



SILSOE RESEARCH INSTITUTE

OVERSEAS VISIT REPORT (OVR-1007)¹

Visit by: Steve Twomlow and Jim Ellis-Jones
To: Zimbabwe
Date: May 2000
Subject: DFID LPP Draught Animal Power

PURPOSE OF VISIT

- Follow up progress with on-station and on-farm trials and provide necessary support for any modifications required based on previous visit OVR 1001.
- Finalise report on initial focus group discussions
- Participate in farmer evaluations of spring ploughing trials.
- Establish a methodology for a wider assessment of implement condition and availability of replacement parts
- Continue discussions on outlines for AgEng 2000 papers

2. PROGRESS

2.1 Despite the continued adverse socio-economic and climatic scenarios that have continued for the first five months of this year both Tiri (TK) and Ephraim (EM) have shown fortitude and flexibility to modify their programmes accordingly. TK sat and passed his MPhil qualifying exam and registration for both TK and EM is currently being processed. Unfortunately, Dr Ivan Loukanov, senior supervisor on both proposed MPhils resigned his post. Consequently Dr Senzanje will provide local supervision with SJT and DON providing external supervision.

Action: TK and EM to complete registration formalities and provide copies of their accepted proposals to DON.

2.2 *On Station Trials*

2.2.1 As and when soil and climate conditions permit, the trials at Domboshowa and Hatcliffe will be being harvested. The initial ploughing treatments for the green manure trial at Domboshowa have been carried out to incorporate the green manures. A preliminary look at the data implies that draught requirements were very similar for plots with or without green manure residues. However, field efficiencies were dramatically affected, with a larger proportion of time spent cleaning the plough on land with residues.

Action: EM to complete harvests and enter record into computer for analysis by early June 00.

2.2.2 SJT reviewed data analysis to date with EM and agreed a draft outline of the AgEng 2000 paper that EM will prepare.

Action:

1. EM to complete draft AgEng paper for completion in June 2000.
2. EM visit UK between Mid June and early July to complete analysis and finalise AgEng 2000 paper.
3. EM in liaison with AS and DON to agree arrangements and travel dates to UK.

2.2.3 SJT followed up discussions with Professors Chivinge and Giller and AB Mashingaidze at UZ and it was confirmed that Honours students in both departments would participate in EM's trials next year.

- Crop Science – 2 weed science students – one working on the tillage by ripping trial and one working on the ox-drawn cultivator trials.
- Soil Science – Soil Chemical responses to Green manuring and tillage (Crop Science would provide this student with support on weed identification)

Action: Professor Giller and AB Mashingaidze to introduce students to EM before EM visits England.

¹Distribution:

SRI:	Director, PCHM, BGS, JEJ, DON, SJT Library
DFID:	John Hansell
NR International	Wyn Richards
UZ	A. Senzanje, Ostin Chivinge, Ken Giller, AB Mashingaidze
IAE	Tiri Koza, Ephraim Mbanje, Paul Gotora

On Farm Work

2.3.1 The draft report compiled by TK following the initial focus group discussions in October and November was completed and now requires collating and distribution to stakeholders attending the initial workshop.

Action: Dave O'Neill to finalise and distribute.

We participated in farmer group evaluations of the spring ploughing trials in areas where the CARE small dam project is active, namely:

- Mutangi Dam Site
- Nyimai Dam Site
- Gari Dam Site and
- Chedenje Resettlement area.

These meetings gave participating farmers opportunity to discuss the activities they had undertaken and their perceptions of the paired plots that had been established. In nearly all instances farmers reported healthier crops on the plots that had been ploughed after refurbishment and correct setting of the ploughs. In addition, it was recognised that where the plough had been set correctly the uniformity of ploughing had been improved, resulting in less weed competition early in the season.

One comment that must be borne in mind is that spring ploughing normally coincides with planting, therefore you do not want to plough too deep, or else you will get poor crop emergence. During the evaluations opportunity was used for the groups to prioritise CARE's own activities in the catchment areas. Work on implements ranked highly (Table 1).

Table 1: Priority of activities as determined through pairwise ranking at thee sites

Activity	Gari	Matange	Nyimai	Overall
Orchards	5	4	2	4
Contour and infiltration pits	2	1	3	2
Woodlots	7			7
Sandtraps/weirs/vetiver	2		3	3
Implements	1	2	1	1
Live-fences	5			5
Seed Co trials	2	3		3
CIMMYT trials	8	5	5	6

At each site maintenance and repair issues were discussed, and local spare part markets reviewed and priced. (Annex 2). It was agreed that the availability of parts was a critical issue and that a wider survey was required to obtain accurate information. A survey questionnaire was drafted and will be applied in August or September (Annex 2).

During the four meetings winter ploughing was discussed, and the decision-making criteria of the farmers itemised. At each site the community identified farmers who regularly practised winter ploughing and could participate in winter ploughing evaluations.

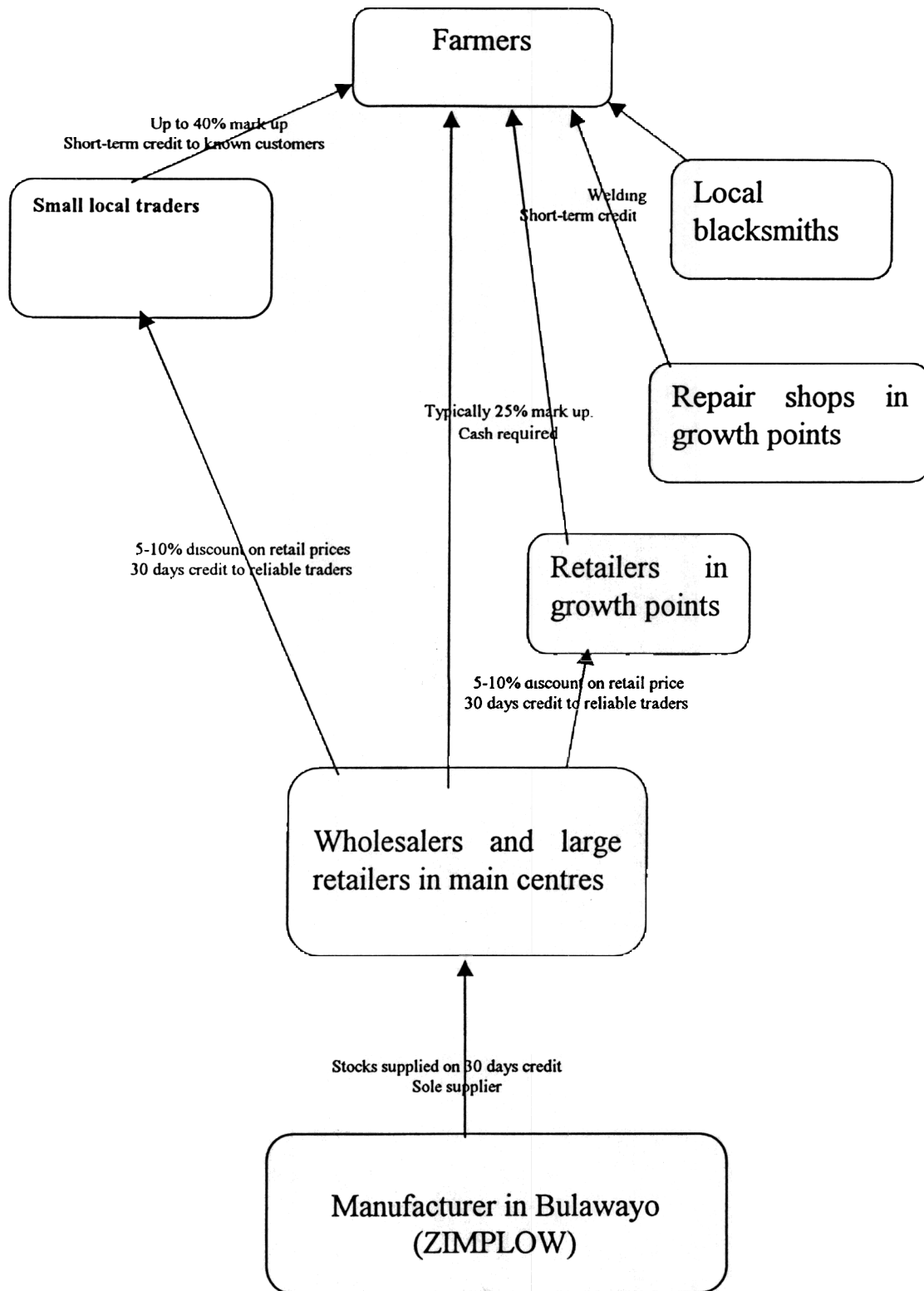
TK is currently collecting harvest data from the spring trials and establishing a series of winter ploughing demonstrations/trials.

2.3.3 The AgEng 2000 paper was discussed with TK and a draft outline agreed. This will be completed when TK visits UK

Actions:

1. **TK is to complete the evaluations at Mshandike Irrigation scheme and Mushagshe Commercial farming area. Reports of the first four meetings were compiled. These together with reports of the last two sites need to be synthesized into a single document. TK will bring a draft to UK during his forthcoming visit**
2. **TK to continue working on his biophysical data collected and make arrangements to capture crop yield data.**
3. **TK to still complete a review of work carried out on plough modifications at Palabane in Zambia is required and a dialogue with ZIMPLOW still needs to be developed.**
4. **Whole team to meet in June in UK to complete presentations for AgEng 2000 presentations.**
5. **Survey details to be finalised and applied in August or September.**

Annex 1: Supply chain for draft animal implement parts



Annex 2: Typical prices – Z\$ (5 May 2000)

	Chedenje Local store	Chivi Clinic Local trading store	Tokwe Range Store at Growth Point	Farm Supplies Wholesaler Masvingo	Retailer Masvingo	N Richards Wholesaler Masvingo
MF plough						2491
Standard plough						2218
Donkey plough						2153
Share		89	100	99		107
Mouldboard			395	388		421
Wheel small						72
Wheel large		85	77	82		85
Wheel arms		60		109		116
Axle and nuts	30			21		22
Landslide	100	95	75	110		116
Frog				238		294
Arms	260	76	75			
Handle bar			198			
U piece and set screw	90			70		77
Regulator hake				190		138
U clamp				62		64
Plough handle				190		196
Stay beam				46		50
Hitch assembly				207		136
Ripper tyne						165
Trek chain				244		286

Notes: Local stores had a very limited range of stocks, having been in stock considerable period with prices lower than the wholesalers

AGRITEX DRAUGHT ANIMAL IMPLEMENT SURVEY

The purpose of this survey is to quantify the conditions of ploughs and cultivators, knowledge of their use as well as availability of spares in representative areas of Natural Regions III, IV and V amongst representative farmers' households.

The survey will be based on the random selection of 25 households in each selected location, namely Mushagashe, Matange, Gari, Mushandike, Chedenje, Muzarabani, Sanyati and Karoi

Enumerator's name

Date

Area

Name of area

Case Number

Household details

The enumerator should ensure that he interviews someone who regularly works with and knows the implements.

- Q1 Are you the head of the household? (Tick one box)
 Yes. No
- Q2 If not, what is your relationship to the head of the household?.....(Tick one box)
 Wife..... Husband.....
 Son Daughter
 Other.....
- Q3 What sex is the of head of household? (Tick one box)
 Male. Female
- Q4 What is the age of head of household? (Tick one box)
 Less than 25 years 25-36 years
 36-45 years 46-55 years
 over 55 years.....

- Q5 What is the status of the head of household? (Please tick one box)
 Single Married
 Widowed Divorced
 Separated.....

- Q6 Does the head of the household live for most of the year with the family in the rural area?
 Yes..... No

- Q7 What are the main sources of household income? (tick one or more boxes)
 Crops Livestock
 Remittances..... Wages.....
 Pensions..... Buying and selling.
 Other.....

Specify

- Q8 Do you regularly work with animals in the field?
 Yes..... No

Household assets

- Q9 What implements does the household presently own?
 Plough Cultivator..
 Oxcart Ox-planter.
 None of these.
- Q10 How many cattle does the household currently own?
 None 1-3.....
 4-7.... more than 8
- Q11 How many donkeys does the household currently own?
 None 1-3.....
 4-7..... more than 8
- Q12 How many goats does the household currently own?
 None .. 1-3.....
 4-7..... more than 8
- Q13 How often do you use fertiliser for crop production?
 Never Sometimes....
 Always.....

Q14 What is your total arable land area? (acres)

Q15 What area of crops did you plant this year? (acres)

Less than 1..... 1-3.....
 3-6..... 7-10.....
 Over 10.....

Q16 Do you belong to any committees, clubs or self help groups?

None Dam, irrigation or agronomy.....
 ZFU Other.....

Specify

Q17 Are you a Master farmer?

No..... In training.....
 Yes.....

If yes, give date (year)

Q18 Do you obtain credit from any source

Yes..... No.....

If yes, please indicate from where

and what credit is used for

Ploughing

Q19 Do you own your own plough?

Yes..... No.....

If yes, indicate year purchased

Q20 How many animals did you plough with last season?

4 oxen or cows..... 2 Oxen or cows.....
 4 donkeys..... 2 donkeys.....
 4 mixed cattle/donkeys..... 2 mixed cattle/donkeys.....

Other, specify

Q21 How do you describe the condition of your plough?

Good..... Average.....
 Poor..... Very poor.....

Q22 What parts are present on the plough and what is their condition? (Enumerator to complete using diagram)

	Good	Average	Poor	Removed
Share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mouldboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hake regulator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Axle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U piece and screw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U clamp assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left Handle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right handle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hitch assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stay beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
King bolt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plough beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plough spanner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q23 How often do you replace or repair these parts?

	More than 3x pa	1-2 pa	1 in two years	1 in three years	Rarely
Share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mouldboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hake regulator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Axle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U piece and screw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U clamp assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left handle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right handle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hitch assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stay beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
King bolt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plough beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q24 Where do you obtain or repair these parts?

	Local store	Nearest town	Repair by blacksmith
Share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mouldboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Axle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U piece and screw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U clamp assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left handle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right handle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hitch assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stay beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
King bolt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plough beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q25 How far away is the nearest local store where you can buy parts? (km)

Q26 How do you get your parts from this store?

Travel by foot..... Travel by bus
 Send household member..... Other.

Q27 How far away is the nearest town, where you can buy parts? (km)

Q28 Which is this town?

Q29 How do you get your parts from this town?

Travel by foot..... Travel by bus....
 Send household member..... Other.....

Q30 How much does it cost to get there and back?

Q31 How long does it normally take to get there and back? (hours)

Q32 How far away is the blacksmith? (km)

Q33 How long does the blacksmith normally take to carry out a repair?

Less than a day.... 1-2 days
 3-5 days Over 5 days.....

Knowledge of the plough

Q34 How do you control the depth of the plough?

Using the wheel.... Using the regulator
 No control..... Other.....

Please specify

Q35 How do you control the width of the plough?

Width regulator Widening the frog..
 Increasing the size of the share Other.....

Please specify

Q36 When do you normally winter plough?

April..... May.....
 June..... July.....
 August..... Never.....

Q37 Do you normally vary your plough setting between winter and spring ploughing?

Same..... Deeper in winter...
 Shallower in winter Other.....

Specify

Q38 In which lands do you normally winter plough?

None All lands.....
 Wetter Lands..... Fallow areas last season
 Other.....

Specify

Q39 How did you obtain your knowledge on ploughs?

- From Agritex. Another farmer
 Father. Other family member.....
 Other

Specify

Q40 Have you ever received formal training on ploughs

- Yes..... No.....

If yes please indicate from who

And when (Year)

Cultivator (if owned or used)

Q41 Do you own your own cultivator?

- Yes..... No.....

If yes, indicate year purchased

Q42 How many animals do you usually cultivate with?

- 4 oxen or cows..... 2 Oxen or cows.....

- 4 donkeys..... 2 donkeys.....

- 4 mixed cattle/donkeys..... 2 mixed cattle/donkeys.....

Other, specify

Q43 How do you describe the condition of your cultivator?

- Good..... Average.....

- Poor..... Very poor.....

Q44 What parts are present on the cultivator and what is their condition? (Enumerator to complete using diagram of the cultivator)

	Good	Average	Poor	Removed
Lever adjusting assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handle bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rack for adj lever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beam and draw bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel axle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swivel plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Share arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tynes (3")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hiller tynes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sweep tynes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Link arm top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Link arm Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sliding bracket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q45 How often do you replace or repair these parts?

	More than 3x pa	1-2 x pa	1 in 2 years	Less than 1 in 3 years	Rarely
Lever adjusting assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handle bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rack for adj lever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beam and draw bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel axle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swivel plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Share arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tynes (3")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hiller tynes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sweep tynes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Link arm top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Link arm Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sliding bracket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q46 Where do you purchase or repair cultivator parts?

	Local store	Nearest town	Repaired by blacksmith
Lever adjusting assembly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handle bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rack for adj lever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beam and draw bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel axle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheel arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swivel plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Share arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tynes (3")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hiller tynes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sweep tynes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Link arm top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Link arm Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sliding bracket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Knowledge of the cultivator

Q47 How do you control the depth of your cultivator?
 Using the wheel No control.....
 Other.....

If other, please specify

Q48 How do you control the width of your cultivator?
 Using lever..... No control.....
 Other.....

If other, please specify

Q49 How did you obtain your knowledge on cultivators?

From Agritex. Another farmer
 Father. Other family member.....

Other.

Specify

Q50 Have you ever received formal training on cultivators
 Yes..... No.....

If yes please indicate from who

And when (year)

Thank you, there are no more questions