lasting rural prosperity. They work directly with the farmers helping them unleash their potential to feed Africa's people and end the need for aid by:

- pioneering techniques to boost harvests
- reducing poverty
- sustaining natural resources

I telephoned Farm Africa's headquarters in the UK and explained my study. The team there were extremely helpful, especially Mathew Whitticase, their Communications Officer. A key member of their team was visiting the UK and I was invited to meet her:

9.2. Zemach Getahun

Zemach is Farm Africa's Gender and Business Development Advisor, leading on gender mainstreaming across Farm Africa's programmes and an expert in this area for all Farm Africa staff. Her

work focuses on helping rural women across Ethiopia develop business skills and earn a living from their crops and livestock. 60% of African agricultural workers are women and they grow 90% of the food.

Zemach grew up in Haru, West Ethiopia where her father has an abattoir and coffee farm. She was the

60% of African agricultural workers are women and they grow 90% of the food.

first girl in this area to go to university but was keen to tell me that many girls attend university now. She worked in agricultural extension for 4 years then became a junior lecturer at an agricultural college. Zemach wanted to find innovative ways to help `un-bankable' people and came up with an idea built on a traditional African system where 10 to 25 people come together from the same village so they know and trust each other. Zemach then assisted by providing training on group management, saving and credit management, and conflict management. No money is given to the groups by the trainer but the group is trained to use their own money, lending to fellow members and charging interest. This is the start of a saving and loan association, not credit, and illiterate people can use it as they are trained to memorise how much money is saved and given out. The whole system is based on trust. The group all sit in a circle so everything is transparent and each one has a pass book. The group decide on the committee members:



- Chair
- Secretary
- Treasurer
- 2 key holders

The group has a savings box with two keys; the box is kept with the treasurer and the keys stay with the key holders only. It is up to each group to set the number of meetings but to start with they meet weekly. The first cycle of training takes between 9 months and a year with one of Zemach's team. If a group member wishes to leave they can, but they cannot take their money out until the end of a cycle, although special circumstances do occur. There are 4 stages to the training – preparatory, training affairs, development phase and the maturity phase. The groups provide network opportunities to the members. Zemach first began these groups with Care International and has now combined with Farm Africa; there are over 1,000 groups now.

Zemach explained to me there are a great many harmful and violent traditional practices. By allowing the women to take decisions at a local level has had a huge impact on families. Legal action should be taken by individual governments to stamp out female genital mutilation and other hideous acts.

Zemach was instrumental in securing funding from the Bill and Melinda Gates Foundation for a project working with 300 smallholder women farmers in It is estimated that closing the gender gap in agriculture could reduce the number of hungry people in the world by between 12% - 17% which is why projects are designed to empower women.

Ethiopia to help them access and use technologies such as manual seed drills and sorghum threshers which save them time and labour. It is estimated that closing the gender gap in agriculture could reduce the number of hungry people in the world by between 12% - 17% which is why projects are designed to empower women.

When she was 16, Zemach wanted to be valued and train to be a doctor. She is married and has lived in Addis Ababa for the last 8 years which is a day's travel away from her family. Zemach is very grateful for her supportive parents and 4 brothers. She attended the United Nation's 'Commission on the Status of Women' in New York this year in honour of International Women's Day.

See next page for a picture of The Independent (UK) newspaper – Special Edition to commemorate International Women's Day.

9.4 Farm Africa Project in Kitui, Kenya

For this part of my travel my family came with me – husband Tom and our daughters Lucy and Hannah.





Through Farm Africa headquarters I made email contact with Francis Mutuku, their field officer in Kitui, and having taken a taxi from Nairobi that expertly negotiated the roads, people, livestock, a puncture and other traffic, we eventually arrived a few hours later than planned. All visitors to outlying areas should present themselves to the Area Chief, so Francis, on the Farm Africa motorbike, led the way to the District Office at Kyaani for us to meet Rachel and Michael, the Acting Chiefs. We were welcomed and in turn stood to introduce ourselves and state our business in this



area, and signed the visitors' book. Rachel told us that in 2009 there were 9,220 households in this area with a population of 42,789 over 2,641 square kilometres. Permission was granted for us to visit the village of Mutindi.



Women Farmers of Mutindi

There were no tarmac or graded roads here but the Kitui taxi expertly negotiated its way. We emerged down a very steep, narrow track to be welcomed by the women of Mutindi dancing and singing for us. What a welcome to Kenya!

Proudly we were shown the newly built latrines, then we were taken down to the dry river bed to see the impressive newly built dam. Farm Africa provided the materials that were not available within the village, such as cement, and then the labour and other materials were provided by the villagers.

The increasingly erratic rains in this region are a huge challenge and Farm Africa's project here is centred on water conservation and growing more from drought tolerant seeds. The ladies show me where they are currently digging into the sand river bed for water and twice a day they carry water to put on their crops of spinach, tomatoes, sweet potatoes, onions, kale, cabbage and herbs. There are 2 growing seasons in this part of the world and they also grow maize, pigeon peas, cassava and soghurm, pumpkins, bananas and papaya.

The ladies told me they were so pleased to be part of the Kitui Integrated project with Farm Africa as it had already made such a difference to their lives. A couple of them were invited by Farm Africa to visit the 'champion farmer' in another district, where this project was already underway and immediately they were very keen to take part. The villagers appointed a committee of 5 village



members to oversee the project and they met every Friday at 7am. For the first year Farm Africa attend these committee meetings to help the farmers with leadership training, book keeping and general advice. Christine, the group's secretary, told me the partnership with Farm Africa is vital. They are given training on modern production techniques, the use of nursery beds, drought tolerant seeds, soil fertility, a money loan and help with marketing. The first priority is to feed themselves, then sell any surplus. Their next project is to build a greenhouse and they had already cleared the land for this. Any surplus money is given to a villager who cannot afford their children's school fees, as education is their top priority after food production.

The women took us back to the village where lunch was being prepared. We helped to grind the maize flour, pod the peas and enjoyed their company as we answered questions about our farm. Lunch was delicious, and was followed by a visit to their champion farmer's area of land. Neighbouring villagers were invited to farm walks to see how they are growing their crops and to share in this knowledge transfer. There are many villages who want to become part of the Farm Africa project.

The next morning we set off for the village of Mutonga and presented ourselves to Katherine, the Assistant Chief of the area and a committee member of Kanini Kaseo Farmers' Group, supported by Farm Africa. Here the women have been given land by members of the village to grow crops under this scheme, including kale, tomatoes and vanilla pods. They are building a well by hand and making their own curved interlocking bricks for its lining.

The enthusiasm and thirst for knowledge shines through. Again the women are full of praise for Francis and Farm Africa and very proud to be working together. Agnes and her husband are the champion farmers for the village and they took us back to their own farm. A year ago they fenced their property, a rare sight in the villages, and they have a brick house and working oxen. The oxen were being harnessed to fetch water from the riverbed. We saw a very well planned area with water channels dug and crops of sweet potatoes, maize in a specially built raised wooden store, and banana, orange and papaya trees.

My sincere thanks to Farm Africa for enabling me to meet women farmers well away from the normal tourist trail. They were very pleased we were farmers keen to learn about their lives and they enjoyed seeing pictures of our farm and details of my study. These women work so hard within their environment together, while lacking many of the

I now realise that to feed
Africa, smallholder farmers
are key. The majority of the
work is done by women
farmers

things we take for granted such as running piped water, electricity and transport. It was a very humbling experience. The majority of the people live in the rural areas, with 70% of the population involved with agriculture. I now realise that to feed Africa, smallholder farmers are key. The majority of the work is done by women farmers, although the land ownership is mainly with the husbands. There is not the infrastructure to move fresh produce around the whole country.

I thoroughly recommend the work of Farm Africa and urge everyone to look at their website www.farmafrica.org





Women Farmers of Kanini Kaseo Farmers Group

9.5. Louise Labuschagne – Real Integrated Pest Management (Real IPM)

Louise and Henry Wainwright have developed a very successful international business, near Thika, on the Equator, in Kenya. They breed natural predators and beneficial insects for horticultural growers, as well as bio-fertilisers, bio-pesticides, seed treatments and sticky traps for a holistic crop

protection programme. They breed wonderful sounding insects such as 'Phytoseiulus persimilis' that is the best predator for spider mites and 'Amblyseius cucumeris' for the control of thrips. Being only an hour from Nairobi airport these products are air crated around the world to South Africa, West Africa, Canada, North America and Europe. They also provide full technical support with a team of trained 'BASIS' and 'FACTS' advisers qualified in UK diploma courses. An example of a bio-fertiliser is Trichoderma, a common beneficial fungus found in soil, which increases root volume and promotes the growth of plants. Trichoderma is also registered in Kenya and Ethiopia for the control of root knot nematodes. One of the

I wanted to know why we cannot use these beneficial products within the EU. We are constantly being lectured by EU politicians that a way has to be found to produce more food without using GMO technology or an increasing list of banned pesticides and herbicides

bio-pesticides produced here is Achieve (Metarhizium 78), an insect killing fungus that comes from



the soil targeting spider mites but it does not kill predatory mites such as *Phytoseiulus*. It has also been shown to kill *varroa* mite, a parasite of bees, but it does not kill the bees.

I wanted to know why we cannot use these beneficial products within the EU. We are constantly being lectured by EU politicians that a way has to be found to produce more food without using GMO technology or an increasing list of banned pesticides and herbicides, but these products are used by other nations around the world. So Louise and Henry's products seem to be just what we need. The cut flower business is huge in Kenya, one of their main exports and nearly 3,000 hectares of rose production use these products. The EU insists on Efficacy Data for Registration while the USA does not require this. The EU is also insisting on Extension of Label Trials when there is no pesticide residue decay curve needed and the pre-harvest interval is zero.

We were shown round by Anne Kiare a local girl who has risen through the training ranks to be one of their top managers. There were also visitors from South Africa while we were there, who use Real IPM products in their apple orchards to great effect.

9.6. Kenana Knitters

A conversation I had when I was helping at an event for the Royal Agricultural Benevolent Institute (RABI) in Gloucestershire led me to find the Kenana Knitters at Njoro in Kenya. This group of women buy raw sheep's wool at local markets, wash, dye and spin it so they can use it to make a glorious array of soft toys and clothing for export. The business is based on a farm owned by the Nightingale family and Mrs Paddy Nightingale has worked tirelessly to help these women since the early 1990s.

Kerry, who showed us around, has been with the group for 3 years. The products are sold online, direct from the farm, at some shops in Kenya and with the majority exported to USA, UK, Japan, Australia, South Africa and other EU countries. The women can knit together at the site on the farm or take the wool home to knit when they have time. When they bring the finished items to the farm they are paid for each item and all income from sales is kept in one account. At the end of each year the women have a meeting and if there are any surplus funds they have the choice of splitting it amongst themselves or choosing another option.

For the last few years they have chosen to use the funds to assist with healthcare for themselves and their families. They have paid for family planning, an AIDS and HIV clinic and an eye clinic. They want to find a dentist but so far this has not been possible. Some computers have been donated to the group and 3 days a month a graduate visits to train them in IT free of charge. A school teacher also takes adult literacy classes a few days a month. The availability of wool is becoming a challenge as Chinese buyers are now here, so the women are starting to use cotton instead.



10.0. Uganda

10.1. Farmers Overseas Action Group (FOAG)

When I mentioned that I planned to travel to Uganda, one man's name kept being repeated. Malcolm Rankin is the President of this charity set up in the 1980s by a group of Worcestershire farmers, concerned by the terrible famine in Ethiopia, while food production within the European Union was being scaled back due to oversupply. A Ugandan national talked to the group and challenged them to visit his country, for them to see the hardships and struggle following the Idi Amin years and Ugandan Bush War. The challenge was taken up and thus began FOAG's involvement. Malcolm was a huge help with planning my visit and the logistics involved.

10.2. The Village of Kasita

Malcolm Rankin recommended that I meet Peter Owor at Iganga where he runs the Multipurpose Training and Community Empowerment Association (MTCEA). Projects run by this association are supported by FOAG. Peter started here in 2004 with 3 farmer groups and now he supports 300, all keen to learn modern farming techniques, to have access to drought tolerant seeds, to establish village banks and extend the schemes to provide poultry, pigs and goats. This is a logistical nightmare over a huge area but Peter has total commitment and enthusiasm.

Peter arranged for us to visit the village of Kasita and on arrival we were invited into the village elder's house and then walked round the village. Each family had their own area of land with a small round, thatched, traditionally made house or a 4-sided brick built room with a tin roof. One enterprising young lad had made a square dovecote with local materials to breed and fatten doves to sell. Some of the villagers were already in a pig scheme breeding a litter, with the sows kept in specially built wooden pigsties, with a slatted floor so manure is collected as fertiliser for the crops plus the pigs stay clean. There were some very good looking goats tethered and poultry around the homesteads. Some of the villagers just grew bananas on their holding while others had mainly sugar cane, with fruit trees. We met a young farmer's wife who had a pedal powered singer sewing machine to bring in an income, making clothes and doing alterations for others.

We were invited to sit under the tall Muwafu trees and all the villagers joined us. Most of the children were at school. There are state funded primary schools but if they can afford it, the villagers prefer to send the children to private schools that they believe offer a far better quality of education. We were told of their struggles with declining soil fertility, disease in their poultry due to not having the money to vaccinate, and family planning problems as their wives said 'the pill' made them feel ill. There was a discussion on politics and they all felt their local Member of Parliament only visited when an election was due and was not interested in their welfare.

I explained we were there as part of my study to learn how they farmed and the villagers wanted to know how they could be awarded a scholarship. We realised the villagers expected us to give them money and agricultural training. We did not have any money with us, having not visited the bank that morning and indeed we were struggling with the costs of our own travel, but this was difficult to explain. We left feeling disappointed that we had let the villagers down as we had no knowledge of



the crops they grow but wanted to learn, and we admired them for embracing a mixed farming system using the pig manure to aid soil fertility. We hoped they would find access to drought tolerant seeds and suggested solar drying as a way of adding value to their crops.

I did find this the most difficult and uncomfortable day of my Nuffield Farming travels; indeed, if I could have reached the airport and flown home I am sure I would. The next morning we set out to visit another village feeling very subdued and concerned about the reception we would receive. This was a steep learning curve as I realised some of the explanation of my study had been lost in misunderstanding and we forget that vast areas of Uganda were still at war until the mid-1980s. The men had become used to attending meetings where they were given money to support different sides. To some villagers, white visitors meant a hand-out and they assumed I had money to give them. To my great relief the next day was very different.......

10.3. Women farmers in the County of Makuutu

The next morning we drove to the sub county of Makuutu where MTCEA were having a training day with 4 farmer groups. We met an American, Polly, who is a volunteer from the USA voluntary service group 'Peace Corp' doing a 2 year placement here, and 3 other teachers. The day was well planned and the 4 women leaders of the farmer's group were happy to spend some time talking to me. All had walked to the meeting, with Zirifa travelling the furthest, 6 miles. The first group had begun in 2006, the next 2 in 2007 and the fourth 2008. They grow a range of crops including egg plants, tomatoes, cabbage, peanuts, cassava, beans, pineapples and maize, they raise poultry and Alice's group make handicrafts as well. Each group has 20 paid up members, they appoint their own committee every year that meets twice a month, and rent an area of land for collectively growing the group's crops. There are some men involved but the majority of members are women.

Their aims are:-

- for each member to be in a sustainable position producing enough food for their families
- > to have enough produce to sell their surplus to fund school fees
- > to be able to buy bicycles instead of walking everywhere
- to move out of round Banda homes into brick houses

The challenges they face within the villages are:-

- 'Witch weed', a purple flowered weed that grows in maize crops caused by loss of soil fertility
- crop rotation major problem where maize is grown continuously
- moving produce to market
- need to improve and enlarge solar drying of pineapples
- availability of packaging and labels for dried pineapple slices
- access to training

We discussed the working of their groups and they all said they enjoyed working together and have formed a strong bond. Their livelihoods have definitely improved, providing food security and money for school fees. They want to improve their marketing to add value to their products. The



soil fertility is falling and they want access to inputs. They believe the seed quality is not good enough and they need improved varieties. Transport for inputs and getting to markets is a huge challenge.



Me, Tanya Robbins, with women leaders of Farmers' Groups, Makuutu

We discussed the working of their groups and they all said they enjoyed working together and have formed a strong bond. Their livelihoods have definitely improved, providing food security and money for school fees. They want to improve their marketing to add value to their products. The soil fertility is falling and they want access to inputs. They believe the seed quality is not good enough and they need improved varieties. Transport for inputs and getting to markets is a huge challenge.

Our conversation moved on to land ownership as culturally a woman does not own anything, even if she has contributed to the funding of a purchase. Indeed, I was told that if a widow has land and remarries, her new husband can claim the land. Some women secretly keep earnings from their produce to buy land themselves but the men, on the whole, do not like the women to have control of money. Succession to family land is very important and it is hoped the child inheriting will look after the widow. Domestic violence is unfortunately very common and an increasing problem. In these parts a husband has to pay a dowry to his wife's family, for example 2 goats or some fuel, but if the marriage does not turn out as he had hoped, he may ask for the dowry back!



The women told me about their daily lives. They are up at 5am to heat water on a wood fuelled stove for preparing the children's breakfast and organising them to leave home at 7am to walk to school. They then may do some hoeing and, if they have livestock, take goats and cow to be tethered on some grazing. It is then time to collect firewood, water from the village well, and food to prepare lunch. A rest for about an hour then it is time to check the tethered livestock and move them if necessary, before working on the crops again. At about 6pm they prepare supper for the family. There is no electricity in this area, indeed only 4% of Uganda has access to it, so it is vital to use the daylight hours. Clothes' washing is a major task done by hand on one day of the week.

I am extremely grateful to Peter Owor of MTCEA and his staff for introducing us to the villagers and I would like to thank the people we met for kindly showing us around their villages and talking to me.

10.4. Victoria Kakoka Sebagereka

While in Norway, Hildegunn Gjengedal recommended I should try to meet Victoria in Uganda and I am so glad this happened.

Victoria has been the chair of the Kayunga District Farmers Association (KDFA) in the area of Jinga for many years, even before she became a Member of Parliament for 15 years, and she has carried on with this vital role. Victoria's father was one of the first agriculturists in Uganda and was an important influence on her life. She has 4 acres of pineapples, oranges, limes, lemons, sweet potatoes, Jack fruit and bananas intercropped with coffee, cassava and beans. The whole area has drainage ditches dug, it was well planned and tidy with the planned rotation. There are a further 3 acres of maize which will be followed by tomatoes as a cash crop. Victoria's 6 cattle produce milk and meat as well as their dung and urine being used as fertiliser.

The KDFA, led by Victoria, is affiliated to the Uganda National Farmers Federation (UNFFE). They have a staff of 6 and have brought in innovation for their members looking to add value. We visited one project where members bring their fruit to be solar dried on specially built

Their motto is P.P.I. –
Patience Perfects
Innovation.

raised frames, with painted black tin bases covered by plastic frames. The tin has to be re-painted every 6 months. The process takes 14 hours, thereby increasing the fruit's value and they have a product that can be marketed throughout the year. They hope to reduce losses of ripe pineapples from 25% down to 5%. We ate some dried pineapple and it was delicious. The Bureau of Standards granted the 'S' mark to this dried fruit last March and it is registered with 'Fair Trade'. They also have a vineyard run by the association and they have set up 25 pineapple demonstration gardens throughout the whole area to showcase modern growing techniques to the farmers. Their motto is P.P.I. – Patience Perfects Innovation.

There is also a Village Savings and Loans Association (VSLA) scheme. 3 of the main association office holders are trained to do the accounts, with a percentage of the loans paid back at a rate decided by the group, usually 5% when the bank interest rate is 15%. At the end of the year each member has a share of the profit and if a member does need to withdraw their investment then that is allowed. Interestingly there are twice as many women members of these schemes as men and they also have



discussion groups to help find solutions to problems in the home, savings, production, adding value and marketing of produce.

Women undertake the majority of the field work but due to gender discrimination rooted in culture, it is unusual for women to be the decision makers or to own land, and they do not receive the payment for their crops. KDFA promotes their 'Gender for Growth Project' – they have trained 50 gender activists to encourage the husband and wife to plan together to improve food production and family health, share responsibilities and solve issues together so that the incidence of domestic problems will reduce.

Victoria is the only person in this area to have been awarded 'The Order of the Nile' for all her work and dedication to the people here. She has 5 children who have all finished their education and has adopted a girl who is still at school. Victoria has had a profound effect on me – I was only meant to visit for an hour, but we had so much to discuss that, before we realised it, the afternoon had slipped by. I am extremely grateful to have met this most inspiring woman who has caused me to think deeply about my own values regarding religion, family and duty to see what can be achieved to help others.

On Nuffield Farming travels there are some contacts where you never know what to expect, and my next visit was one. Via LinkedIn I had made contact with a lady who had recommended we should visit Anna. On the journey to Lira our driver could not understand why I had planned to stay here for 2 nights – he said there was nothing to see and we should go straight on to Murchison. Once we had arrived at Anna's farm, Umar was as impressed as we were.

10.5. Anna Ebong – Brownstone Country Home, Lira

This incredible lady is a totally market-driven farming business lady. If Anna sees a crop making good money that she is not already growing, then immediately she will start growing it. There are two growing seasons in this part of the world and Anna farms 30 acres growing papaya, tangerine, figs, maize, red and green chillies, ginger, pineapple, oranges, lemons, guava, Italian nuts, Jacob fruit, mulberries, sweet and Irish potatoes, black bean, mango, banana, yam, cassava, chives, cabbage, cherry tomatoes, eggplant, spinach and a whole host of herbs. I am sure I have missed some crops out! Even the dam is full of fish for sale, plus honey bees, pigs, goats and chickens are to be found here. Anna takes produce to her own market stall in Lira twice a week and a woman is employed to run this. When there is enough produce to fill a lorry, Anna takes this to Kampala, the capital city, where she can sell for the best price.

As well as the farm, Anna has developed a tourist business by building lovely thatched Banda's fitted out for tourists with comfy beds and bathroom as well as the main brick built guest house. Anna and her husband used to run a restaurant in the town of Lira before moving the business to their house. Anna's husband works in Kampala leaving Anna to run the farm and guest house.

The road from Lira to the farm was not too bad and we learnt that previously it had become almost impossible for a lorry to reach the farm, so Anna asked the local council to mend the road. They replied there was no money to do this, so Anna organised and paid for the road to be graded herself; hence immediately past her entrance the road is rough. Anna uses modern seeds, intercropping and



seeks out best practice. She says the local farmers are not interested in how she farms, but they are keen for her to become involved in their local government after she sorted out the road. However for the time being, Anna is too busy with her own businesses to become involved in local politics. Anna would like to open a cultural centre here - she has put her catering course and business management degree to good use.

10.6. Dr. Theresa Sengooba

Two people recommended I should meet this lady, and I wanted to find out how she had become such a world-respected lady in agriculture based in Uganda.

Theresa grew up on a 10 acre farm, 2 miles from Entebbe that grew bananas, cassava, beans, ground nuts, yams, maize and had goats. For 8 years she walked 2.5 miles to and back from school every day and when home fetched water and collected firewood. Saturday was laundry day. Theresa was the fifth child out of 11 and the oldest daughter. She was expected to help with the family and household duties. Her father was a primary school teacher as was her mother before having the children and Theresa was able to go to boarding school for her last 2 years of junior school and for secondary school. Her supportive parents encouraged her to go to Makerer University, Kampala where she studied botany, geography and biology in her first year and botany and zoology in the second year. To help fund University she took a part time job at the Virus Research Institute.

Theresa married and then undertook a Master's degree and took a job as an assistant at the University, then became a scientific officer at the Department of Agriculture. She began work on the Bean Programme and was awarded a scholarship to undertake a master's degree on beans. This led to her becoming the Head of the Beans Programme and she studied for a PhD at Tanzania University on the diseases of beans, doing the research in Uganda.

In 1991 Theresa studied at Wellesbourne, United Kingdom, for 4 months and on her return took a position at the National Agricultural Research Organisation (NARO) which is a Government body in Uganda, becoming the Head of one of the research institutes from 1992 to 1999. In 2003 Theresa was invited by the International Food Policy Research Institute (IFPRI) based in Washington, USA, to manage a project part time and this led to her full time position as co-ordinator of this Uganda programme for the Biosafety Systems (PBS) in 2005.

This has involved:

- The development of a regulatory mechanism to enable confined field trials of GM crop materials
- ➤ The drafting of Uganda's biotechnology and biosafety policies approved by the Government in 2008
- > The creation of improved capacity for biosafety regulatory compliance for both regulators and scientists.

During this time Theresa has raised 4 children who are accountants and lawyers, and the family own their own 60 acre farm. Her daughter-in-law is in charge of the poultry and dairy cattle and they sell milk. While I was there the region was becoming quite dry and the price of milk was rising. They



have a problem with ticks causing East Coast Fever so their cattle are sprayed twice a week to keep the ticks off.

This incredible woman has reached retirement age but she continues to mentor others, helping them to put their talents to use, and will keep her board positions. She says Ugandan women have realised they need to earn money to supplement the families' income, sustain themselves and have money to pay for school fees as this is the way for their own children to have a better life. Theresa is so pleased that universities have intakes of 50% girls and 50% boys nowadays and I found there were 42 universities in Uganda.

10.7. Mara Bua Johnson

Mara is an executive of Vitals - Farm Fresh Vegetables and Fruit- who also sell dried fruit and process tomato paste. Her family has 5 acres in Lira growing mangos and oranges and she studied in the United Kingdom in 2006. This lady is on a mission to improve the health of all Ugandans.

She told me there is a perception that native fruits and vegetables are for famine only, so families ignore this vital source of nutrition, thereby putting themselves at serious risk of malnutrition. In 2010 Mara began finding volunteers at universities to train in health and nutrition by identifying key fruit and vegetables. She gathered groups of women on Sundays and market days to teach them the benefits of fruit and veg.

Mara knows the impact a visual demonstration such as DVDs can have and has been talking to the National Agricultural Advisory Service (NAADS) to persuade them to make a DVD on this in local languages to be played in schools, meetings and markets. Mara wants to call the campaign 'Step Up for Wellness' and visit embassies to raise funds. Maybe the President of Uganda's wife will be the patron, as her mission is to eradicate poverty. Obtaining Government funds is fraught with problems as unfortunately there is still a culture of bribery and corruption.

Ideally Mara wants to target 9-12 year olds to build the next generation with a healthy vision. Another idea is to take salad bars and fruits into offices twice a week for employees to buy healthy food. The population do not know the nutritional value of fruit and vegetables. At Lira, Mara began a vegetable garden at a school but, due to child labour laws the children were not allowed to do any digging, so she asked parents to help, but only some would help and then some parents stole the vegetables. Cases such as this do not deter Mara; instead she tried to find other ways to engage with pupils.

10.8. Nora Eubukalin

Nora and her husband The Reverend Sam Ebukalin live at Bukedea in eastern Uganda, an area that was devastated by the Teso insurgency from 1986 to the early 1990s. The local population ended up in camps and became used to food hand outs for survival. Nora realised they needed help to 'normalise' themselves as the art of farming to feed themselves had been lost. Hence the Popular Knowledge Women's Initiative (P'KWI) was founded in 1993 with the aim to regain stability and support each other. Initially 5 households worked together on sunflower and cassava production



and this model was extended into a structure so that 5 households formed a club, then 5 clubs formed a socio-economic group of 25 households, where 60% of the members were women. Each club then elected a 'Leader of Change' to become the Key Farmer Trainer (KFT). The KFT links P'KWI with the members, taking adapted information from universities and research institutes back so the farmers can use it. To add value to their crops of sunflowers the group were the recipients of a press to extract oil.

In this area there is a tradition of giving a baby a chicken as they hope chicken farming will lead to goat farming and on to cattle farming; so P'KWI encourages chicken ownership. Children work together building chicken houses and learn co-operation. After the war there were a great many orphans in this area and now there are a high percentage of teenage pregnancies. Nora and Sam are working to find funds for a 'hub' at Bukedea where the research is gathered in one place from the Government and research bodies using the internet, and Nora's vision includes a boarding school for children built using the local technique of crushing subsoil into interlocking blocks.

They have collaborated with Makerere University to establish farmer field schools and place students there to teach modern practices and to learn from the farmers. Representatives of the Bill Gates Foundation have visited Nora to hear first-hand of her commitment and achievements and in January 2013 Nora was made an Honorary Friend of the Royal Agricultural Society of the Commonwealth, (RASC). In 2009 P'KWI became the P'KWI Farmer to Farmer Co-operative Society and they have over 2,500 households as members.

Hon. Bethel Amadi, the President of the Pan African
Parliament says 'When a man receives something he
does not return home but women will return home and
put food on the table'



11.0. India

11.1. Dr. Sarala Gopalan

Dr. Sarala Gopalan represents India at the World Farmers Organisation (WFO) and has previously represented women at the National Institute of Agriculture (NIA) and was a Vice President of the International Federation of Agricultural Producers (IFAP). Sarala has a coconut farm in her home state of Kerala that her brother farms for her, as the majority of her time is spent in New Delhi nowadays. Sarala showed me a video of the latest innovation used in coconut farming by men and women in Kerala — a pedal system to 'walk' up and down the trees safely for harvesting the coconuts. Previously this was achieved by using ropes or dried stalks bound together to form a rope-like circle, but this new system is a great deal safer and less time consuming.

Sarala's father was an accountant in the southern Indian state of Kerala; he was a major influence on her and she had 8 siblings. She had a good education at High School by some nuns from Scotland. Her mother wanted her to marry when she was 15 but she persuaded her parents to allow her to continue with her education until she married. She had the best marks at her school for science and wanted to study engineering but as she would have been the only girl on this course, the college would not allow it. She asked to study commerce and that was declined as well, so she undertook a Bachelor of Arts degree with her results impressing her professors so she then studied for a post graduate course in economics. Now she was able to persuade her parents to let her study at Madras on a 2 year Post Graduate course. Sarala returned to the college where she had first studied and taught economics as the Engineering College would still not let her study, but they employed her instead to teach economics. Sarala is quite a small lady and the students seemed huge to her. Indeed, on her first day teaching at the college when she walked into the room the students just carried on talking. She stood on the dais and waited until they stopped talking then smiled and said 'Now you have finished I will begin'. This must have taken a great deal of courage and the College Principal was very impressed and helped her with her career.

Sarala moved jobs to become a civil servant for Kerala State Government. This state had been a Principality for 100 years and girls' education had been supported by the Royal family. There had been a great many Christian missionary schools before the Hindu schools, therefore a great many girls had a good education but no employment. As a civil servant Sarala set out to do what she could to rectify this. One young woman was the eldest girl of a family and her father became ill. The girl was skilled at tailoring so Sarala helped her to secure a bank loan to buy a sewing machine and the girl was able to earn enough money to feed the family. With Sarala's help this girl formed a group with 10 other tailors to work together and they were able to access a bank loan to purchase further machines and material and, through research, they started making school uniforms. The group was successful and the banks were encouraged to lend to other self-help groups. This encouraged Sarala to help more women and to talk to a great many people about this issue.

She also encouraged school children to collect nuts on the way to school and to sell them at school. The children opened bank accounts with their rupees and so started their own savings accounts which helped them enormously if they wanted to apply for a loan in later life. This led to her coming up with an idea that she and others took to the Kerala State Government – if young people registered to say what job they wanted to train to do, the State would guarantee them 100 days of



employment at the minimum wage to train. By taking part in this scheme young people would know they would earn some money and have training to start their careers. She asked for a minimum of 30% of the jobs in this scheme to be for women only. Kerala State took up this scheme about 30 years ago and now this scheme has been rolled out over the whole country of India by the National Government under the 'National Employment Guarantee Act', with the largest budget of 10 billion over all the departments.

Thanks to my Nuffield Farming Scholarship I met the lady who began this scheme; in Kerala the take up is 90% by women. Being able to access credit gives a woman her own identity, not totally reliant on her husband. Sarala did marry a fellow civil servant and her career continued to National Government where she held the position of Secretary to Government of India. Sarala continues with her non-governmental organisation (NGO) roles and believes it is important to work with all the political parties for reform.

Sarala has presented papers at an array of conferences around the world. For Farming First she gave a presentation 'Appropriate Technologies for Water Supply Systems' as India has plenty of water but access to drinking water is still a problem. For IFAP one paper was 'Calls for a Sustainable Green Revolution in Africa' and at the United Nations (UN) Sarala requested resources to help sustainable agriculture by transferring knowledge from scientists to farmers. At the NIA she promotes the use of more efficient tools such as sickles and apps on mobile phones; she tells of the importance of building latrines so women do not have to wait until after dark to go to the loo, hence improving health and security. Sarala says 'we have to change the mind set to new ways of farming'; indeed this lady has brought in and continues to advance change for the better for farming as well as women in general.

Sarala told me about her husband's family – the grandfather had left the farm to his 4 sons in equal proportions, and the elder sons were sent to live with their uncle to have a proper education; indeed 2 of them became lawyers. The girls of the family were married off at the age of about 14 or 15, so eventually there was only one son farming the whole farm. The custom is for a proportion of the produce to be sent to the families of the sons living and working away, hence the remaining son and his family had a quarter share of the produce to feed their own family of 7. The farmer's wife worked hard looking after the household, their own cattle, grinding corn, milking the cows, working as a farm labourer at times to earn cash to buy the food they did not produce, such as sugar and oil.

Then the brothers working away decided they would sell their shares in the farm so the farming brother had to pay them out. This left the family with a huge loan and no money. Produce was still being sent to the other families, who had their own living from their professional work and a great deal of their food provided. In the end the farming son sold some of the farm to pay off his debt and he had enough money to go to college himself and move his family to the city where his children received a good education and his wife did not have to work so hard. The remaining land he owned he rented out for an income.

In some areas of India a great many of the younger generation have left for education and work, leaving the older generation in the villages and, without the family structure to care for the elderly, there is an increasing problem of the elderly living alone and unable to care for themselves. The Government's Agriculture Department is looking into ways of bringing uncultivated, fallow land back



into production by providing loans and training along with modern seeds to encourage the younger generation back to the land.

11.2. The Punjab Agricultural University, Ludhiana

This university is considered one of the best in Asia. It was established in 1962 and is the second oldest university in India. In the 1960s the Green Revolution for India was pioneered here, with the introduction of high-yielding crop varieties and the application of modern agricultural techniques using chemicals, fertilizer and irrigation. The production of wheat has been a major influence in the self-sufficiency of India.

Dr. Malwinder Malhi was instrumental in providing contacts for my study and accommodation in this part of India for which I am extremely grateful. I was welcomed by Mrs Rupa Bakhshi, the Dean of the College of Home Science and 4 of the lecturers:

The production of wheat has been a major influence in the self-sufficiency of India.

- > Dr. Sukhjit Kaur, Professor and Head of Home Science Extension and Communication Management
- > Dr. Sukhminder Kaur, Associate Professor of Human Development
- > Dr. Balwinder Sadang, Senior Nutritionist and Food and Nutrition
- > Dr. Muninder Sidhu, Professor and Head of Family Resource Management

The women explained the main rural health problems are anaemia due to worms in humans, and diabetes. The university is undertaking major research into the changes to health by better nutrition. They have students from all over India and I was very impressed with a meeting of about 10 students and staff where we had a good dialogue. The facilities are excellent and the students go to stay in villages for one month undertaking research projects and helping to teach the families what they have learnt at the university to better the lives of the villagers through improved nutrition.

11.3. P.A.U. Kisan Club (Farmers Club)

This club of progressive farmers is approaching their 50th year. They have 4,000 members with 450 women farmer members. The President, Mr Pavitarpal Singh Pangli, a fellow Nuffield Farming Scholar and finance secretary of the club, Mr Rajvinder pal Singh Rana, and the club secretary Mr Hardev Singh Gahnor arranged a series of meetings around Ludhiana for me. They were extremely generous with their time taking me to meet people, discussing agriculture and the way of life in the Punjab.

The university and the Farmers Club work closely together transferring technical information to the farmers and finding out what the farmers want the university to research. Currently they are working together on inputs following an integrated nutrient and pest management approach. On the first Thursday of each month the Club meets the Directorate of Extension Education from PAU to



learn the latest techniques to advance the region's agriculture, and the attending farmers pass this knowledge to others.

At the Farmers Club I met Dr. Rupinder Kaur, in charge of the Ladies Wing, and Dr. Ravinder Kaur Dhaliwal who is the Director of Communications. One of her publications is 'Progressive Farming', a monthly journal for PAU. Each month has a theme and in October 2013 it was wheat cultivation.

We went to a festival at Sangroor that was full of colourful stalls selling handicrafts from all over India by self-help groups and a great many local groups selling honey, food and drink, the majority of which have been supported by PAU.

I met a lady dairy and honey farmer. She had about 6 tethered cows in an open brick built shed behind her modern house, and about 20 beehives at another location with up to date equipment for centrifuging the honey and putting it into labelled, sealed jars ready for sale. PAU has advised this lady and she earns enough to employ a man.

From the Punjab I flew to Chennai in the southern state of Tamil Nadu to meet Mr Ramesh Thirruppathi who had kindly arranged 5 days away from his own business and family to take me around the state meeting innovative women.

11.4. Nehrumathi Kamaraj

Nehrumathi and her family live at Pattukkottai in the southern state of Tamil Nadu. This is a major coconut region with many processing factories that all have huge piles of coco dust, which is the waste product after the bigger fibres have been taken out for rope production. Nehrumathi came up with the idea of taking this waste away from the factories to make it into coirpith blocks.

Her husband drives the lorry collecting the coco dust and brings it back to their yard where 20 women are now employed putting the dust into a machine that packs it into blocks 32x32x80 cm. Each block weighs 5kg and can absorb 80 litres of water. The main use is in place of rockwools and peat moss as a hydroponic medium. At the moment Nehrumathi sells all her product to exporters but she is keen to visit the UK and find her own market. This business has a turnover of a quarter million rupees and she has won business awards as an innovative business woman. While we were there a local politician arrived on his motorbike, having heard visitors from the UK were with Nehrumathi. She is a very well respected person in the district.

11.5. Jeya Kunari

This lady owns all her 9 acres of land and is ambitious to buy more. She married at 15 years old and had her first child aged 16. Jeya's philosophy is 'If you stay at home you will have nothing but if you work hard you will have profit'. She grows bananas using modern varieties and the latest techniques, such as trickle irrigation, regularly using the advice of an agricultural adviser. I was very impressed with her knowledge of the crop and when the soil needs cultivating a tractor is hired and casual labour used when necessary. The holding is fenced in and they have a huge well. Her daughter is an engineer and her son is still at school.



11.6. Mrs Lagha

Mrs Lagha was widowed after 2 years of marriage, leaving her with a baby daughter to bring up alone. Against the wishes of her husband's family, she decided to farm the land herself growing grapes. Using advice from an agricultural consultant she has been very successful earning enough to give her daughter a good education and teacher training. Each day she is up at 5.00am and arrives on her land at 7am working until the evening. All her grapes are sold through a broker.

Teams of grape pickers go round this area organised by a woman called Laxshimi. She has about 200 women working in 15 to 40 teams, depending on the amount of work, and tells me she only allows her husband pocket money each day!

11.7. Velmani Santhakumar

This lady was widowed and has carried on farming 50 acres of mainly coconut trees, nutmeg and coco beans for Cadburys. Her farm is at the base of a mountain and elephants can cause a lot of damage. The area suffered a bad drought during 2002 to 2004 and had no rain in 2012, but last year they had good rain. This is a well organised farm with irrigation set up and fertiliser used. She has 6 employees and a further 6 casual workers when necessary. The coconut price is the same today as it was in 1999, but fertiliser has increased threefold and the cost of labour has increased fivefold, hence the reason Velmani has diversified into nutmeg and coco beans.

11.8. Latha Kannan

Latha has 4 milking cows and 20 acres of coconut trees with 95 coco shrubs. The cows are milked on a purpose built concrete pad so the slurry can be collected, with 2 buckets of it being put into their own anaerobic digester (AD). As the sun heats the tank, gas is taken off for the cooker.

11.9. Shentara Ramasamy

Mrs Ramasamy started farming organically 15 years ago on 8 acres around their factory, selling produce in a farm shop on a busy main road and at a stall in the city centre. They have a garden growing about 15 different varieties of herbs and vegetables. The family also own land at another site with a 40-cow dairy in modern concrete barns. I saw 8 tethered cows being hand milked, and immediately the milk is strained and poured into half litre plastic packs that a man on a moped takes to the shops straight away. They employ 14 people on the farms and although the market for organic produce is small, the owner is passionate.

11.10. Mrs Nagalakshmi

Mrs Nagalakshmi has had her own business for 14 years. When she was at school they did not know about sanitary pads and when girls reached puberty that usually meant the end of school and girls were married off. Back in 1995 Mrs Nagalakshmi learnt of sanitary pads and decided making them would be the perfect business. She joined a self-help group and they secured a loan from the District Rural Development Agency to start production. Unfortunately the business could not repay



the loan and they went out of business. Mrs Nagalakshmi sat down with the figures and realised that if they had bought the inputs in greater quantities at a reduced price, then the business would have succeeded. Eventually, and against her family's wishes, Mrs Nagalakshmi was able to secure a new loan and start again. She designed her own machines to make 1 pad every 3 seconds, whereas manual production time was 5 minutes. The business has gone from strength to strength over the last 14 years with a franchise model. It is Mrs Nagalakshmi's vision to empower as many women entrepreneurs as possible and she trains self-help groups, loaning them the machines and buys back the manufactured pads. Thanks to her there are 25,000 women entrepreneurs and she even goes into prisons to train the female inmates so that on their return to 'normal' life, they can have their own businesses.



Mrs Nagalakshmi

Mrs Nagalakshmi went to her state government in Tamil Nadu and suggested to them that if they bought pads from her and gave a packet to girls each month when they reach puberty, then girls can finish their education. The state government could see the huge benefit to half the population with this scheme and agreed; hence every 3 months girls in Government schools are given 3 packets of 8 sanitary pads. Mrs Nagalakshmi also makes maternity pads and the state Government gives pregnant women a free pack of these too. Several other states now operate similar schemes.

UNICEF has made Mrs Nagalakshmi a master trainer and she has visited 18 Indian states to train women to make the pads. She has spoken at major conferences on women's health and the business is diversifying into baby nappies. UNICEF wanted her to visit Africa but Mrs Nagalakshmi was worried about the quality control of her business if she was away and also the language barrier; so UNICEF bring people to her. During her first year in business they made 10,000 pads. Now 5



million are being produced a month! Her next project will be to produce organic pads. Mrs Nagalakshmi paid tribute to Chief Minister Jayalalithaa who has held this National Government post for 15 years and has made a huge difference to rolling out the scheme.

Meeting Mrs Nagalakshmi was my last appointment in India and she is truly inspirational and completely innovative.



12.0. Key influencing factors

12.1. Education

In Ireland I was struck by the importance placed on education, and how proud families are of their education system as a means for the next generation to have a better life. This was emphasised in Kenya, Uganda and India. I was amazed to see children looking so smart, every morning, in clean and pressed school uniforms in these countries, when they have miles to walk on very dusty roads full of people and traffic. It was very humbling to hear how the women help each other in their self-help groups to grow crops to feed the families first, and then any surplus produce is sold for school fees. If one family is struggling with the fees, the others help them out. In Uganda one discussion I had highlighted a problem where some families use their money on school fees to the detriment of buying nutritious food for the family. An unfortunate form of social climbing!

Kenya and Uganda have free state education for the primary years and India from ages 6-14. The class size and very limited resources in many areas mean parents prefer to send their children to private schools if they can. In India there are an incredible number of colleges training engineers.

In the UK I feel we do not appreciate just how good our education system is - every child has free access to education, a wonderful achievement. Our children are not proud to wear their school uniforms and, quite frankly, look disrespectful. There are incredible opportunities available to us in the developed world, let us use them well, be thankful and keep them purposeful for future generations.

12.2. Infrastructure

I had visited Ireland 24 years ago and been amazed to see hay still being cut by hand by old women in one region. The country had greatly changed by my visit in 2013. The farmers I spoke to totally embrace the EU, and the difference EU funding has made to Ireland is evident.

Only 4% of Uganda has electricity, hence daylight hours are used, especially by the women, to carry out all their tasks. Most of Kenya and Uganda does not have running water so a great deal of time is spent fetching and carrying water. In Kenya there was a great deal more work being done to the roads than in Uganda, with most of the funding coming from China. We did see a bridge that had been funded by the EU in Uganda. In hot countries moving produce to markets is very difficult in very congested urban areas, with huge potholes in the roads and without refrigeration. In Kenya they are working to upgrade

In Kenya there was a great deal more work being done to the roads than in Uganda, with most of the funding coming from China.

some rail lines, but in Uganda nothing has been done to the railways since the country became independent and most are not usable now. All this has a huge impact on the lives of everyone, especially women. India is a lot more advanced with a good train system and tarred roads in cities and main highways. There is a lot of congestion in the cities.



12.3. Marriage

I now have a respect for arranged marriages — this is a total surprise to me. In India I had the opportunity to talk to a great many men and women and I was surprised how openly they talked to me. There are always good examples where traditions have adapted to a more modern manner and unfortunately, especially in some very poor rural areas, the worst of the traditions are upheld. When young people try to marry out of their caste or against their families' wishes, we still hear of stoning to death occurring. In one area of India I was surprised to learn that in Saturday newspapers, adverts are placed by families looking for a suitable bride or groom. To me it was fascinating that a wife meets the chosen bride for her son before her husband and, in the family I spoke to, should the wife not approve then another bride is sought.

12.4. Healthcare

We take so much for granted. Early this year there was a newspaper headline in the Daily Telegraph 'India's last polio victim offers a global ray of hope'. The article tells us that just 3 decades ago this disease had claimed 150,000 victims in one year and 2014 was the third consecutive year that India has not seen a new case of polio. Officially India is now polio free. The World Health Organisation had co-ordinated the work of local doctors, district magistrates and charities to immunise more than 170 million children in 2011 and over the next three years. I so hope they will be able to say the same for tuberculosis and other diseases soon. In an Indian hospital I saw a big poster warning of the dangers of tuberculosis.

12.5. Domestic violence

Within my own little sheltered world this issue had never really been a concern to me but conversations in Uganda has led to me opening my eyes and ears to this. Unfortunately domestic abuse is an increasing problem in Uganda and women's groups work to bring married couples to attend workshops together so this issue can be discussed and hopefully will become unacceptable behaviour.

12.6. Ugandan Convention, London Sept 2013

I attended this, the third UK Ugandan Convention with the aim to 'Drive Growth in Uganda'. The main theme was asking expats to invest in their home country and go home. The speakers included the Hon. Edward Ssekandi, Vice President of Uganda, Dr. Irene Muloni, Minister of Energy and Minerals and Hon. Sam Engola, Minister of Housing.

Some key facts about Uganda are:

- Population of 33 million and fastest growing in Africa (3.2%)
- ➤ 65% of population is under the age of 15.
- > 80% of the population are rural dwellers and 70% of these people survive on agriculture
- This country has the highest incidence of AIDS/HIV
- ➤ GDP per capita is \$1400 ranking this nation 206 out of 229



Patrick Bitature, the chair of the Ugandan Investment Board and CEO of Simba Group, made the keynote speech. He said the 'West' view of Africa is of riots, poverty and war and Africans have to change this image. The main challenge to growth is infrastructure – roads, rail, ICT and electricity. They must break the stranglehold of poverty. Major oil and gas sites have recently been found in Uganda, Kenya and Tanzania. They need to harness and make better use of natural elements – sunlight and rain. There is a National Development Strategy to build industrial parks throughout Uganda. The main trade route in this part of the world is from the port of Mombasa in Kenya to Jinja in Uganda and north to the Sudan. Mombasa to Kampala, the capital of Uganda, takes 5 days now by road instead of 15 and the governments are removing the road blocks. I hope this is the case, but a great many of the road blocks are a source of bribery by the police as, I am told, they regularly go unpaid. He stressed how important tourism is but Ugandans take this for granted. He called for 'Enlightened leaders' to focus on education and leadership more than politics. To great applause he said the major issue was corruption followed by fragile institutions and weak leaders.

Lord Sheikh sits in our own House of Lords and was brought up in Uganda until Adi Amin expelled 28,000 Ugandan Asians. The regime took everything and the families left Uganda with nothing. He appealed to Ugandan Asians to invest in Uganda and take their leadership skills back there and not to bear a grudge. He said the main areas to invest in are:

- Agriculture
- Oil and gas
- Infrastructure roads, housing and hydro-electricity
- Fisheries processing factories on lakes

I do hope expats are able to help their own country but until corruption is stopped I believe they will be reluctant to do so.



13.0. Conclusions

- 1. Women in the UK must have the confidence to move out of their 'comfort zone' and take opportunities to forge ahead with their careers and businesses.
- 2. To reach the top women need to be confident, self-assured, seek the advice of a mentor and believe in themselves.
- 3. Career/business women need support from families, friends and the general population to bring about a change of mind-set to admire these women; let's celebrate them.
- 4. Words of encouragement and thanks would help.......
- 5. We take so much for granted such as running water, electricity and an education. It has been so humbling to see women without these things achieving so much against the backdrop of their cultural traditions.
- 6. On family farms the majority of childcare still falls to the woman, but on less busy days please can the men offer to take/fetch children, cook supper? Many of you do, thank you.
- 7. There are network groups and mentors out there make the contacts, it will make such a difference to your own mind-set, give confidence and it is good to be challenged on ideas.
- 8. In the UK we must celebrate and be proud of our education system, political system and healthcare.
- 9. It is the International Year of the Family Farm the women of the family are the backbone, working on farm, raising children, taking part in the local community and working off farm.
- 10. The Queen, a woman, is the most iconic person in Great Britain, women bishops are to be appointed, and in 2013 we had the most successful GB Olympic team due to the performance of the female athletes. Women should be held in higher regard within our culture.
- 11. Women are half the population, hardworking and deserve more recognition.
- 12. Having children does not need to halt the progress of a career, they are our future. A great many of the women I met have children plus their own business/career. It's not easy and involves a lot of organisation.
- 13. Women are half the population; we need more women to enter parliament and the top echelon of boards. Currently the UK is ranked 65th out of 151 nations for the number of women in national parliaments, according to www.ipu.org. See Appendix 1
- 14. It takes an innovative woman to juggle children, husband and a career/business!



14.0. Life post my Nuffield Farming study

I do believe I am more confident and this has led us to re-evaluate our farm business. It was not easy for the family when I arrived home, full of ideas. I have been on this most amazing journey talking to innovative, inspiring, successful people involved in world agriculture while the family has had to cope at home. Having fellow Scholars from UK and overseas staying with us has been a huge added benefit as my husband has enjoyed being involved in the conversations.

The presentations at the conference brought home how important every acre is – before we tended to think the way to survive was to expand, but doing what we are now, using best practice to be efficient and cost effective is the way forward. To that end, our tenanted farm comprises a great deal of re-claimed quarry land with an abundance of wildlife. I approached our landlord to ask permission to take the farm into the Higher Level Stewardship Scheme. After discussion the landlord decided against this due to worries over future planning applications but suggested we entered into a private scheme between ourselves whereby the landlord would pay us to deliver wildlife benefits on the farm.

My husband owns a field on the outskirts of a village and we have gone into a partnership with a development company to explore planning options. An application has been submitted and we are waiting to hear from Cotswold District Council. On discussion with Angela and Tony Davies NSch, about renewable energy I realised we could install solar panels on a house we rent out and this has been done. We are currently trying to raise a mortgage to purchase a house on adjoining land we own and we are taking advice on converting an old, disused stone barn. Attention to detail is key to our survival as a relatively small family farm. Our management of the sheep flock has to be improved getting more lambs finished in a shorter time and our arable land practice is under scrutiny. We need to be open to looking at other rotations for greater returns.

I have been appointed to the NFU National Livestock Board and thoroughly enjoy the work this involves. The devastating disease bovine tuberculosis occupies a great deal of time, talking to politicians, local councillors, local groups and farmers. We know this disease can only be eradicated with controls in the wildlife as well as cattle and we all need to engage with the general public to explain this.

Our eldest daughter is deciding her future, looking at universities. She would be the first member of our family to go to university. We do not have a tenancy she could take on but have encouraged both daughters to be involved with our business and ask them for ideas. Katrina Claas was guest speaker at an event I was invited to attend and she told us that family members are invited to special 'Family Board' meetings when they reach the age of 15 to start familiarising themselves with the business. Inspired by this we had a family meeting and informed our eldest daughter of the financial state of our business and future plans for its management. I look forward to her input. I am sure I am more open to discussing our business with others now and advice received has been very helpful.

Currently I am the deputy chair of Gloucestershire NFU and a Governor of our local Church of England Primary School. I enjoy helping as a volunteer for Gloucestershire RABI and at Moreton



Show. Voluntary work is a very important part within the local community but it does not pay the bills. I will fulfil current obligations but restrict other requests.

Thank you Nuffield Farming Scholarships Trust—my journey has altered my life and the lives of my family. We all are benefiting.

Tanya Robbins



15.0. Executive summary

I realised most go ahead family farm businesses in our area were being taken forward by the women of the family - whether through diversification, or family discussions to move a tenancy to the next generation. I needed to re-evaluate our own business and being awarded a Nuffield Farming Scholarship has transformed my own thinking and given me an opportunity to meet women making a difference for their businesses and a better life for women in developing nations.

My travels took me to Isle of Man, Ireland, Canada, Norway, Kenya, Uganda and India to see how women are involved in agriculture in emerging countries as well as developed nations.

The greatest impact upon me was meeting women in Kenya, Uganda and India who farm and have their own businesses, as it is so against parts of their culture. It is humbling how much we, in the developed world, take for granted. Four women farmers in Uganda told me about their daily lives. They were up at first light to heat water on a wood fuelled stove to prepare their children's breakfast. Then some hoeing and, if they have livestock, take them to be tethered on grazing. It is then time to collect firewood, water from the village well and food to prepare lunch. A rest for about an hour then off to check the livestock and move them if necessary before working on the crops again. At 6pm they prepare supper for the family. There is no electricity here making it vital to use the daylight hours. Clothes' washing is a major task done by hand once a week.

A great many of the ladies I met have made their businesses work by seeing an opportunity and being totally focused on finding a way to reach their goal. The most inspirational ones use their ideas/ businesses to help others. For example, in India Mrs Nagalakshmi makes sanitary pads with machines she designed and thanks to her all the young girls in her home state of Tamil Nadu have access to free pads meaning they can finish their education as, before, once a girl reached puberty often she had to leave school and become married.

In the UK women are reaching new heights in agriculture. Minette Batters has been voted in as the first female deputy chair of the National Farmers Union. Christine Tacon was the managing director of Co-operative Farms for the Co-operative Group for eleven years and is now the first ever Government-appointed Grocery Code Adjudicator. This remarkable lady continued her education while working full time and makes time to mentor others.

There are a great many progressive family farms in the UK but, unfortunately, there is still a pocket of old fashioned views that the family farm should pass to a son, whether a daughter is better suited or not. In Norway I met women who have taken on their family farms through the Allodial Act giving them, as the eldest child, the right to 'reclaim' the farm.



16.0. Acknowledgments

I would like to sincerely thank the following people and organisations for all their help and support:

My sponsors: Central Region Farmers Trust Mara Bua Johnson

My family, husband Tom, and daughters Lucy and Hannah Nora Ebukalin

Dad and Mum Dr. Sarala Gopalan

My sisters Lynn and Helen The Punjab Agricultural University

Simon, NSch, and Carol Weaver P.A.U. Kasan Club

Angela and Tony Davies, NSch Mr Pangli and family

Stephen Watkins, UK Nuffield Chairman Rajvinder pal Singh and family

Mike Vacher, UK Nuffield Director Nehrumathi Kamaraj

John Stones, former UK Nuffield Director Jeya Kunari

All the 2013 Nuffield Scholars Mrs Lagha

Mrs C. Christian, BSc Robert Lasseter, NSch

Belinda Leach Sophie Stanley

Fiona Brumby Jim Godfrey

Ramsey Grammar School David Gardner

Karen Brosnan, NSch Malcolm and Tinah Rankin

Grainne Dwyer, NSch Friends Overseas Action Group

Katherine O'Leary Farm Africa

Betty Murphy Matthew Whitticase

Val Kingston Dr. Mahli

Ann Moore Mr Monoj

Catherine Lascurettes, NSch Ramesh Thiruppathi and family

Margaret Healy James and Leonie Kenyon

Baroness Hazel Byford Richard Beldam

Judy Shaw Paul Costain



Carolyn Fuerth, NSch Jenny Deveraux

Anna Mastronardi Caroline Millar, NSch

Leslie Huffman Amy Jackson, NSch

Tanya Mitchell Catherine Nakielny, NSch

Nikki Tayler Jane Craigie

Carol Taves Emma Penny

Izabel Muzzin Kate Phillips

Hildegunn Gjengedal Rosie Dunn

Lise Thorso Mohr Julie Thomas

Tone Vaag Mandy Hope

Kathrine Kleveland Louise Manning NSch

Berit Hundaala Will and Megan Archer

Stine Bjornstads Sheila and David Spearing

Torill Midtkandal Shelly and Paul Harris

Tove Andersen Boyce and Georgina Herries

Dr. Marit Haugen, PhD Gloucestershire NFU

Zemach Getahun Sue Carlson

Louise Labuschagne & Henry Wainwright Olwen Thomas

Carissa Nightingale Mel Bent

Anna Ebong Sarah Righton

Dr. Theresa Sengooba Gill Godwin

Velmani Santhakumar Latha Kannan

Shentara Ramasamy Mrs Nagalakshmi

Sian Bushell Julie Robinson

Minette Batters ChristineTacon

Glos Beef Suckler Group Tricia MacFarlane



17.0. Appendix 1

Intra-Parliamentary Union "Women in Parliament" World Classification

>>> VERSION FRANÇAISE



Women in national parliaments

Situation as of 1st June 2014



The data in the table below has been compiled by the <u>Inter-Parliamentary Union</u>on the basis of information provided by National Parliaments by 1st june 2014.**188 countries** are classified by **descending order of the percentage of women in the lower or single House**. Comparative data on the <u>world and regional averages</u> as well as data concerning the two <u>regional parliamentary assemblies</u> elected by direct suffrage can be found on separate pages. You can use the <u>PARLINE database</u> to view detailed results of parliamentary elections by country.



New: You can now consult our <u>archive of statistical data</u> on the percentage of women in national parliaments.

	WORLD CLASSIFICATION										
Rank	Country	Lower or single House				Uppe	er House	r House or Senate			
Nalik		Elections	Seats*	Women	% W	Elections	Seats*	Women	% W		
1	Rwanda	9 2013	80	51	63.8%	9 2011	26	10	38.5%		
2	Andorra	4 2011	28	14	50.0%						
3	Cuba	2 2013	612	299	48.9%						
4	Sweden	9 2010	349	157	45.0%						
5	Seychelles	9 2011	32	14	43.8%						
6	Senegal	7 2012	150	65	43.3%						



7	Finland	4 2011	200	85	42.5%				
8	Nicaragua	11 2011	92	39	42.4%				
9	Ecuador	2 2013	137	57	41.6%				
10	South Africa ¹	5 2014	400	163	40.8%	5 2014	54	19	35.2%
11	Iceland	4 2013	63	25	39.7%				
II	Spain	11 2011	350	139	39.7%	11 2011	266	89	33.5%
12	Norway	9 2013	169	67	39.6%				
13	Belgium	5 2014	150	59	39.3%	6 2010	71	28	39.4%
14	Mozambique	10 2009	250	98	39.2%				
15	Denmark	9 2011	179	70	39.1%				
16	Netherlands	9 2012	150	58	38.7%	5 2011	75	27	36.0%
17	Timor-Leste	7 2012	65	25	38.5%				
18	Mexico	7 2012	500	187	37.4%	7 2012	128	44	34.4%
19	Angola	8 2012	220	81	36.8%				
20	Argentina	10 2013	257	94	36.6%	10 2013	72	28	38.9%
21	Germany	9 2013	631	230	36.5%	N.A.	69	19	27.5%
22	United Republic of Tanzania	10 2010	350	126	36.0%				
23	Uganda	2 2011	386	135	35.0%				
24	Serbia	3 2014	250	85	34.0%				
25	New Zealand	11 2011	121	41	33.9%				
26	Costa Rica	2 2014	57	19	33.3%				
"	Grenada	2 2013	15	5	33.3%	3 2013	13	2	15.4%
II .	Slovenia	12 2011	90	30	33.3%	11 2012	40	3	7.5%
27	The F.Y.R. of Macedonia	4 2014	123	40	32.5%				
28	Austria	9 2013	183	59	32.2%	N.A.	62	18	29.0%
29	Algeria	5 2012	462	146	31.6%	12 2012	144	10	6.9%
30	Zimbabwe	7 2013	270	85	31.5%	7 2013	80	38	47.5%



31	Italy	2 2013	630	198	31.4%	2 2013	317	92	29.0%
32	Guyana	11 2011	67	21	31.3%				
"	Portugal	6 2011	230	72	31.3%				
33	Cameroon	9 2013	180	56	31.1%	4 2013	100	20	20.0%
34	Switzerland	10 2011	200	62	31.0%	10 2011	46	9	19.6%
35	Burundi	7 2010	105	32	30.5%	7 2010	41	19	46.3%
36	Nepal	11 2013	575	172	29.9%				
37	Trinidad and Tobago	5 2010	42	12	28.6%	6 2010	31	6	19.4%
38	Luxembourg	10 2013	60	17	28.3%				
39	Tunisia	10 2011	217	61	28.1%				
40	Ethiopia	5 2010	547	152	27.8%	5 2010	135	22	16.39
41	Afghanistan	9 2010	249	69	27.7%	1 2011	102	28	27.5%
42	El Salvador	3 2012	84	23	27.4%				
43	Philippines	5 2013	289	79	27.3%	5 2013	24	6	25.0%
44	Lesotho	5 2012	120	32	26.7%	6 2012	33	9	27.3%
45	Belarus	9 2012	109	29	26.6%	8 2012	57	20	35.19
46	South Sudan	8 2011	332	88	26.5%	8 2011	50	5	10.09
47	Turkmenistan	12 2013	125	33	26.4%				
48	France	6 2012	577	151	26.2%	9 2011	347	78	22.5%
49	Australia	9 2013	150	39	26.0%	9 2013	75	31	41.39
50	Honduras	11 2013	128	33	25.8%				
51	Namibia	11 2009	78	20	25.6%	11 2010	26	7	26.9%
52	Bolivia	12 2009	130	33	25.4%	12 2009	36	17	47.29
53	Iraq	4 2014	328	83	25.3%				
"	Singapore	5 2011	99	25	25.3%				
54	Kazakhstan	1 2012	115	29	25.2%	8 2011	47	3	6.4%
"	Mauritania	11 2013	147	37	25.2%	11 2009	56	8	14.39



" Sudan 4 2010 354 86 24.3% 5 2010 29 5 17.2° " Viet Nam 5 2011 498 121 24.3%	55	Canada	5 2011	307	77	25.1%	N.A.	96	38	39.6%
Second	56	Lao People's Democratic Republic	4 2011	132	33	25.0%				
58 Poland 10 2011 460 112 24.3% 10 2011 100 13 13.00 "Sudan 4 2010 354 86 24.3% 5 2010 29 5 17.2 "Viet Nam 5 2011 498 121 24.3%	"	Latvia	9 2011	100	25	25.0%				
" Sudan 4 2010 354 86 24.3% 5 2010 29 5 17.2° " Viet Nam 5 2011 498 121 24.3%	57	Bulgaria	5 2013	240	59	24.6%				
" Viet Nam 5 2011 498 121 24.3%	58	Poland	10 2011	460	112	24.3%	10 2011	100	13	13.0%
Section Sect	"	Sudan	4 2010	354	86	24.3%	5 2010	29	5	17.2%
60 Equatorial Guinea 5 2013 100 24 24.0% 5 2013 75 8 10.7% 61 Croatia 12 2011 151 36 23.8%	"	Viet Nam	5 2011	498	121	24.3%				
61 Croatia 12 2011 151 36 23.8% <td< td=""><td>59</td><td>Lithuania</td><td>10 2012</td><td>141</td><td>34</td><td>24.1%</td><td></td><td></td><td></td><td></td></td<>	59	Lithuania	10 2012	141	34	24.1%				
62 China 3 2013 2987 699 23.4%	60	Equatorial Guinea	5 2013	100	24	24.0%	5 2013	75	8	10.7%
63 Kyrgyzstan 10 2010 120 28 23.3%	61	Croatia	12 2011	151	36	23.8%				
64 Madagascar 12 2013 147 34 23.1%	62	China	3 2013	2987	699	23.4%				
65 United Kingdom 5 2010 650 147 22.6% N.A. 779 182 23.4° 66 Israel 1 2013 120 27 22.5% <td>63</td> <td>Kyrgyzstan</td> <td>10 2010</td> <td>120</td> <td>28</td> <td>23.3%</td> <td></td> <td></td> <td></td> <td></td>	63	Kyrgyzstan	10 2010	120	28	23.3%				
66 Israel 1 2013 120 27 22.5%	64	Madagascar	12 2013	147	34	23.1%				
67 Peru 4 2011 130 29 22.3%	65	United Kingdom	5 2010	650	147	22.6%	N.A.	779	182	23.4%
68 Eritrea 2 1994 150 33 22.0%	66	Israel	1 2013	120	27	22.5%				
" Uzbekistan 12 2009 150 33 22.0% 1 2010 100 15 15.0% 69 Guinea 9 2013 114 25 21.9%	67	Peru	4 2011	130	29	22.3%				
69 Guinea 9 2013 114 25 21.9% -	68	Eritrea	2 1994	150	33	22.0%				
70 Bosnia and Herzegovina 10 2010 42 9 21.4% 6 2011 15 2 13.3° 71 Greece 6 2012 300 63 21.0% -	"	Uzbekistan	12 2009	150	33	22.0%	1 2010	100	15	15.0%
71 Greece 6 2012 300 63 21.0% -	69	Guinea	9 2013	114	25	21.9%				
72 Cabo Verde 2 2011 72 15 20.8%	70	Bosnia and Herzegovina	10 2010	42	9	21.4%	6 2011	15	2	13.3%
" Dominican Republic 5 2010 183 38 20.8% 5 2010 32 3 9.49 " Monaco 2 2013 24 5 20.8% 73 Pakistan 5 2013 323 67 20.7% 3 2012 104 17 16.3° 74 Cambodia 7 2013 123 25 20.3% 1 2012 61 9 14.8°	71	Greece	6 2012	300	63	21.0%				
" Monaco 2 2013 24 5 20.8% 73 Pakistan 5 2013 323 67 20.7% 3 2012 104 17 16.3° 74 Cambodia 7 2013 123 25 20.3% 1 2012 61 9 14.8°	72	Cabo Verde	2 2011	72	15	20.8%				
73 Pakistan 5 2013 323 67 20.7% 3 2012 104 17 16.3° 74 Cambodia 7 2013 123 25 20.3% 1 2012 61 9 14.8°	II .	Dominican Republic	5 2010	183	38	20.8%	5 2010	32	3	9.4%
74 Cambodia 7 2013 123 25 20.3% 1 2012 61 9 14.8°	"	Monaco	2 2013	24	5	20.8%				
	73	Pakistan	5 2013	323	67	20.7%	3 2012	104	17	16.3%
75 Albania 6 2013 140 28 20.0%	74	Cambodia	7 2013	123	25	20.3%	1 2012	61	9	14.8%
	75	Albania	6 2013	140	28	20.0%				



"	Liechtenstein	2 2013	25	5	20.0%				
76	Saudi Arabia	1 2013	151	30	19.9%				
77	Bangladesh	1 2014	348	69	19.8%				
78	Czech Republic	10 2013	200	39	19.5%	10 2012	81	14	17.3%
79	Panama	5 2014	57	11	19.3%				
80	Kenya	3 2013	350	67	19.1%	3 2013	68	18	26.5%
81	Estonia	3 2011	100	19	19.0%				
82	Burkina Faso	12 2012	127	24	18.9%				
83	Mauritius	5 2010	69	13	18.8%				
II .	Republic of Moldova	11 2010	101	19	18.8%				
84	Slovakia	3 2012	150	28	18.7%				
85	San Marino	11 2012	60	11	18.3%				
II .	United States of America	11 2012	432	79	18.3%	11 2012	100	20	20.09
86	Sao Tome and Principe	8 2010	55	10	18.2%				
87	Togo	7 2013	91	16	17.6%				
88	United Arab Emirates	9 2011	40	7	17.5%				
89	Morocco	11 2011	395	67	17.0%	10 2009	270	6	2.2%
II .	Venezuela	9 2010	165	28	17.0%				
90	Indonesia	4 2014	560	94	16.8%				
91	Barbados	2 2013	30	5	16.7%	3 2013	21	6	28.69
II .	Malawi	5 2014	192	32	16.7%				
"	Saint Lucia	11 2011	18	3	16.7%	1 2012	11	2	18.29
92	Libya	7 2012	200	33	16.5%				
93	Democratic People's Republic of Korea	3 2014	687	112	16.3%				
94	Tajikistan	2 2010	63	10	15.9%	3 2010	34	4	11.89
95	Chile	11 2013	120	19	15.8%	11 2013	38	7	18.49
96	Ireland	2 2011	166	26	15.7%	4 2011	60	19	31.79



"	Republic of Korea	4 2012	300	47	15.7%				
97	Azerbaijan	11 2010	122	19	15.6%				
98	Gabon	12 2011	120	18	15.0%	1 2009	102	17	16.7%
"	Paraguay	4 2013	80	12	15.0%	4 2013	45	9	20.0%
99	Chad	2 2011	188	28	14.9%				
"	Mongolia	6 2012	74	11	14.9%				
100	Montenegro	10 2012	81	12	14.8%				
101	Turkey	6 2011	548	79	14.4%				
102	Malta	3 2013	70	10	14.3%				
103	Somalia	8 2012	275	38	13.8%				
104	Guinea-Bissau	4 2014	102	14	13.7%				
105	Russian Federation	12 2011	450	61	13.6%	N.A.	163	13	8.0%
106	Romania	12 2012	407	55	13.5%	12 2012	176	13	7.4%
107	Guatemala	9 2011	158	21	13.3%				
"	Niger	1 2011	113	15	13.3%				
108	Bahamas	5 2012	38	5	13.2%	5 2012	16	4	25.0%
109	Uruguay	10 2009	99	13	13.1%	10 2009	31	2	6.5%
110	Saint Vincent and the Grenadines	12 2010	23	3	13.0%				
111	Dominica	12 2009	31	4	12.9%				
112	Djibouti	2 2013	55	7	12.7%				
"	Jamaica	12 2011	63	8	12.7%	9 2007	21	6	28.6%
113	Cyprus	5 2011	56	7	12.5%				
114	Sierra Leone	11 2012	124	15	12.1%				
115	Georgia	10 2012	150	18	12.0%				
"	Jordan	1 2013	150	18	12.0%	10 2013	75	9	12.0%
"	Syrian Arab Republic	5 2012	250	30	12.0%				
116	Suriname	5 2010	51	6	11.8%				



117	India	4 2014	543	62	11.4%	2 2014	243	29	11.9%
118	Liberia	10 2011	73	8	11.0%	10 2011	30	4	13.3%
119	Ghana	12 2012	275	30	10.9%				
120	Zambia	9 2011	158	17	10.8%				
121	Armenia	5 2012	131	14	10.7%				
122	Democratic Republic of the Congo	11 2011	498	53	10.6%	1 2007	108	6	5.6%
123	Antigua and Barbuda	3 2009	19	2	10.5%	4 2009	17	5	29.4%
124	Malaysia	5 2013	222	23	10.4%	N.A.	59	17	28.8%
125	Bahrain	10 2010	40	4	10.0%	11 2010	40	11	27.5%
126	Ukraine	10 2012	442	43	9.7%				
127	Botswana	10 2009	63	6	9.5%				
"	Hungary	4 2014	199	19	9.5%				
"	Mali	11 2013	147	14	9.5%				
128	Cote d'Ivoire	12 2011	254	24	9.4%				
"	Gambia	3 2012	53	5	9.4%				
129	Kiribati	10 2011	46	4	8.7%				
130	Brazil	10 2010	513	44	8.6%	10 2010	81	13	16.0%
131	Bhutan	7 2013	47	4	8.5%	4 2013	25	2	8.0%
132	Benin	4 2011	83	7	8.4%				
133	Japan	12 2012	480	39	8.1%	7 2013	242	39	16.1%
134	Congo	7 2012	136	10	7.4%	10 2011	72	10	13.9%
135	Nigeria	4 2011	360	24	6.7%	4 2011	109	7	6.4%
"	Saint Kitts and Nevis	1 2010	15	1	6.7%				
"	Tuvalu	9 2010	15	1	6.7%				
136	Swaziland	9 2013	65	4	6.2%	10 2013	30	10	33.3%
137	Maldives	3 2014	85	5	5.9%				
138	Sri Lanka	4 2010	225	13	5.8%				



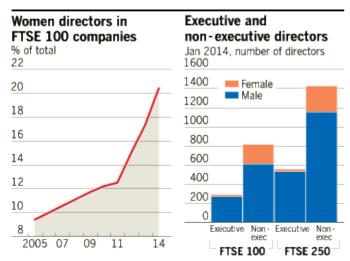
139	Myanmar	11 2010	429	24	5.6%	11 2010	224	4	1.8%
140	Nauru	6 2013	19	1	5.3%				
141	Haiti	11 2010	95	4	4.2%	11 2010	20	0	0.0%
142	Samoa	3 2011	49	2	4.1%				
143	Tonga	11 2010	28	1	3.6%				
144	Belize	3 2012	32	1	3.1%	3 2012	13	5	38.5%
"	Iran (Islamic Republic of)	5 2012	290	9	3.1%				
"	Lebanon	6 2009	128	4	3.1%				
145	Comoros	12 2009	33	1	3.0%				
"	Marshall Islands	11 2011	33	1	3.0%				
146	Papua New Guinea	6 2012	111	3	2.7%				
147	Solomon Islands	8 2010	50	1	2.0%				
148	Kuwait	7 2013	60	1	1.7%				
149	Oman	10 2011	84	1	1.2%	10 2011	83	15	18.1%
150	Yemen	4 2003	301	1	0.3%	4 2001	111	2	1.8%
151	Micronesia (Federated States of)	3 2013	14	0	0.0%				
"	Palau	11 2012	16	0	0.0%	11 2012	13	3	23.1%
"	Qatar	7 2013	35	0	0.0%				
"	Vanuatu	10 2012	52	0	0.0%				
?	Colombia	3 2014	165	?	?	3 2014	100	?	?
?									

^{*} Figures correspond to the number of seats currently filled in Parliament

^{1 -} South Africa: The figures on the distribution of seats do not include the 36 special rotating delegates appointed on an ad hoc basis, and all percentages given are therefore calculated on the basis of the 54 permanent seats.



18.0. Appendix 2: Professional Boards Forum "Woman Directors of FTSE 100 Companies"



Sources: Professional Boards Forum; BoardEx, Female FTSE Boards Report