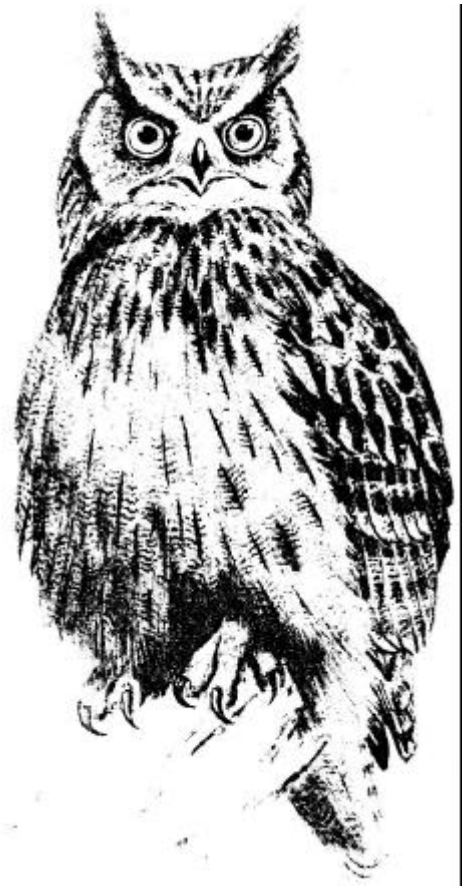
ALAM

Newsletter

Spring 2001



The Association of
Lecturers in Agricultural Machinery

The Association of Lecturers in Agricultural Machinery

Engineering Sector
Reaseheath College
Reaseheath
NANTWICH
Cheshire
CW5 6DF

February 2001

Dear Colleagues

I apologise for the delay in the production of the newsletter but all of us involved in the education and training of young people seem to be working harder than ever. This is not now helped by the terrible sceptre of Foot and Mouth hanging over the industry with no end in sight.

JCB at Rocester has kindly agreed at short notice to provide us with a venue for this years Annual Technical Conference. Final details have not yet been arranged but I would urge all those interested to contact Dave Heminsley sooner rather than later so as to make the conference a success. A proper booking form will be made available as soon as possible, but please put the date in your diary now.

We had a successful 4-day conference again at Claas UK at Saxham, which was well attended and provided those lucky delegates who went with an excellent technical updating session. Our thanks go to our hosts, Claas UK and to our organiser, Tim Ball.

We have a one-day event planned, in conjunction with Sauer-Danfoss, on Hydraulics for Wednesday 30th May 2001. Details of the course are included within the newsletter along with a booking form. If any member has suggestions for such courses could they please contact a committee member with as much detail as possible.

Phillip Hurrell
Honorary Secretary

ALAM Members 2000-2001

Listed according to where Newsletters are mailed to.

Askham Bryan College
Sandy Ellis 2k/081
Paul Talling 2k/013

Barony College
David Ritchie 2k/122
Ian Taylor 2k/025

Bicton College
Julian Jordan 2k/107

Bishop Burton College
Martin Baxter 2k/096
Rick Sunderland 2k/097
Charles Szabo 2k/117

Brackenhurst College
Vic Hird 2k/065
John Pygott 2k/092
Martin Towsey 2k/108

Brinsbury College
David Harris 2k/034
Brian Simpkin 2k/021

Cannington College
Stuart Christie 2k/006
Alan Davey 2k/099
Frank Facey 2k/035
Steve Hasell 2k/098

Claas UK Ltd
David Sparks 2k/007

Coleg Meiron Dwyfor
Terence Broad 2k/036

Coleg Powys
Neal Dodd 2k/112

De Montfort University
Clive Bound 2k/012
Graham Hartley 2k/103
Stephen Watson 2k/057

Duchy College
Duncan Elliott 2k/029
Anthony Kessell 2k/062

East Devon College
John Palmer 2k/015
Tony Roberts 2k/019

Easton College
Gerald Anderson 2k/076

Evesham College
Alan Fagg 2k/054

Hadlow College of Agriculture
James Sanders 2k/004

Hartpury College
Patrick McLeod 2k/090
David Scotchmer 2k/033

Hayter Ltd
Robin Blackford 2k/105

Hereford College of Technology
Ian Coleman 2k/123

Home
Michele Brown 2k/085
John Bumby 2k/HON
Denis Cartmel 2k/045
Peter Cockrell 2k/086
Keith Coldwell 2k/059
Peter Coleman 2k/001
Miles Couchman 2k/005
Oliver Dunthorne 2k/118
Paul Durant 2k/079
Peter Homer 2k/053
Richard Newman 2k/106
Mike O'Dowd 2k/HON
Robert Patmore 2k/047
Brian Poulson 2k/077
Robert Rattray 2k/037
Jon Sarsfield 2k/114
Emlyn Thomas 2k/052
Mark Tyson 2k/087
Arthur Walker 2k/HON
John Welwood 2k/024
Peter Weston 2k/071
Ian Whitehead 2k/084
David Wilson 2k/018
Peter Woodliffe 2k/049

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Colin England 2k/101
David Henley 2k/048
Tim Northmore 2k/011

Lackham College
John Dixon 2k/051
Richard Heath 2k/016
Michael Sidlow 2k/089

Llysfasi College
Peter Eland 2k/063
David Williams 2k/060

Myerscough College
Kevin Davenport 2k/043
Tony Houghton 2k/078
Gwynfor Williams 2k/044

Newton Rigg College
John Jones 2k/046
David Ross 2k/061
Jonty Rostron 2k/074

Oaklands College
Chris Bishop 2k/121
Nicholas Cartwright 2k/031

Otley College
Richard Clarke 2k/073
Stewart Cousins 2k/010
Chris Creasy 2k/038
Paul Harrison 2k/102
Chris Keeble 2k/055
Michael Percival 2k/072
Andrew Soar 2k/042
Mark Stallabrass 2k/030
Tom Turney 2k/HON
Richard Waterson 2k/070

Otter Services
Thomas Fackrell 2k/002

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Mark Embrey 2k/040
Andrew Frank 2k/017
Phillip Hurrell 2k/058
Melvin Johnson 2k/110
Alexander Johnston 2k/111
Dave Kynaston 2k/109
Rob Lee 2k/080
Brian Nicholls 2k/091
Simon Parker 2k/041
Alastair Taylor 2k/014

Rodbaston College
John Gough 2k/088

Royal Agricultural College
Harry Catling 2k/050

Rycotewood College
Lionel Foreman 2k/068
Evelyn Pearce 2k/023
David Stephenson 2k/032

Salesian College
Philip Harold-Barry 2k/120

South Kent College of Tech
Bob Creasey 2k/094

Sparsholt College
Bruce Badger 2k/069
Nick Bevan 2k/009
Nigel Fox 2k/083
Julian Greenman 2k/093
Richard Gregory 2k/067
William Helen 2k/020
Nigel Macpherson 2k/064
Roger Tiller 2k/075

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Tym Morgan 2k/095
Peter Walley 2k/066

Welsh College of Horticulture
Trevor Edwards 2k/022
Colin Hughes 2k/056

Writtle College
Brian Cairns 2k/115
Steve Hackett 2k/027
Paul Hill 2k/113
Iain Kirk 2k/104
Richard Langley 2k/028
David Lankester 2k/100
Les Milne 2k/008
Clive Perrins 2k/039
Andrew Salmon 2k/082
Steve Warr 2k/026

As on 22 February 2001. Subscriptions for 2001/2002 are due on April 1st.

National Training Issues

Funding changes for NVQs in Service Engineering Lantra NTO the National Training Organisation for Landbased Industries, supported by BAGMA have been successful in changing the Learning and Skills Councils funding arrangements for Modern Apprenticeships and NVQs.

The proposed structure by The Learning and Skills Council which would have seen a reduction in the funding for the agricultural and garden machinery courses taught in colleges. There would have also seen a reduction in the time allocated for the completion of the courses from 4 years to 2 years.

Due to the combined efforts of BAGMA, Lantra, NAPEO, Alam and colleges the decision has been changed and the respective banding for agricultural and garden machinery engineering has been changed to mirror the engineering section. Detailed below are the changes that have been made. Any questions please cqall Ian Jones at BAGMA on 01293 720 241.

Latest Basic National Rates

Advanced Modern Apprenticeships

Occupational Sector	Sector Weighting	16 – 18 Year Olds		19-24 Year Olds	
		Stand Length of Stay Months	Basic national Rate	Stand Length of Stay Months	Basic national Rate
Agriculture	1.2	30	£6,065	23	£3,410
Ag & GM Service Engineering	1.5	48	£12,130	36	£6,825
Engineering	1.5	48	£12,130	36	£6,825

- Rates above remain in force throughout period 26 March 2001 to 31 July 2002.
- The above lengths of stay assume the trainee does not already have a FMA in the same occupational sector. Lengths of stay for 16-18 year olds who already have the relevant FMA will be the same as in the 19-24 column. But the rates would be 75% of the 16-18 column.
- The Basic National Rate is "core programme" plus "occupational weighting". Includes 20% for achievement. Excludes disadvantage/area costs uplifts.
- The Basic National Rate does not include any uplifts for disadvantage or area costs, or Additional Learner Needs/Allowances etc.

Foundation Modern Apprenticeships

Occupational Sector	Sector Weighting	16 – 18 Year Olds		19-24 Year Olds	
		Stand Length of Stay Months	Basic national Rate	Stand Length of Stay Months	Basic national Rate
Agriculture	1.2	12	£2,425	12	£1,820
Ag & GM Service Engineering	1.5	18	£4,550	18	£3,410
Engineering	1.5	18	£4,550	18	£3,410

NVQ Level 2 Training

Occupational Sector	Sector Weighting	16 – 18 Year Olds		19-24 Year Olds	
		Stand Length of Stay Months	Basic national Rate	Stand Length of Stay Months	Basic national Rate
Agriculture	1.2	9	£1,820	9	£1,365
Ag & GM Service Engineering	1.5	14	£3,410	14	£2,555
Engineering	1.5	14	£3,410	14	£2,555

NVQ Level 3 Training

Occupational Sector	Sector Weighting	16 – 18 Year Olds		19-24 Year Olds	
		Stand Length of Stay Months	Basic national Rate	Stand Length of Stay Months	Basic national Rate
Agriculture	1.2	23	£4,550	17	£2,555
Ag & GM Service Engineering	1.5	36	£9,100	27	£5,115
Engineering	1.5	36	£9,100	27	£5,115

The Association of Lecturers in Agricultural Machinery

SAUER DANFOSS

Sauer-Danfoss - ALAM
Technical Update Day.
Wednesday 30th May 2001.
10.00 to 16.00.

Programme of Events.

10.00. Arrival to Sauer-Danfoss. Coffee.

10.15. Welcome to Sauer-Danfoss. Overview of Sauer-Danfoss. Who we are and what we are capable of in the UK.

10.30. Hydrostatic Transmissions. General overview of Series 90, Series 15 and series 40. Applications.

11.30. New developments. SX controller. Programmable Personalities available. Applications.

12.30. Buffet Lunch.

13.30. EHPS. Electro Hydraulic Power Steering. Advantages of Sauer-Danfoss system. Different stages of EHPS. Control opportunities available. Applications.

14.30. PVG 120 and 32. Different controls available. Valve configurations. Spool types. Applications.

15.30. Tour of Service shop. Hands on for PVG 32 and steering.

16.00. End of day.

To be held at training centre, Cheney Manor, Swindon

The Association of Lecturers in Agricultural Machinery

In association with

SAUER-DANFOSS

a one day practical seminar on

Hydraulic Systems

Venue
Cheney Manor
SWINDON
Wiltshire

Date
Wednesday 30th MAY 2001

Time
10.00am - 4.00pm

Cost
Members £ 50.00 Non-members £ 60.00

Come and be updated in the latest technology involved with hydraulic systems at our practical seminar.
To secure places on the course contact Len Foreman by completing the booking form below and return to him at Rycotewood College.
All cheques must be made payable to **A.L.A.M.**

Please reserve places for the following persons on the Sauer-Danfoss one day ALAM course

Names _____

_____

_____

College _____

Address _____

_____

Tel no _____

Return to:

Len Foreman
Rycotewood College
Priest End
THAME
Oxfordshire
OX9 2AF

Tel no 01844 212501
Fax no 01844 218809

All cheques payable to A.L.A.M.

Members @ £50.00 _____
Non Members @ £60.00 _____

Total _____

If you require an invoice please tick the box below.

☐

The Association of Lecturers in Agricultural Machinery

Annual Technical Conference 2001

at

JCB Training

Woodseat
Rocester

16th – 19th July 2001

Construction and Agricultural Machinery

Interactive training - CD ROM's
- web site training

Electronic Management systems

Teletruck – computer controlled transmission

Hands on
Factory visit

Full details will become available when conference content is finalised – subject to prevailing conditions and FMD.

Not to be missed – reserve your place now!

The Association of Lecturers in Agricultural Machinery

A.L.A.M.

JCB

Annual Technical Conference

To be held in conjunction with

JCB Training
Rocester

16th – 19 th July 2001

Full details of conference will be made available shortly
To reserve a place complete the form below

Please reserve places for the following persons on the ALAM Annual Technical Conference.

NAME ____________________

____

____

COLLEGE ____________________

____

Tel. No. ____________________

Return To-

David Heminsley
JCB Training
Woodseat
Rocester
Staffordshire

Tel. No. 01889 591300
Fax No. 01889 591400

Kvernland Accord
Tuesday 20 July 1999

With our packed lunches inside us, we set off up the M6 to Haydock. No, not to the races – but to the UK headquarters of Kvernland Accord. We were greeted at the gate by a formidable looking Viking warrior which was constructed from plough, cultivator and disc harrow parts. I wonder if he is genuine, debated Jonty.

Haydock has been the home of Accord UK since 1973, with Kvernland only moving here 6 months ago after taking over Accord. The site covers approximately 3 acres, with a large part of it being under roof. Much of the area is occupied by the massive stores area stocking large quantities of spares to service the needs of Kvernland and Accord machinery in the UK.

Accord's technical service engineer, Dave Ward, warmly welcomed us. He began with a technical update on the Accord Drill Systems, and informed us that while the Accord distributor drill has been modernised and improved over the many years it has been in existence, it still maintains the basic principles of the single external force feed fluted roller metering device, diffuser tube and distribution head. The heads are matched to the drill size and coulter numbers, and accommodate tram lining systems which can be easily tailored to customers requirements. Suffolk coulters can be ceramic tipped, or the new popular CX disc coulter is a popular option offering improved penetration and good cleaning characteristics in clammy conditions.

Seed rate is adjustable by changing the metering unit, or drive ratio. However, now a motor driven version requiring a 100 amp power supply from the tractor is also available, which eliminates sowing lag. Seed rate adjustment on the move is also an option, as well as compatibility with GPS on these high spec versions.

Accord also produces a range of precision seed drills, which can handle anything from the smallest tobacco see to the largest bean seed. There are 3 main models:-

- **Optima** - for large seeds (using a vacuum disc system)
- **Miniar S** - for small seeds below 3.5mm (again using a vacuum disc system)
- **Monopill** - primarily for sugar beet (using a centrifugal disc system)

Optima: Seeds are sucked onto the rotating disc and therefore lifted out of the feed area at the hopper bottom. Doubles etc. are removed by the top toothed selector, and the single remaining seed is realigned by the bottom selector. When disc rotates down to the bottom, the suction of the vacuum is interrupted and the seed drops down behind the coulter. There are no seals between the rotating components and disc. Very fine disc clearances are used to ensure successful operation.

Miniar S: It is similar in principle to the Optima drill and is designed to handle the smallest seeds, below 3.5mm. These seeder units are correspondingly smaller than the Optima and Monopill drills. A range of seed discs and hole spacings are available, with hole sizes ranging from 2mm down to 0.5mm, which can handle the smallest chicory seeds.

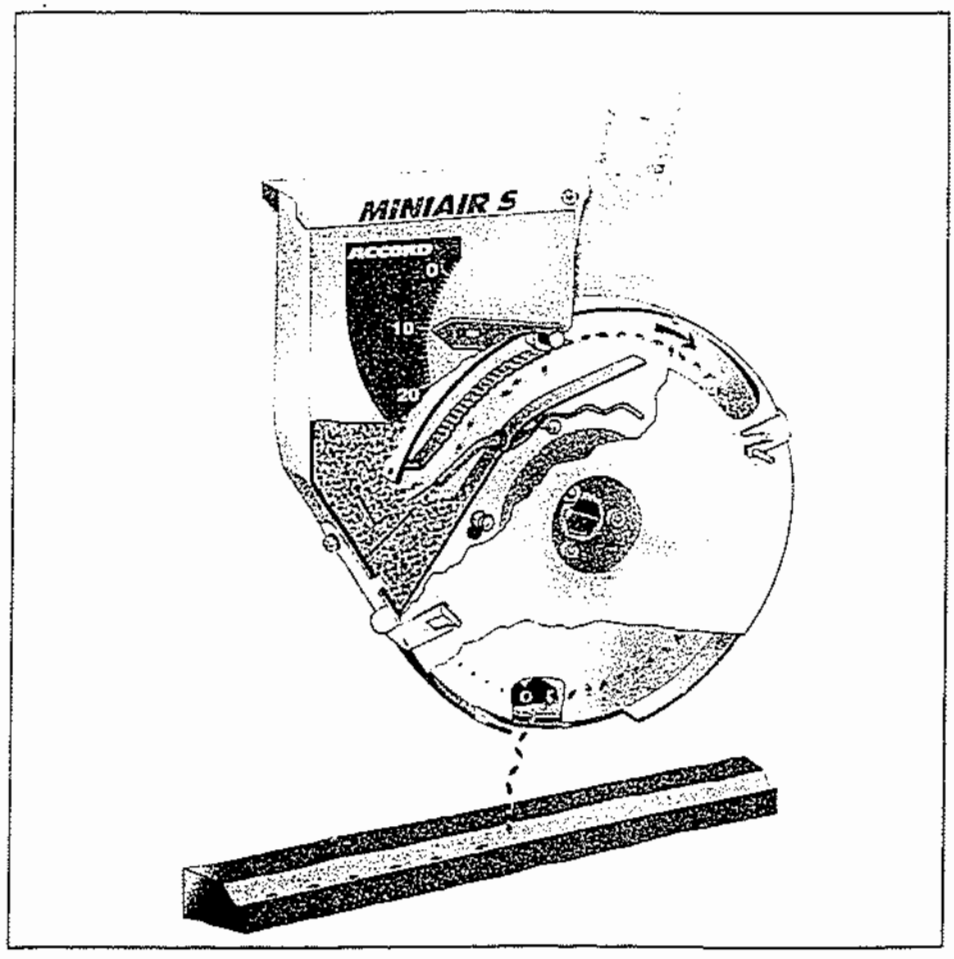
Monopill: This is a medium sized precision drill, designed primarily for sugar beet grower. It uses the action of a centrifugal force to deliver a single seed from hopper to the ground, via the seed disc. This model has been well proven in the European market

Dave gave us a very impressive demonstration of each of these units in action, where seeds were sown into a moving, oil coated conveyor belt. This is used for both demonstration to customers, and testing of units in the workshop situation. Our visit was concluded with a site tour where we were shown round the vast storage areas.

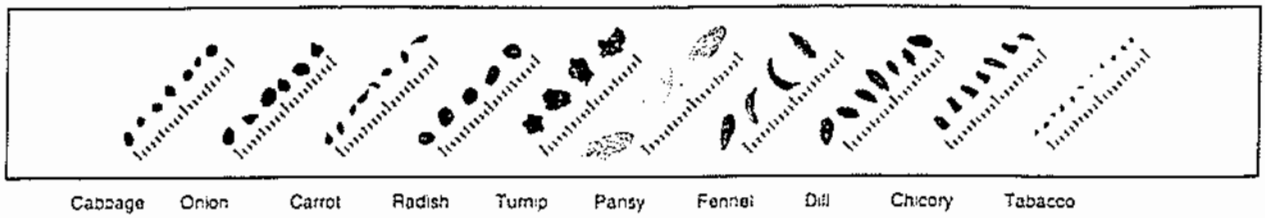
ALAM members are extremely grateful for our warm welcome, and interesting and informative technical update that we received at Kvernland Accord. A special thank you to Dave Ward for his personal efforts which made this visit such a success.

David Ritchie
Barony College

The exact sowing mechanism of the MINIAIR S guarantees uniform distribution of seed types which differ in size, shape, and surface. The easily exchangeable seed disc mounted on a ballbearing shaft rotates between two high-grade steel half-housings. The holes in the seed discs vary in number and diameter according to the seed. Seeds are sucked from the hopper on to the holes on the rotating seed disc. The infinitely adjustable serrated selector ensures individual placement. An atmospheric jet interrups the vacuum allowing the seeds to be placed directly into the seed furrow. Finally, an adjustable pressure jet is directed through the seed hole to free it from any dust or seed debris.



Seeding heart



Kverneland

Kerteminde, Denmark 14-04-00

This visit started in the now traditional Danish manner with coffee and pastries in the dining area of what was origionally theTaarup factory,where we were greeted by Per Henningsen the Sales Director. Following the refreshments a tour of the production facility commenced.

The factory works on a one shift system which starts at 6am. and finishes at 2pm. at present is working the full 7 days. 180 people are employed in the factory with a further 50 people in administrative and marketing posts.

Most machine production is carried out on a KAN BAN system which monitors stock levels and organises for new machines to be built as the stock is depleted. This means that a number of different types of machine are in the process of production at any one time. However some of the larger machines are batch produced such as the forage wagons and the Ten x forage harvesters.

Raw steel materials were delivered to the factory on a just in time basis to match production needs. Only special steels with longer lead times from suppliers needed to be held in stock.Steel components up to 6mm thickness are produced by punching out with computer controlled machines while thicker material is cut by 4 laser cutters, one of which is fitted with a magazine feed giving it the capacity to operate through a full 24 hour period once loaded.

Some parts are press formed and manually welded into sub assemblies on jigs, there are 3 weld robot units used for larger parts like machine mainframes and these are designed to work on a 2 jig system where the operator loads one jig while the robot is welding the other. Disc mower beds are machined after welding to overcome any distortion problems and are then washed out to remove any swarf. Washing is carried out in a specail enclosed bath which rocks the bed from end to end to rinse out the metal particles.

The mower bed assembly incorporated many common parts for the different machine cutting widths with the spur gears having a specially relieved tooth profile at the outer edges to allow for flexing of the bed during operation.The idler gear stub shafts are cooled to -18 c to aid fitting. Once assembled the beds are transferred to a soundproofed testing box where they are filled with oil and run up for 12 minutes while they are monitored for power consumption and noise output. These test results are recorded on the bed build identification sheet which is kept on file at the factory for future reference should the need arise. Some mower primary gearboxes are bought in from Comet in Italy.

Parts which require painting are first washed in acid based solutions and then in phosphate solutions to provide suitable rust inhibition and paint key. Most machine sub assemblies are painted by a powder coating method which is a two stage process, the first stage being to apply the powder coating and the second stage to melt the powder in an oven at approximately 160 c to provide the high quality durable finish. Heat sensitive assemblies like hydraulics and gearboxes go through the wet paint process to ensure their integrity.

The final stages of production involve building of assemblies and packaging to meet the individual transport requirements as machines are shipped throughout Europe.

Another area of the factory which we visited was the testing department where there were a number of different components , systems and machines undergoing some fairly arduous testing! A mounted mower conditioner was having its frame and headstock strength tested by being bounced up and down on the back of a large old four wheel drive Ford. This in turn was

running on a rolling road with modified oval rollers causing the tractor to leap up and down briskly. Other items on test included a complete hydraulic circuit, trailed mower drawbar, rake tines working in a soil tub and an autoswather unit cycling through its transport and work positions. Testing was set up to simulate ten years work and there was evidence to show that some components had succumbed to this arduous treatment. Field testing also took place and a policy of only sending new models to European markets in their first year of production was also in operation

In the past Tarrup were probably best known for their single chop flail forage harvester, over the years they have produced over 110,000 units. Today they are producing machines with innovative design features such as the centre pivot drawbar for the trailed mower conditioner and the floating cutterbar linkage together with the demountable two way autoswather which will comfortably put three rows into one.The flywheel forage harvester is available with an anti block sensing system which will stop the feed system if there is a risk of spout blockage. These features all demonstrate that the company has in the past been able to identify market development opportunities and act positively to develop and produce quality machines to meet a need. This has allowed the company to develop and grow to the point it is at today as part of a Scandinavian group with a major share of the agricultural machinery market

J Gough
30-04-00.

EUROPEAN STUDY TOUR - DENMARK

MF DRONNINGBORG

As we travelled north to Aalborg up from Esberg on the evening of our arrival in Denmark, we passed numerous lorries loaded with new MF combine harvesters, heading south. Twenty years ago this was a common sight back in Dumfriesshire as combines also streamed south from MF in Kilmarnock. A touch of déjà vu for myself!

We were welcomed to the MF Dronningborg Manufacturing Facility by European sales manager, Knud Just. The factory is situated in the suburbs of Randers, which itself is on the north eastern side of the Jutland peninsular. A carpenter, Neils Kristian Nielson, originally started to build hand driven grain-cleaning winnows 106 years ago in an old windmill. This he used to power his woodworking tools in the early years. This business developed into the production of threshing machines. The Dronningborg Company continued to build threshing mills up until 1960.

Trailed combine harvesters were first imported from Sweden in 1954 then built under licence. The first self-propelled combine was produced in 1958 and throughout the 1960's, the company developed a complete range of self-propelled machines. A new large combine design was launched in 1969, but proved too large for the market of the time. However, this technology proved itself in later years. These designs became the backbone of a new range launched again in the eighties when the market started to demand larger machines.

Dronningborg originally sold combines primarily in Scandinavia, but exports to continental Europe and the UK began to grow. In 1984 MF approached Dronningborg with a marketing agreement to sell Dronningborg combines within the UK and Europe. However, they were still sold under the Dronningborg badge in Scandinavia. Under the agreement Dronningborg could sell machines themselves, should the MF market share drop below 5%.

Manufacturing agreements with Case IH were also established and all three badged combines have been produced on the same production lines at Dronningborg. In 1992 the company hit hard times and had to be refinanced by both MF and Danish Pension Funds. Three years ago MF Agco bought the non-MF shares to make Dronningborg a wholly owned Agco subsidiary. Dronningborg now produce Fendt badged combines sold in Fendt green. These are all built to a high standard specification. Dronningborg sells these for around 18% more than MF machines, which gives more scope for profit margins.

The new 7200 range has been a development upon which the preceding 32/34 and 38 and 40, which started life back in the mid 80s. This new range encompasses the main features of the predecessors, but are claimed to be capable of around an 11% higher output due to various mechanical refinements and application of computer control systems. The smallest 7250 has, as a result, a higher throughput capacity than the largest Dronningborg / MF30, sold in the 80s.

Mechanical improvements include:

- Updated and cleaner burning Sisu turbo inter-cooled diesels
- Rotary 165 – 325hp separation between drum and walkers
- Multi triple pump up-rated Hydraulic system
- High inertia cylinder using Rasp Bar backing plates for extra weight and support
- Cruise control which measure belt slip on the threshing drum drive to maximise forward speed
- New longer grain pan
- Redesign cab control layout
- Autoglide table control of main features

Knud told us that problems encountered recently with semi ripe straws are better handled with rotary separator systems, as compared to the straw walkers on their own. However, straw walkers still tend to be better in the damper Danish and North European harvest conditions. As a result these hybrid combines tend to be a good compromise in most conditions. On average there are about 10 good

harvest days at the end of August / beginning of September, (the usual harvest period in Denmark) so the harvesting window is tight, combines here work hard, usually in damp conditions! "Just like home"!

Danish sales are, in total, around 400 combines per annum. Sales from Dronningborg account for approximately 25% of this market. However, with the current run out terms on the previous model stock this is nearly 50% at this time.

There are about 3500 main parts in each Dronningborg combine of which roughly 50% are bought from outside suppliers. These include engines from Sisu, and Transmissions and axle assemblies from Gleaner Corporation in the USA. Hydraulic systems and electric's make up the bulk of parts purchased from outside, with the wiring in these combines manufactured to military standards. The combines are then hand built in batches of 22 combines, which are produced every two weeks.

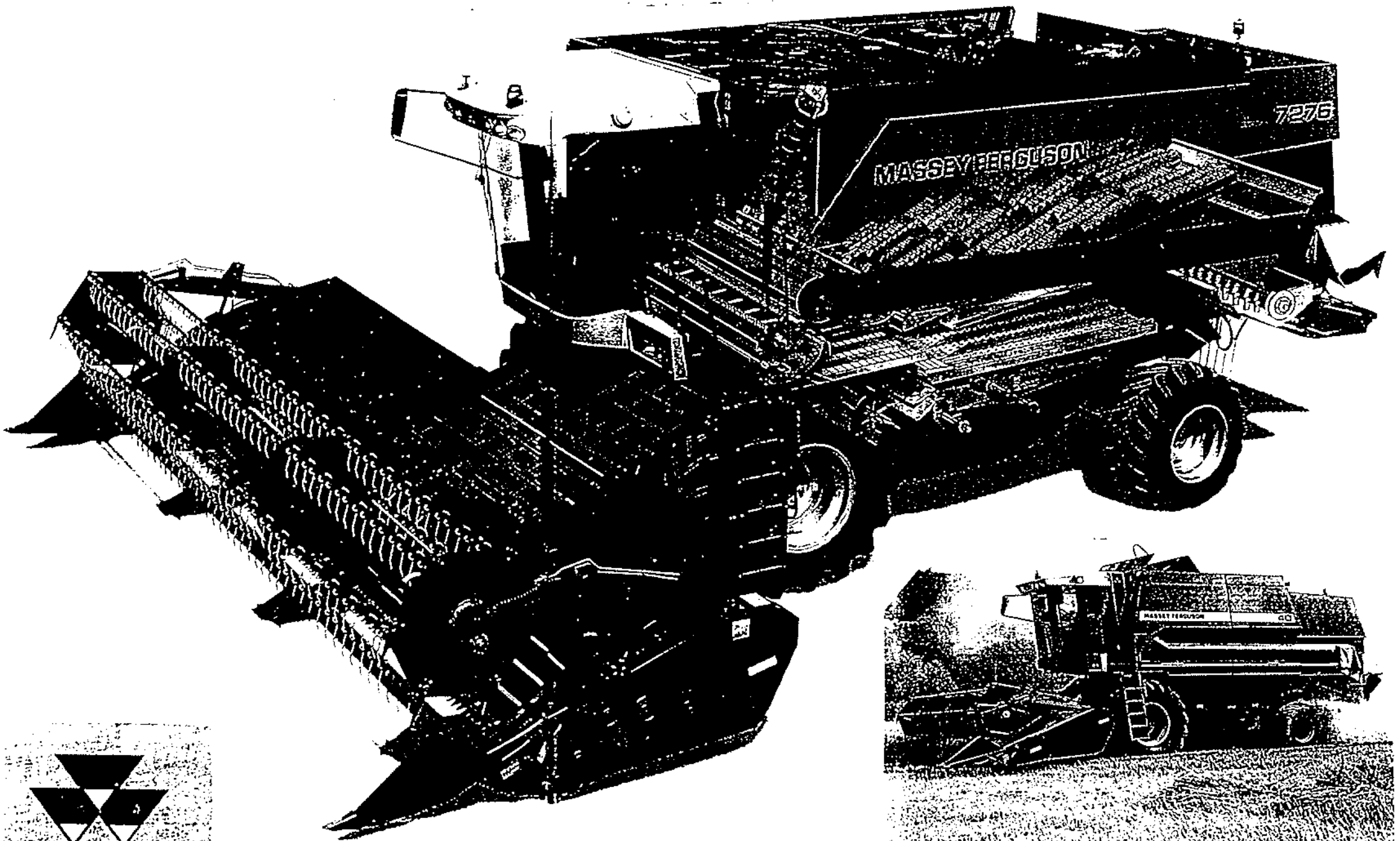
Dronningborg are well equipped with metal cutting and folding equipment. The factory is sectioned into sub assembly production areas, with all sub assemblies pointed separately using a 2-pack point system before the final assembly. In addition to their own requirement tables are manufactured for the Case Axial Flow combines sold in the European market. Dronningborg has further developed the MF Power Flow table. We were given a demonstration of the fitting of Powerflow roller end flanges, which are now thermally shrank and glued into position. This has eliminated the problems of distortion associated with the previously welded units resulting in better belt tracking. Powerflow tables cost roughly £5000 over the conventional table. MF still protects that patent for the Powerflow. Most of the combines are now built from High Tensile Steels, which means lighter gauges of sheet, which results in a reduction in weight. Cabs are manufactured in house again phosphated and painted prior to assembly. Straw walker crankshafts are assembled with rolling element bearings and are supplied as complete units for replacement, should they be required.

The factory currently employs 600 people, which is one employee per combine the factory produced last year. The factory area total 18Ha, 7Ha of which is under roof. There is a mix of traditional wooden Production Buildings, as well as newer steel and brick. The tour that we took covered about half a kilometre.

The recently completed Harvest Academy training centre offers everything from sales teams product awareness courses, dealer service course and operator training courses, which are often packaged in with combine sales. We also had the opportunity to visit their new showroom where we were able to look first hand at the 7700 features.

A.L.A.M. are extremely grateful to MF Dronningborg for our delicious lunch and all round welcoming hospitality. Knud's talk on combine production history and developments at Dronningborg have given everyone valuable insight into the company history and future developments. Knud's knowledge of combine harvesters, first class English and subtle wit made this visit a very interesting and enjoyable learning experience. Our only problems is, how are we going to pay for this combine we have bought lads!! He was a very effective salesman as well I hasten to add.

MF 7200



MASSEY FERGUSON

EUROPEAN STUDY TOUR - DENMARK

KONGSKILDE

As is the norm for most factory visits our first experience was to be ushered into a well appointed lecture room, in the training school, where jugs of coffee and plates of scrumptious cookies awaited consumption.

The Product Manager, Per Oluf Ohlson commenced by explaining that Hans Tyndeskov and Mogens Peterson, then producing a simple pneumatic grain blower had founded the company, in 1949. The main plant now covers an area of 7 acres and a vast product range.

Kongskilde Industries now have four separate production lines:-

Soil Preparation: the company expanded by acquiring Juko (1950) manufacturer of combination seeding machines; Becker (1970) with its range of precision seeders, and Overuum (1998) the Swedish plough maker - the only one in the group to retain its own brand name. The overall range under this heading covers primary and secondary cultivation, seed drilling and placing, plant care equipment and stubble treatment machines.

From all the types of machinery produced in this category, from figures supplied, the only range showing sales growth in Denmark are the inter-row cultivators. Tractor sales were down by almost a thousand units on 1997 – 1998 figures.

Grain Handling Systems: As mentioned previously, this was the base on which the firm was established. Kongskilde now offer a full range of equipment for pneumatic or mechanical transport, cleaning, continuous flow or batch drying and flat or silo storage systems. Pipes, bends etc. are all made at this factory.

Space Heaters: The majority of types in this range are mobile units although static models are included in the catalogue. Versions available are direct and indirect oil fired, gas fired and electrical heaters. A waste oil burner is also produced.

Industrial Pneumatic Conveying Systems: This became a separate division in 1960. Customers are invited to bring the product or waste material to the factory so a suitable method of handling or processing can be developed and tailored to suit the customer's premises. Pneumatics is the main propulsion method with venturi created extraction vacuum, shredding machines for reducing paper or plastic trimmings for recycling and cyclone separators plus associated pipework.

Kongskilde have acquired many foreign markets by buying up leading companies in other countries and recently installed powder painting facilities in Overuum and Poland. It is claimed that products from the Polish factory are almost up to Danish standard.

Much emphasis is placed upon producing, for the customer, good instruction books and parts lists.

Prior to being entertained with a sumptuous lunch we were escorted around the factory where we saw both antiquated labour intensive and highly automated modern production methods consuming some 2000 tonnes of steel per annum.

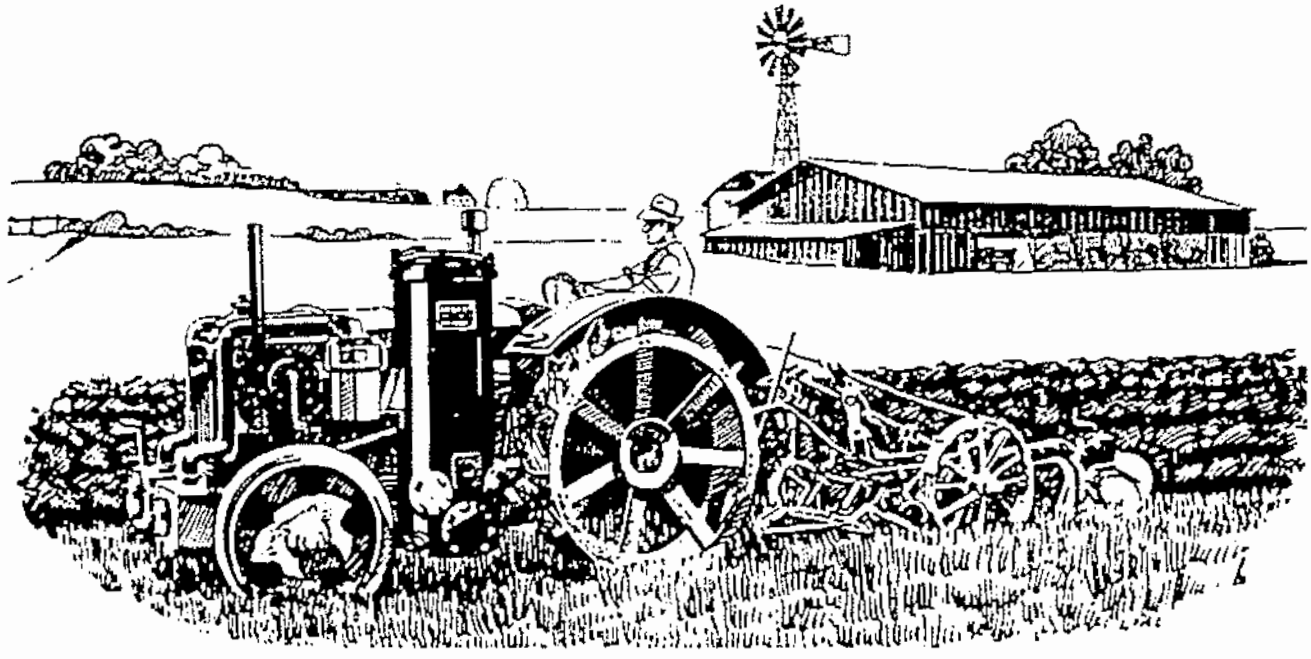
From this we moved into a product display area for some 'tyre kicking'. We should probably have spent more time in this area had we not been ushered to the original workshop, which now houses the Kongskilde Museum. The displays here illustrated well the progress from modest beginnings to the industrial giant of today.

This was a visit of the highest standard and our hosts were thanked accordingly.

RYAN ROBERTS – DUCHY COLLEGE

PIONEREN

Dansk Veteran Traktor Klub



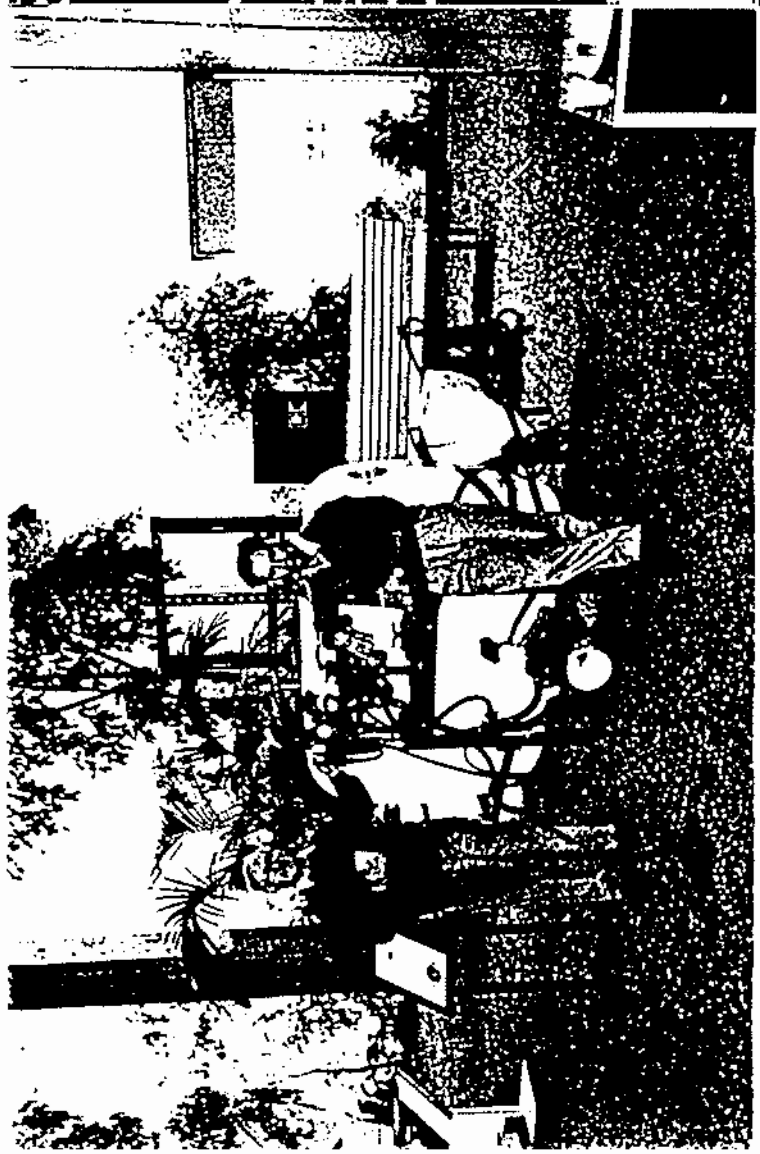
12. ÅRGANG NR. 2 APRIL 1999

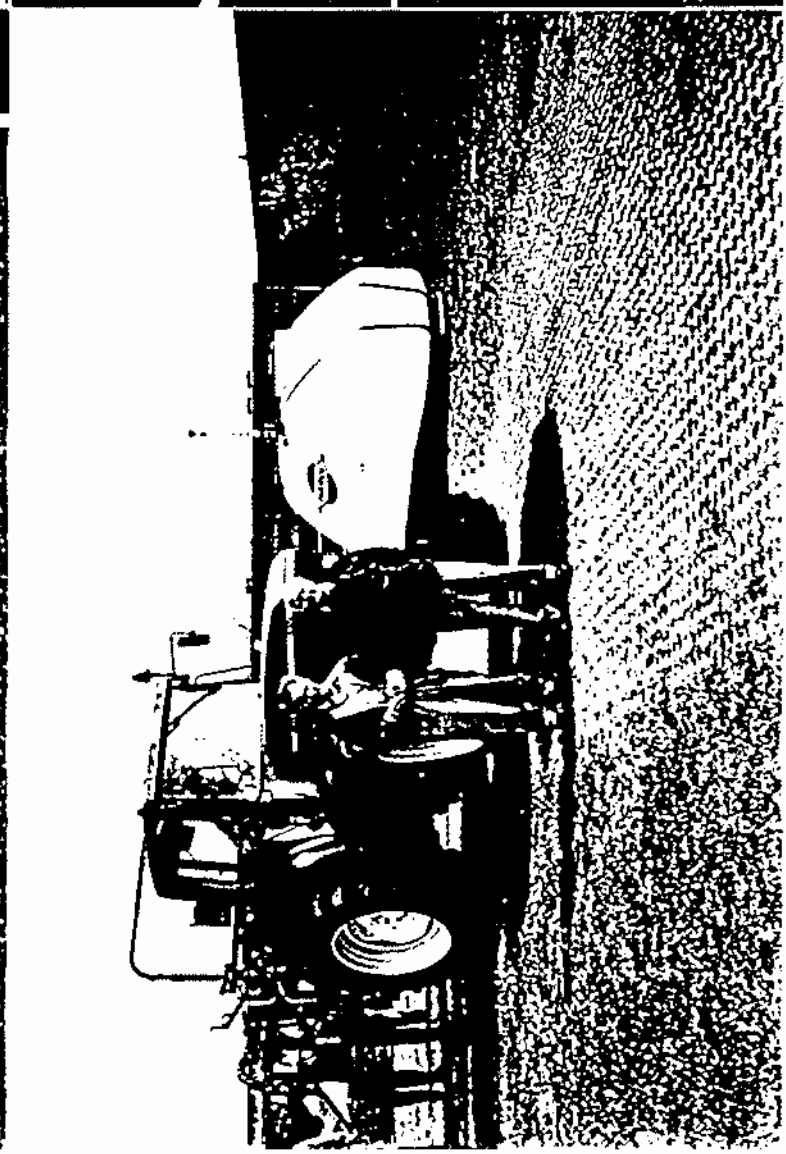
A pilgrimage to the Lolland Falsters
Tractor and Engine Museum

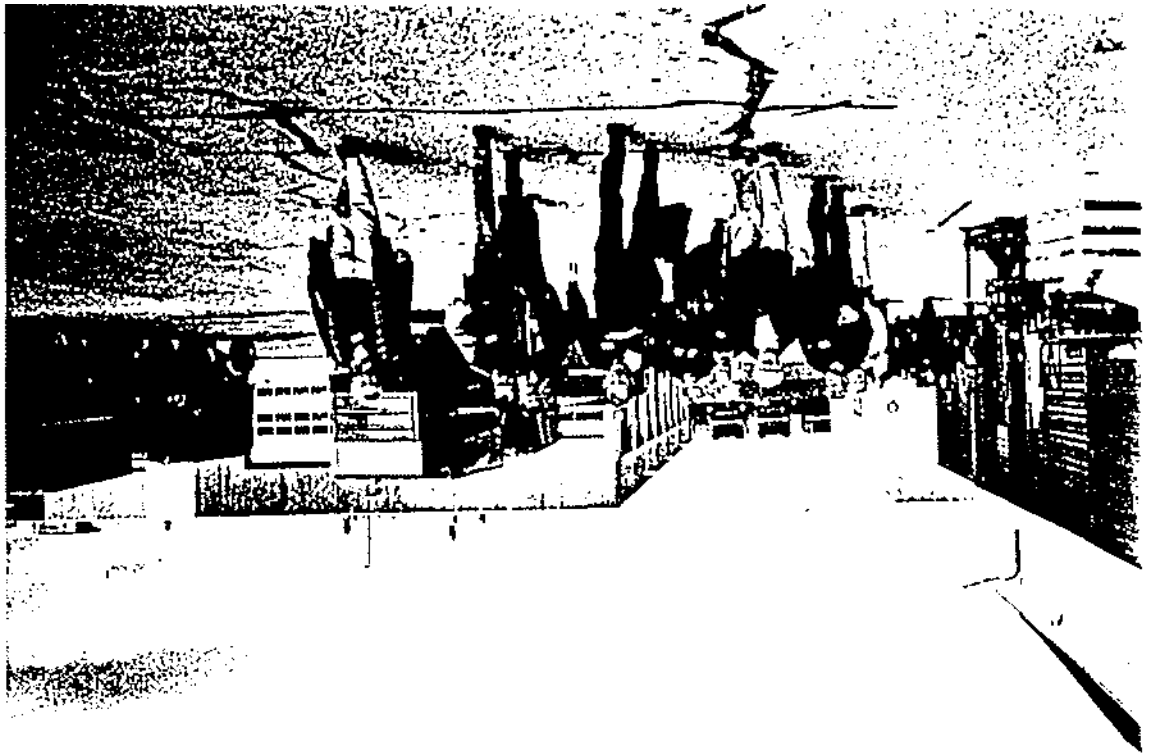
It would be futile to try and capture through whatever means, all that was contained in the museum, so I have confined these mere jottings to some of the lasting impressions of a memorable visit.
I have found that vintage machinery resonate with people in very different ways; it's only the truly ingenious devices that capture the imagination of many and such items were not found wanting .
Our guides for the visit were Morgen and Annus, the latter was a tall, upright young man, who spoke very good English and had a resounding voice, which boomed through the entire building and to the fields beyond. The museum was once a seed mill of very significant proportions, with three wooden floors supported by 24 columns of 13x7 timber stanchions. Someone at one time must have worked out the weight which could be supported on such columns, but I had an uneasy feeling that 38 tractors on the first floor and a further 42 on the second, was knocking on the limits; for pine at least. The H.S.E., Planning Officer, Fire officer and a host of other official bodies would have piled in to this building if it were on British soil, and a vivid imagination as to the outcome is not needed.
Two brothers who farmed in the area, started the collection in 1988. Between them they had some 40 tractors and no sooner had the idea germinated, than a further 40 came from like minded people. By today the museum has over 80 tractors and a similar number waiting in the wings to go on display.
With the introductions barely over, the sound of a tractor approaching at high speed could be heard. This is the kind of sound that immediately puts one in "bollocking mode" when dealing with students. For the un-initiated, this was just another tractor haring along, but for Gwynfor, this was the sound of a raving BUKH 544, which he had been craving for. The delight and boyish enthusiasm in the driver's eyes matched those of Gwynfor's and within a short time, technicalities were exchanged and compared. The remainder of us left the two and continued to view some very interesting exhibit. One, an American tractor made by the Electric Wheel Company had just arrived that day, much to the delight of our hosts. This machine had a power driven water pump, fitted a good 20 years before it was considered necessary on British built tractors.
The snake like procession came to a halt on the first floor by a steam driven Standard Fordson, converted in 1920 by Ellehannes. I stood by this machine for a good 20 minutes listening in awe to Paul Durant and Dick Waterson pontificating as to the workings of this strange beast. Dick, in his inimitable way had all the working principles sorted out, and a modicum of agreement was achieved between the two on the way the valves worked. However when a small circular appendage with three pipes connected to it, was discovered on the bell housing, things went rather different. From here on, and for many more hours, all kinds of advanced thermodynamic theories emerged. At one point the steam and oil were merged together in the sump, and at the other end, oil in the back axle fuelled the flash boiler; and so it went on. The two worked so hard at fathoming out how

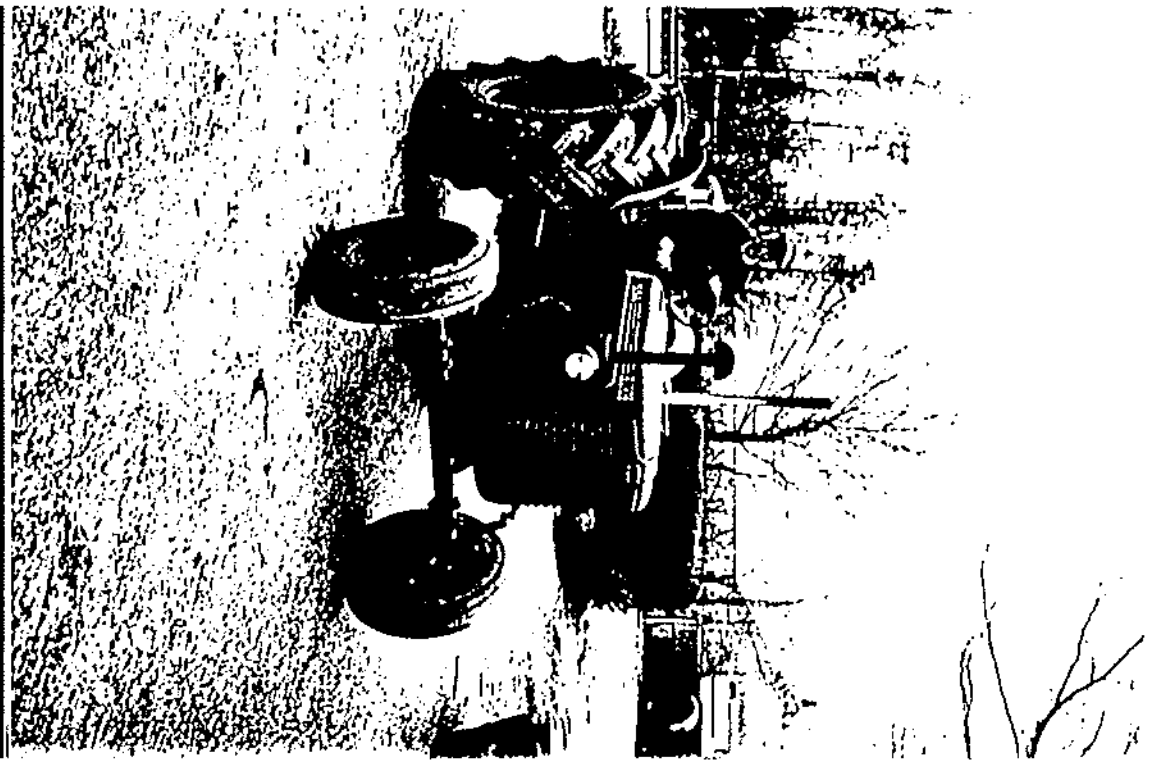
it worked, that they missed a large number of the exhibits, but I am sure if the inventor was listening up there, he must have enjoyed every bit as much as I did.
The visit inside the museum would not be complete without starting the BUKH stationary oil engine. This drove a shaft high up in the roof, which was supported by two hanger bearings, or so I thought. I felt quite uncomfortable looking at the large wooden pulley being driven at speed well in excess of what it was designed for. However my fear was allayed somewhat when two outrigger bearings supporting the shaft were spotted hiding in pockets within the wall and the engine governor took over from the operator. It was clear that this middle-aged gentleman wanted to prove to his captivated audience, that the BUKH spirit, despite the closure of the factory, was still very much alive in Denmark
The visit ended outside the building with another Sandard Fordson, this time running on methane gas. After vigorous turning of the hand operated turbo, which drew gas from the burner to the carb, the engine fired and once heated, ran as sweet as a nut without a trace of blue smoke. I had seen similar exhibits standing in museums in Germany many times before, but this was the first time I saw one running. I couldn't believe that such a small quantity of wooden blocks, placed in a burner could generate enough gas to power a tractor, a truly amazing site.
The visit ended in a local hostelry which did us proud, however proceedings were brought to an abrupt halt when the chairman heard through an intermediary, whom shall remain nameless, that the driver was experiencing extreme pressure on a particular sphincter muscle and had to depart quickly. This turned out to be just a means of getting us back on the bus in double quick time and full marks to the driver for his originality.
This was a cracking visit enjoyed by everyone.

Emlyn P Thomas.

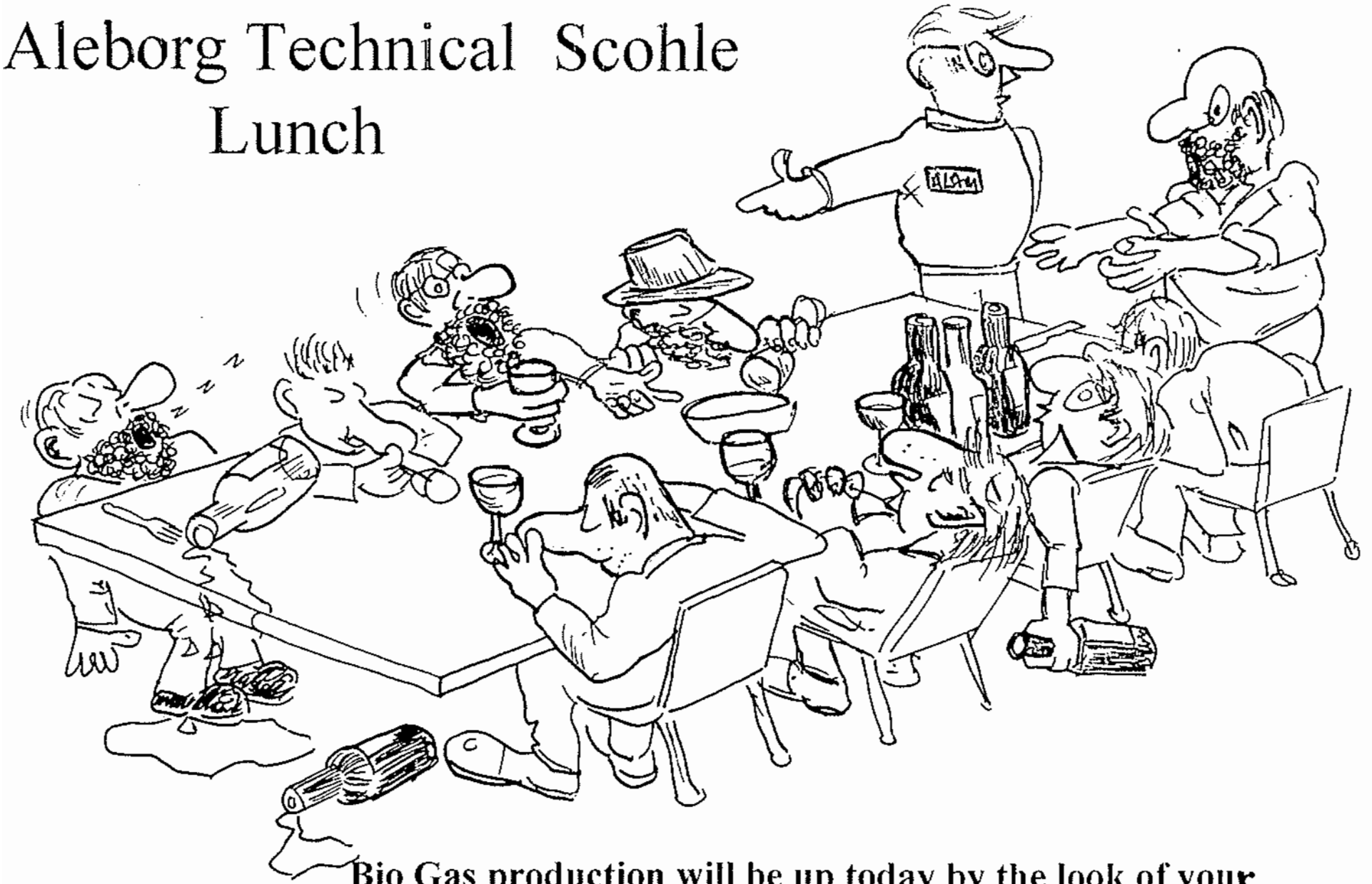








Aleborg Technical Scohle Lunch



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