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A.R.C. WEED RESEARCH ORGANIZATION

Field Experiments Committee

TREATMENT CLEARANCE FORM

W.R.O. Number

Project Number

Officer Responsible

Probable Location

Intended Date of Start

Crop(s)

Dimensions\*

Number of Replications

Main plots : . X

One replicate X

Sub-plots : X

Total area X

Herbicide Treatments (Main or sub-plots)

Number of Treatments

Name of Chemical	Dose (range)	Area involved yd <sup>2</sup> or m <sup>2</sup>	Time & Method of Application	PSPS Clearance Situation	Instructions regarding experi- ment and produce

Remarks (include any additional information that may assist PSPS e.g. plans for clearing site at end of experiment)

Duplicate returned to originator  
Date .....

\* When clearance is being sought at a preliminary planning stage the exact dimensions need not be included, but will be required later.

A. Subject Card Section of Index Sheet

Project No. .... Expt. No. .... (a)

Subject Cards	Subject No(s)	Subject Validity	Experiment carried out by:-	Location	Brief description Notes on crops chemicals and experiments in not more than 10 words
	b)	c)	d)	e)	f)

This section must be completed for all experiments and answers should concern the experiment as a whole.

- a) The experiment number is entered in full here
- b) If the experiment is concerned with one or more of the subjects on the form the appropriate number(s) should be listed here. If none of the subjects apply, leave this space blank.
- c) Please enter in this column a cross against any of the numbers listed in b) for which the results are questionable or of doubtful validity. No other entry is necessary.
- d) If the experiment was carried out by W.R.O. staff only, please enter name of the officer responsible. If the experiment was co-operative, answer with the name of W.R.O. member concerned and name of co-operating organization, e.g. R. J. Haggart, co-op - G.R.I. Hurley. (A co-operative experiment is one where the co-operator does a share of the work. It may be that only the co-operator has sufficient data to write a complete top sheet. When this occurs a copy should be obtained if possible and the W.R.O. member should provide an index sheet.)
- e) If the experiment was carried out at Begbroke Hill, answer Begbroke Hill with the name of the field afterwards, e.g. Begbroke Hill, Deal. If the experiment was an outside site answer with the name of the nearest village and the county:- e.g. Waddesdon, Bucks., or Mepal, Cambs.

B. Chemical Card Section of Index Sheet

This section must be completed if chemicals form part of the experiment. The various parts of the section should be answered in relation to each chemical used. Parts which do not apply should be left blank.

CHEMICAL CARDS	Application Data	Chemical Compound	a)	a)	a)	a)	a)
		Soil/foilage Application	b)				
		Formulations	c)				
		Mixtures	d)				
		Volume/Drop size	e)				
	Crops	Cereals					
		Other Arable					
		Permanent Grass					
		Sown Grass	f)				
		Fruit					
		Ornamentals					
		Other crops					
	Weeds	Annual Monocots					
		Annual Dicots					
		Perennial Monocots	g)				
		Perennial Dicots					
		Woody/Aquatic					
		Properties	h)				
		Residues	i)				
		Other Aspects	j)				
	Expt.	Screening/Development	k)				
		Valid/Questionable	l)				

- a) Chemical - the name of each of the chemicals (as used in Weed Abstracts) and mixtures of chemicals used in the experiment should be entered. Where mixtures have been used enter as follows:- Dalapon/dicamba. If either or all the chemicals involved in the mixture were also used alone they should be entered again separately. A mixture is taken to mean two or more chemicals applied to the same area of ground - no distinction is made between chemicals mixed before application and those applied one after the other with or without a time interval.
- b) Was the chemical applied to the soil, the foliage or both?
- c) Were different formulations of any of the chemicals compared or in some cases was an unusual formulation used? If 'yes' tick the chemicals concerned.
- d) Were mixtures used? If 'yes' tick in appropriate squares.

- e) Were comparisons of volume and/or drop size made? If both answer V/D, if one or the other answer V or D.
- f) Tick the crop(s) to which each chemical was applied. If the answer to this is 'other crops' add group name, e.g. vegetables.
- g) Tick the type of weeds to which each chemical was applied. If the answer is woody/aquatic answer W or A or W/A. If no weed species were present or if the number was so small that no data was collected, leave this section blank.
- h) If other properties of the chemical were considered (e.g. differences in leaf cover when used with different wetters) tick the appropriate squares. If this aspect of the chemical has not been noted in the subject section, add a brief note.
- i) Was information collected on the residual properties of the chemical? If so, tick where appropriate.
- j) If any other aspects were covered, for example the time of application indicate this with a tick. If this aspect has not been covered in the subject section, add a brief note.
- k) Were chemicals used in a screening trial or development trial? answer S, D, or S/D.
- l) Indicate here whether the data collected for each chemical is valid or questionable. Insert V or Q.

C. Species Card Section of Index Sheet

This section should be completed if data was collected concerning the crop and weed species. The various parts of the section should be answered in relation to each species recorded. Parts which do not apply should be left blank.

SPECIES CARD	SPECIES (Crops & Weeds).						
		Crop/Weed	b)				
	The Plant	Propagation/Cultural	c)				
		Varieties	d)				
		Seeds	e)				
		Yields	f)				
		Quality	g)				
		Stage of Growth	h)				
	Application condi- tions data	Environment	i)				
		Ecology	j)				
		Soil/Foliage					
		Formulations					
		Mixtures	k)				
		Volume/Drop size					
		Scores/Kills/Notes	l)				
	Effect etc.	Underground Organs					
		Physiology	m)				
		Morphology/Anatomy	n)				
	Expt.	Screening/Development	o)				
		Valid/Questionable	p)				

- a) Species - the botanical of each species should be recorded. The English name of crop species should be bracketed afterwards.
- b) Please state whether the species are being considered as crop or weed. Answer C or W. Note In some cases it is quite possible that species normally termed crop will be considered as weeds and in these cases the answer should be W (e.g. volunteer Barley).
- c) Where the experiment provides information on propagation or cultural aspects of control, please indicate here by means of a P or C.
- d) Were different varieties of any of the species being considered; if 'yes' insert tick.

- e) If seed has been collected and checked for germination, quality etc. tick. Also if the experiment involves seed germination.
- f) Make an entry here if yields are being considered. If yields are not involved or are purely a means of assessing some other factor leave this blank.
- g) Tick here if quality was being considered. If quality was merely a means of assessing some other factor, leave blank.
- h) Was stage of growth of any of the species a particular consideration of the experiment, if so tick.
- i) Was the environment of any of the species a particular part of the experiment, if so tick.
- j) Where the experiment provides information on the ecology of the species present, this should be indicated with a tick.
- k) Were chemicals applied to soil/foilage? Were different formulations or unusual formulations used? Were mixtures used? Was volume/drop size compared? Answer in appropriate square in similar manner to chemical card section, but in relation to species.
- l) Were assessments for each species made in form of scores, kills or notes, answer with S, K, or N, or a combination if more than one type of assessment was made.
- m) If the experiment provided information on either or both of these subjects, leave a tick in the appropriate place.
- n) If the experiment provided information on either or both of these subjects, answer M, A or M/A.
- o) Were the species being considered in a screening or development trial? Answer S, D or S/D.
- p) Indicate here whether the data collected for each species is valid or questionable. Insert V or Q.

VI - THE IRRIGATION SYSTEM

The irrigation system at Begbroke Hill consists of a reservoir with a capacity of 26 acre inches, a pump with a maximum throughput of 6000 gal/h and mains to hydrants situated in all the arable fields on the farm.

The reservoir is normally filled at the beginning of the season by pump from the spring, and, depending on rainfall, a further 60-70 acre inches can be supplied by the spring during the period May, June and July. A total of 90-100 acre inches of water is therefore normally available for irrigation in any one season. At maximum output it is possible to apply approximately one acre inch of water in four hours.

The irrigation pipes are stored on the East side of the grain dryer, and a specially equipped four wheel trailer is normally available for transport.

Small pieces of equipment and spares are held by the Farm Manager.

Responsibility for the various aspects of the irrigation system have been apportioned as follows:-

- a) Water supplies - Officer in Charge of Irrigation (J. Holroyd)
- b) Irrigation pipes etc. - Farm Manager
- c) Pumps and machinery - Workshop Supervisor

Keys to the pump house are held by b) and c).

Procedure for using Wright Rain irrigation

1. Ascertain whether suitable supplies of water are available from officer in charge of irrigation.
2. Design the layout of a suitable irrigation system. (The sprinklers should be arranged in rows with 60 ft. between the rows and 35 ft. between the sprinklers in the row. This arrangement at 40 p.s.i. should apply approximately 0.25 acre inches per hour).
3. Collect pipes from east side of the Dutch Barn and smaller pieces of equipment and key to the pump house.
4. Ascertain whether any other person is using the irrigation system. If so, check that their water supply is unaffected when you turn on the water.
5. When less than 500 gal/h of water is being used, the by-pass valve in the pump house should be opened to maintain adequate flow of water through the pump.
6. When irrigation is finished, switch off the pump, return the pipes to the barn and the other pieces of equipment to the Farm Manager.
7. Inform officer in charge of irrigation as to how much water has actually been applied.

This is only a brief summary and if further information is required this can always be obtained from the Farm Manager or Officer in charge of irrigation. Any damage or loss should be reported to the Farm Manager and any mechanical defects to the Workshop Manager.

#### Small Plot Irrigator

This irrigator consists of a 'Handy Angle' frame, 9 ft. x 10 ft. on which are mounted 8, 10 ft. lengths of 1 in. piping, 1 ft. apart. Bray jets (No. 000) are set in the pipes at intervals of 1 ft. (On the outside pipes the spacing is 6 in.). The height of the pipes above the ground and the direction of the spray can be altered if necessary. Plastic curtains are hung round the frame to reduce wind effects.

The irrigator is connected by  $\frac{1}{2}$  in. hose to a control table on which are mounted a stop tap, filter, water meter (recording in gallons) and a pressure gauge. A 60 ft. length of 1 in. pressure hose connects this table to a riser from a 3 in. pipe on the irrigation system.

The irrigator will apply water to the area at a rate of about 5 in. per hour at a pressure of 20 p.s.i. The central 6 ft. square can be assumed to receive a reasonably even amount of water (variation from point to point in this area is probably of the order of 10-15%) and calibrations of application rates have been based on water received over this area. With the jets set at 5 ft. above the ground and pointing downwards, 1 in. of water is applied to the central 6 ft. square when 45 gallons have passed through the meter at 20 p.s.i. Where repeated applications are made to the same plot the position of the frame should, ideally, be changed each time.

- Note 1. The position of the jets is likely to be altered. Calibration details should be checked with D. V. Clay before using the equipment.
2. When this irrigator is going to be used, the by-pass tap in the pump house should be opened slightly after switching on, to give a continuous small flow of water through the pump.

#### Oscillating Spray Line

The Kinnell spray line consists of 16 ft. lengths of  $1\frac{1}{2}$  in. diameter aluminium pipe each with 8,  $\frac{1}{36}$  in. diameter orific nozzles at 2 ft. spacings. The pipes are joined by a 'twist-on' connection and rest on  $1\frac{1}{2}$  ft. high wire stands, one stand per section of line. Each 16 ft. length of spray line delivers 1 gallon/minute at 50 p.s.i. At this pressure and spraying a width of 20 ft the application rate will be  $\frac{1}{3}$  in./hour.

The spray line is connected to a Huggan 'waterboy' oscillator which uses the water pressure to turn the line through the required angle. The line can spray a maximum swathe width of 40 ft. but the stroke of the oscillator piston can be adjusted to give a narrower swathe.



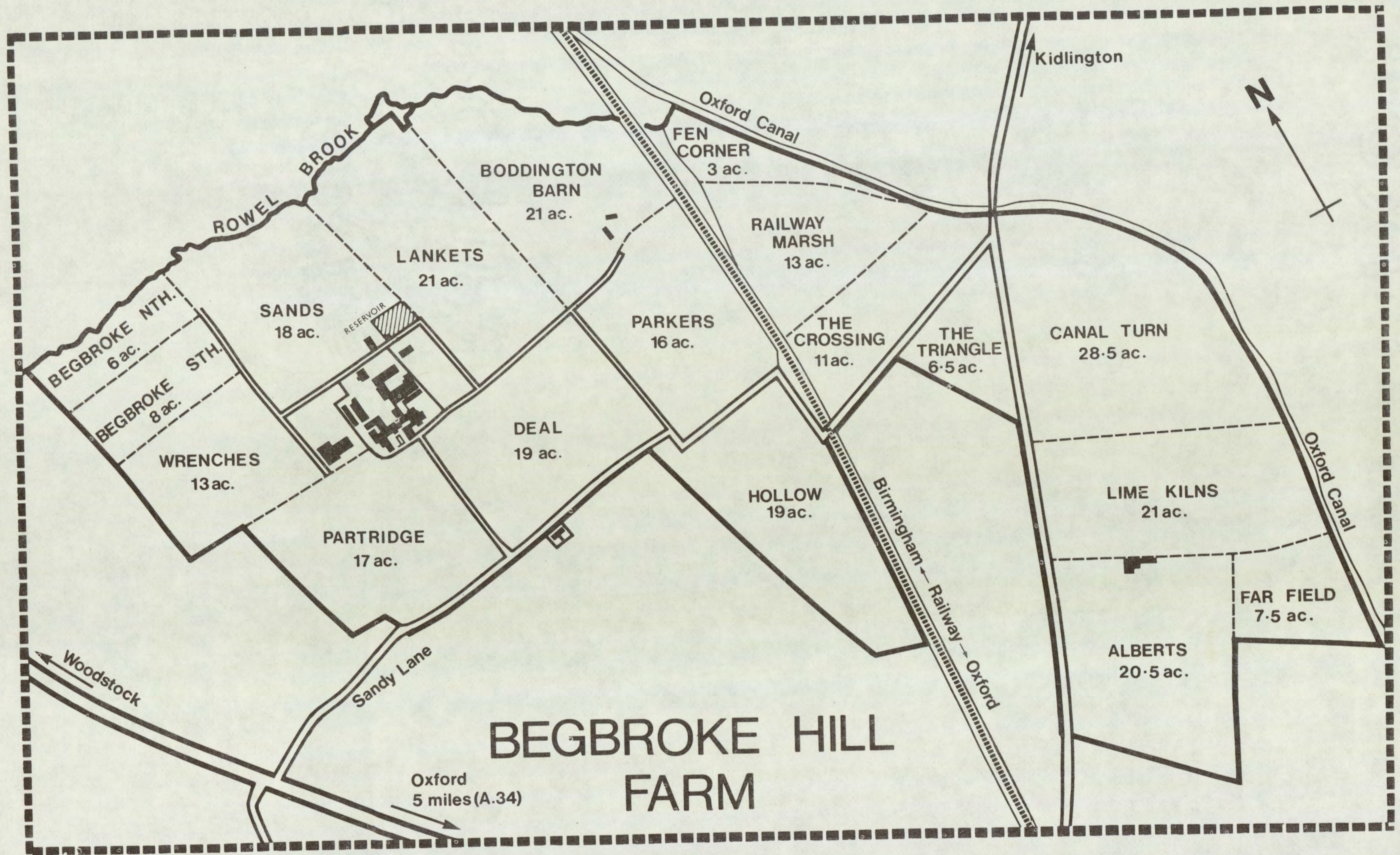
Connection is made to the irrigation system using a series of couplings on to the end of a 3 in. irrigation pipe on which the hole for the riser has been blanked off. On setting up always flush out the spray line with the end plug removed to reduce chances of blockages in the nozzles. Do not use wire to clear blocked nozzles.

Two oscillators and 20 lengths of spray line are available, not more than 10 lengths should be used with one oscillator.

The spray distribution is good in calm weather but variable in windy conditions.

PART TWO

INFORMATION



# BEGBROKE HILL FARM

II - LISTS OF WEEDS1. Weeds occurring on Begbroke Hill arable land

Lists of the 10 most common weeds, in order of frequency, as found on fields of the arable farm.

Abundance - each species is awarded a score out of 3 for abundance (3 = most abundant)

Distribution S = scattered  
D = well distributed  
ZS = zone strip  
ZP = zone patch  
I = irregular

Location N = North  
S = South  
E = East  
W = West  
and combinations of these four.

Partridge

Stellaria media	3	D	All over
Matricaria recutita	3	D	Mainly E half
Legousia hybrida	2	D	More W half
Poa annua	2	D	Mainly S quarter
Chrysanthemum segetum	2	S	More S half
Papaver rhoeas	2	I	Mainly W half
Veronica persica + arvensis	2	S	More W half
Aethusa cynapium	1	I	All over
Anagallis arvensis	1	I	All over
Polygonum aviculare	1	I	All over

Wrenches

Poa annua	3
Stellaria media	2
Chrysanthemum segetum	2
Capsella bursa-pastoris	2
Lamium amplexicaule	1
Viola arvensis	1
Veronica persica	1
Spergula arvensis	1
Senecio vulgaris	1
Matricaria recutita	1

Begbroke South

Stellaria media	3	D	All over
Poa annua	3	D	All over
Viola arvensis	3	I	All over
Aphanes arvensis	2	I	Mainly E half
Veronica pers. + arvensis	2	S	E & W ends
Aethusa cynapium	1	S	All over
Legousia hybrida	1	I	E & W ends
Chrysanthemum segetum	1	S	All over
Lamium amplexicaule	1	I	NE & NW corners
Veronica hederifolia	1	I	Mainly S half

Begbroke North

<i>Stellaria media</i>	3
<i>Viola arvensis</i>	3
<i>Aethusa cynapium</i>	2
<i>Polygonum convolvulus</i>	1
<i>Papaver rhoeas</i>	1
<i>Anagallis arvensis</i>	1
<i>Specularia hybrida</i>	1
<i>Trifolium repens</i>	1
<i>Sonchus</i> spp.	1
<i>Capsella bursa-pastoris</i>	1

Sands

<i>Stellaria media</i>	3
<i>Poa annua</i>	2
<i>Galium aparine</i>	2
<i>Capsella bursa-pastoris</i>	2
<i>Senecio vulgaris</i>	1
<i>Matricaria matricarioides</i>	1
<i>Cerastium vulgatum</i>	1
<i>Veronica</i> spp.	1
<i>Ranunculus</i> spp.	1
<i>Veronica hederifolia</i>	1

Lankets

<i>Ranunculus bulbosus</i>	3	D	All over
<i>Trifolium repens</i>	2	S	All over
<i>Cerastium vulgatum</i>	2	S	All over
<i>Fumaria officinalis</i>	2	S	All over
<i>Plantago lanceolata</i>	1	I	All over
<i>Aethusa cynapium</i>	1	I	Mainly S end
<i>Arabidopsis thaliana</i>	1	ZP	N of centre
<i>Aphanes arvensis</i>	1	S	All over
<i>Crepis</i> spp.	1	S	Mainly centre area
<i>Sinapis arvensis</i>	1	S	N half
<i>Viola arvensis</i>	1	S	N half

Hollow

<i>Polygonum lapathifolium</i>	3	ZS	around ditch
<i>Polygonum aviculare</i>	3	I	All over
<i>Sonchus asper</i>	3	I	All over
<i>Polygonum convolvulus</i>	3	ZP	Ditch/railway junction
<i>Trifolium repens</i>	2	I	All over
<i>Raphanus raphanistrum</i>	2	I	Mainly N half
<i>Polygonum persicaria</i>	1	ZS	around ditch
<i>Senecio vulgaris</i>	1	S	NW quarter & N of ditch
<i>Solanum tuberosum</i> (potato)	1	I	Centre of field
<i>Anthemis cotula</i>	1	S	Centre of field
<i>Potentilla anserina</i>	1	ZS	around ditch

Boddington Barn

Polygonum aviculare	1		
Matricaria recutita	1		
Polygonum persicaria	1		
Poa annua	1		
Aethusa cynapium	1		A sparse and scattered distribution
Sonchus spp.	1		
Stellaria media	1		
Polygonum lapathifolium	1		
Fumaria officinalis	1		
Polygonum convolvulus	1		

Parkers

Anagallis arvensis	3	I	SE quarter
Viola arvensis	3	I	All over
Papaver rhoeas	3	S	Mainly N half
Polygonum aviculare	3	I	None in NE corner
Aphanes arvensis	2	S	All over
Polygonum persicaria	2	I	SE quarter
Raphanus raphanistrum	2	I	Mainly SW
Fumaria officinalis	1	S	N three quarters
Senecio vulgaris	1	S	All over
Aribidopsis thaliana	1	ZP	2 patches E & W sides
Trifolium arvense	1	S	All over

Deal

Papaver rhoeas	3	D	All over
Viola arvensis	3	D	All over
Aphanes arvensis	3	I	All over
Legousia hybrida	3	S	All over
Aethusa cynapium	3	I	All over
Stellaria media	3	I	All over
Veronica pers. + arvensis	2	S	All over
Senecio vulgaris	2	I	N half
Fumaria officinalis	2	S	All over
Capsella bursa-pastoris	2	S	All over

Alphabetical list of species most recently recorded on arable  
half of the farm

Achilla millefolium	Poa annua
Aethusa cynapium	Polygonum amphibium
Alchemilla vulgaris	Polygonum aviculare
Anagallis arvensis	Polygonum convolvulus
Anthemis cotula	Polygonum lapathifolium
Aphanes arvensis	Polygonum persicaria
Arabidopsis thaliana	Potentilla anserina
Arenaria leptoclados	Ranunculus acris
Artemisia vulgaris	Ranunculus bulbosis
Atriplex patula	Ranunculus repens
Bellis perennis	Raphanus raphanistrum
Capsella bursa-pastoris	Rumex acetosa
Centaurea nigra	Rumex acetosella
Cerastium vulgatum	Rumex crispus
Chenopodium album	Rumex obtusifolius
Chrysanthemum segetum	Senecio vulgaris
Cirsium spp.	Silene alba
Cirsium arvense	Sinapis arvensis
Cirsium vulgare	Sisymbrium officinalis
Convolvulus arvensis	Solanum nigrum
Coronopus sp.	Solanum tuberosum (potato)
Crepis spp.	Sonchus arvensis
Epilobium sp.	Sonchus asper
Equisetum arvense	Sonchus oleraceus
Euphorbia exigua	Spergula arvensis
Fumaria officinalis	Stellaria media
Galium aparine	Taraxicum officinale
Geranium pusillum	Trifolium sp.
Gnaphalium uliginosum	Trifolium arvense
Hypochaeris radicata	Trifolium pratense
Juncus byfonius	Trifolium repens
Lamium amplexicaule	Urtica dioica
Lathyrus pratensis	Urtica urens
Legousia hybrida	Veronica arvensis
Leontodon autumnalis	Veronica hederifolia
Matricaria matricarioides	Veronica persica
Matricaria recutita	Veronica serpyllifolia
Papaver argemone	Vicia hirsuta
Papaver rhoeas	Viola arvensis
Plantago lanceolata	Vicia sativa
Plantago major	

Further information concerning weed populations on the arable half of the farm may be obtained from the Botany Section.  
(R. J. Chancellor)

### III - ARABLE ROTATION

The arable part of Begbroke Hill Farm has an 8 course rotation based on experiments, cereals and potatoes. The sequence of crops is:-

Winter Wheat	Spring Barley
Experiments	Spring Barley
Spring Barley	Winter Oats
Experiments	Potatoes

In addition one field, Deal, is set aside for long term experiments. The parts of this field that are not in experiments are sown to an appropriate crop.

The 8 course rotation is designed to provide land in good heart for experiments and to allow the remainder to be farmed commercially. The break of five years between the second and first experimental years is intended to allow all traces of past experiments to disappear. The crop of Spring Barley between the first and second experimental years is in effect a spacer to allow any short term effects to disappear, thus allowing a partial re-use of the land.

#### The Arable Soil

The soil for the most part is a well drained light sandy loam varying in depth from 6 in. to more than 2 ft, overlying gravel which is up to 30 ft thick and overlying clay. The organic matter is about 2.0%. Phosphate and potash are low - medium, pH about 6.0. The topsoil dries out quickly after rain and this makes the land easy to work. It is early land which warms up quickly in the spring but is liable to be dry in summer. Crops are quick to respond to rain or irrigation and to fertilizers, particularly nitrogen, provided there is sufficient water available. Because the soil is light and free draining seedbeds are easy to obtain by a minimum of cultivation even when the seedbed has to be forced. Experimenters should beware of over cultivation which can lead to surface capping in wet weather or compaction below the surface. Soil disturbance during the summer months usually leads to appreciable moisture loss.

#### Colour Zones

The arable part of the farm is divided into 4 colour zones:-

- a) Blue - experimental area, permanently excluded from farm rotation
- b) Green - current experimental area, in farm rotation
- c) Amber - farm crop with limited possibility of experimentation
- d) Red - farm crop, experiments not permitted

The chart on the next page shows the crop planned for fields in the farm rotation from 1971-1978 inclusive.

Blue areas, not in the farm rotation, include Deal and the Horticultural Area.



YEAR	Partridge	Wrenches	Begbroke S & N	Sands	Lankets	Boddington Barn	Hollow	Parkers
1971	Spring Barley	Winter Oats	Potatoes	Winter Wheat	X	Spring Barley	X	Spring Barley
1972	Winter Oats	Potatoes	Winter Wheat	X	Spring Barley	X	Spring Barley	Spring Barley
1973	Potatoes	Winter Wheat	X	Spring Barley	X	Spring Barley	Spring Barley	Winter Oats
1974	Winter Wheat	X	Spring Barley	X	Spring Barley	Spring Barley	Winter Oats	Potatoes
1975	X	Spring Barley	X	Spring Barley	Spring Barley	Winter Oats	Potatoes	Winter Wheat
1976	Spring Barley	X	Spring Barley	Spring Barley	Winter Oats	Potatoes	Winter Wheat	X
1977	X	Spring Barley	Spring Barley	Winter Oats	Potatoes	Winter Wheat	X	Spring Barley
1978	Spring Barley	Spring Barley	Winter Oats	Potatoes	Winter Wheat	X	Spring Barley	X

IV - GENERAL EQUIPMENT

Classified list of machinery and equipment, excluding sprayers, available for use, 1971.

	<u>Working width</u> <u>approximately</u>
<u>Ploughs</u>	
2 furrow, reversible 2 x 14" - 'Melotte'	2' 4"
1 furrow - 'Pierce Wexford'	1' 2"
<u>Tillage Implements</u>	
Harrows, disc - trailed 'Ransomes'	8'
disc mounted 'Pettit'	8' 6"
spring tined - mounted 'Massey Ferguson'	8' 6"
mounted - 'Kombi Krumbler'	7' 6"
chain - mounted - folding	12'
spike, trailed - 6 in. 2 ft sections	12'
chain - trailed	4' 6"
chain - trailed	8'
Cultivators, rigid tine - mounted 'Red 'M F'	11'
rigid tine - mounted 'Grey M F'	10'
mounted with underbuster 'Rotovator'	
E. 60	5'
mounted rowcrop 'Rotocadet'	6'
mounted Nuffield 'Rotavator' F 40	3' 4"
self propelled rotary 'Monrotiller'	1'
mounted on MG 40, rotary - 'Mansley'	4'
Ridger, mounted, 3 bodies on a 5 ft frame	
Rolls, Cambridge - 3 sections, 4 ft - 6 ft - 4 ft	14'
Flat	
Roll mounted	6'
Weeders, tine - mounted	13'
Steerage Hoe, mounted - 4 row unit	9' frame
underslung - 'Allis', 4 row unit	8' 6" frame
Hoe, self propelled 'Vibrohoe'	10"
<u>Distributors</u>	
Manure spreader 'Rotaspreader'	
fertilizer spreader - mounted 'Sisag'	9'
Granules 'Noble' 2 x 9 in. bands	1' 6"
Grass seed 'Quillot'	3' 3"
<u>Seed Drills and Planters</u>	
Corn drill with grass box 'Massey Ferguson'	10'
Seed drill 'Amazone'	9'
Triple disc 'Fernhurst'	8' 9"
Precision drill 'Stanhay', 4 units on 9' frame	
(Mark I and II, see file for details)	
Seed drill 'Gloster', 4 units on 5' 6" frame for MG 40	
Fluid drill, prototype, mounted, 5 units on 9' frame.	
Fluid drill, prototype, mounted, 1 unit on 4' frame.	
Planter potato, 'Packman', 2 row	5'

### Harvesting Equipment

Grain 'Claas Mercury'	8' 6"
Grass Mower, mounted 'Massey Ferguson'	4' 6"
Rotary, self propelled 'Hayter'	2'
pushed 'Atco'	1'
carried 'Brielmayer'	10"
self propelled 'Allenscythe'	3'
Forage harvester, with maize attachment	3' 6"
Kale 'Cutrake', mounted	8'
Hedge cutter, 'Mc Connell', mounted	
Potato harvester, complete, 'Johnson Faun', 1 row digger, 'Wild-Bucher', 2 row	
Root lifter, bow plough, 1 row	

### Mechanical handling and Tractors

Flail mower, straw chopper 'Wilder'	5'
Elevator, with extension	
Buckrakes - 2	7'
Foreloader, with fork and bucket	3' 6"
Grass and straw baler with sledge 'Bale Slave'	
side delivery rake	14'
tedder	9'
horse rake, converted to tractor	6' 6"
Trailers, tractor, 2 wheel, semi-mounted - 2 4 wheel, trailed transport box, mounted	
Land Rover, 2 wheel, 15 cwt 4 wheel, 3 ton	
Close-coupled 4 wheel, 2 ton - 2	
Tractors,	
Model 165 'M F' TUD 466G	
" 165 'M F' HUD 659D	
" 135 'M F' WBW 915H	
" 135 'M F' VBW 169H (with foreloader)	
" 135 'M F' OUD 808F	
" 135 'M F' HUD 365D	
Model 4.25 'Nuffield' TUD 380G	
" MG 'Ransomes' tracklaying with mounted 4 ft toolframe	
Wheels, Cage wheels for MF 135 tubular Row Crop wheels 600 x 36 Row Crop wheels 650 x 44 PAVT wheels for MF 135	

### Weighing Equipment

Platform scales, 5 cwt x $\frac{1}{2}$ lb steelyard 405 lb x $\frac{1}{2}$ lb dial	
'Weighcrush' 1 ton x 7 lb	
Mobile rig for spring balances, on wheels, complete.	

### Barn Equipment

#### Threshing, cleaning, grading and sorting

Peg drums - 1	1' 3"
Threshing drum, N.I.A.E.	2'
Seed cleaner, 'Clipper'	10"
Winnower	
Potato sorter, spool type	

Further information concerning this equipment may be obtained from  
the Field Experiments Office

V - HERBICIDE APPLICATION EQUIPMENTAvailable for use

Sprayers	Number & Type	Max. Spray Swathe	Location
Farm Sprayer	1 - Tractor Mounted	30'	Farm Implement Store
Large Plot Sprayer	1 - Allis Chalmers	18'	Dutch Barn
Large Plot Sprayer	1 - Land Rover CYN	18'	Dutch Barn
Large Log Sprayer*	1 - Land Rover	15' H.D.D. 8.2 yds	Dutch Barn
Dribble Bar (on loan)*	1 - Tractor Mounted	15'	Dutch Barn
Small Self Propelled	1 - Side Boom	7' 6"	Dutch Barn (refer to Farm Manager)
Monro Tiller Sprayer*	1 - Power Driven	7' 6"	Dutch Barn
Evers & Wall "Evrall" 'MG'	Trailer Type 1 Independent Pumping Unit	Overall Swathe Inter row	Dutch Barn
Oxford Precision Sprayer	1 - Propane	6' & 7' 6"	LT (Long Term)
	1 - Propane	6'	WA (Weeds Aquatic)
	1 - Propane	6'	EF (Evaluation Fens)
	1 - Propane	6'	W (Weeds Botany)
	1 - Propane	6'	H (Horticulture)
	1 - Propane	6'	AA (Agronomy Arable)
	1 - Propane	6'	AG (Agronomy Grass)
	1 - Propane	6'	EA (Evaluation Arable)
	1 - Propane	6'	EG (Evaluation Grass)
	1 - Propane	6'	EE (Evaluation Equipment)
	2 - Compressed Air	6'	Sprayer Stores

Sprayers	Number & Type	Max. Spray Swathe	Location
"Mini" Log	1 - Propane	3' H.D.D. 5½ yds	EA (Evaluation Arable)
	1 - Propane	3' H.D.D. 5½ yds	EF (Evaluation Fens)
	1 - Propane	3' H.D.D. 5½ yds	Sprayer Stores
Oxford Ladder Log	1 - Propane	3' H.D.D. 4½ feet	Dutch Barn
Wheeled Precision Spray Rig MK II	1 - Propane O.P.S. attached		Evaluation Equipment
P.P. Vibro Jet (on loan)*	1 - Single Wheel Push Type	Single row	Dutch Barn
Spray Incorporation Drill (S.I.D.)*	1 - Tractor Mounted	4 x 7 inch bands	Implement Park
Dorman Band Sprayer*	1 - Tractor Mounted with Drill	4 x 7 inch bands	Refer to <b>Farm Manager</b>
Warnock Inter-row Sprayer Model M.1	1 - Single Wheel Push Type	10 inch to 20 inch Swathe	Dutch Barn
Micro-Sprayer	1 - Compressed Air	Square yard	EF (Evaluation Fens)
	1 - Compressed Air	Square yard	Sprayer Stores
Meter Miser	1 - Two Wheels Push Type	Spinning Disc	Dutch Barn
Cooper Peglar CP. 40	1 - Motorised Knapsack	Mist Blower	Sprayer Stores
Xpando	1 - Two Wheels Push Type	Dribble Bar	Sprayer Stores
Arbogard	Knapsack Hand Lance	Ring Weeding Trees	Sprayer Stores

Sprayers	Number & Type	Max. Spray Swathe	Location
Kestrel Sprayer*	1 - Knapsack (Hand-Pump)	Single Jet or Boom	Sprayer Store
Saval Sprayer*	1 - Knapsack (Hand-Pump)	Single Jet	Sprayer Store
K.E.F. Sprayer*	1 - Knapsack (Hand-Pump)	Single Jet	Sprayer Store
Killaspray Sprayer*	1 - Free Standing (Hand-Pump)	Single Jet	Sprayer Store
Arimitsu*	1 - Shoulder carrying (Hand-Pump)	Single Jet	Sprayer Store
Cooper Peglar C.P. 3	1 - Knapsack (Hand-Pump)	Single Jet or Boom	H (Horticulture Growth Regulators)
	1 - Knapsack (Hand-Pump)	Single Jet or Boom	H (Horticulture) Insecticides & Fungicides
	1 - Knapsack (Hand-Pump)	Single Jet or Boom	EA (Evaluation Arable) (General use with modifications)
	2 - Knapsack (Hand-Pumps)	Single Jet or Boom	Sprayer Stores (General use)
	1 - Knapsack (Hand-Pump)	Single Jet or Boom	Sprayer Stores (Growth regulators)

(\* In Store but need attention before use)

## GRANULE APPLICATORS

Name	Number & Type	Type of Swathe	Location
Horstine Farmery (on loan)	1 - One Wheel Motorised	Two Fish Tail	Dutch Barn
Horstine Farmery (on loan)	1 - Knapsack Motorised	One Fish Tail	Sprayer Stores
Cyclone	1 - Knapsack	Broadcast	Sprayer Stores
P.C.B. Spreader	1 - Knapsack	Broadcast	Sprayer Stores
Experimental Applicator*			Dutch Barn (refer to J. Holroyd)
Horstine Farmery (Micro Band) (on loan)	1 - Tractor Mounted	4 Tubes or Fish Tails	Dutch Barn

(\* In Store but need attention before use)

Technical reports available

5. A survey of the problem of aquatic weed control in England and Wales. October, 1967. T.O. Robson. Price - £0.25.
6. The botany, ecology, agronomy and control of Poa trivialis L. rough-stalked meadow-grass. November 1966. G.P. Allen. Price - £0.25.
7. Flame cultivation experiments 1965. October, 1966. G.W. Ivens. Price - £0.25.
8. The development of selective herbicides for kale in the United Kingdom. 2. The methylthiotriazines. Price - £0.25.
9. The post-emergence selectivity of some newly developed herbicides (NC 6627, NC 4780, NC 4762, BH 584, BH 1455). December, 1967. K. Holly and Mrs. A.K. Wilson. Price - U.K. and overseas surface mail - £0.25; overseas airmail - £0.50.
10. The liverwort, Marchantia polymorpha L. as a weed problem in horticulture; its extent and control. July, 1968. I.E. Henson. Price - £0.25.
11. Raising plants for herbicide evaluation; a comparison of compost types. July, 1968. I.E. Henson. Price - £0.25.
12. Studies on the regeneration of perennial weeds in the glasshouse; I. Temperate species. May, 1969. I.E. Henson. Price - £0.25.
13. Changes in the germination capacity of three Polygonum species following low temperature moist storage. June, 1969. I.E. Henson. Price - £0.25.
14. Studies on the regeneration of perennial weeds in the glasshouse. II. Tropical species. May, 1970. I.E. Henson. Price - U.K. and overseas surface mail - £0.25; overseas airmail - £0.50.
15. Methods of analysis for herbicide residues in use at the Weed Research Organization. December, 1970. R.J. Hance and C.E. McKone. Price - U.K. and overseas surface mail - £0.25; overseas airmail - £0.50.
16. Report on a joint survey of the presence of wild oat seeds in cereal seed drills in the United Kingdom during Spring 1970. November, 1970. J.G. Elliott and P.J. Attwood. Price - £0.25.
17. The pre-emergence selectivity of some newly developed herbicides, Orga 3045 (in comparison with dalapon), haloxydine (PP 493), HZ 52.112, pronamide (RH 315) and R 12001. January, 1971. W.G. Richardson, C. Parker and K. Holly. Price - U.K. and overseas surface mail - £0.25; overseas airmail - £0.50.
18. A survey from the roadside of the state of post-harvest operations in Oxfordshire in 1971. November, 1971. A. Phillipson. Price - U.K. and overseas surface mail - £0.12; overseas airmail - £0.34.



19. The pre-emergence selectivity of some recently developed herbicides in jute, kenaf and sesamum, and their activity against Oxalis latifolia. December, 1971. M.L. Dean and C. Parker. Price - U.K. and overseas surface mail - £0.25; overseas airmail - £0.45.
20. A survey of cereal husbandry and weed control in three regions of England. July, 1972. A. Phillipson, T.W. Cox and J.G. Elliott. Price - U.K. and overseas surface mail - £0.35; overseas airmail - £0.75.
21. An automatic punching counter. November, 1972. R.C. Simmons. Price - U.K. and overseas surface mail - £0.30; overseas airmail - £0.50.
22. The pre-emergence selectivity of some newly developed herbicides: bentazon, BAS 3730H, metflurazone, SAN 9789, HER 52.123, U 27,267. December 1972. W.G. Richardson and M.L. Dean. Price - U.K. and overseas surface mail - £0.25; overseas airmail - £0.45.
23. A survey of the presence of wild oats and blackgrass in parts of the United Kingdom during summer 1972. A. Phillipson. Price - U.K. and overseas surface mail - £0.25; overseas airmail - £0.45.
24. The conduct of field experiments at the Weed Research Organization. February 1973. J. G. Elliott, J. Holroyd and T. O. Robson. Price U.K. and overseas surface mail - £1.25; overseas airmail - £1.47.