

## Supplement 4 – Description of harness components and characteristics and structured interviews

Supplement 4, Table 1 – Description of the proportion and frequency of harness components and characteristics in a cross-sectional study investigating work-equipment and practices in working equids of three Ethiopian locations.

| Equipment Components Present<br>Equipment characteristics | Equipment-related wounds |       | No equipment-related wounds |       | All equids |       |
|---|--------------------------|-------|-----------------------------|-------|------------|-------|
|   | Frequency                | %     | Frequency                   | %     | Frequency  | %     |
| Bit   | 267/366                  | 73%   | 99/366                      | 27%   | 366/368    | 99.5% |
| Good condition  | 44/65                    | 67.7% | 21/65                       | 32.3% | 65/366     | 17.8% |
| Correct size/fit  | 69/94                    | 73.4% | 25/94                       | 26.6% | 94/366     | 25.6% |
| Blinkers  | 233/323                  | 72.1% | 90/323                      | 27.9% | 323/368    | 87.8% |
| Dished shape  | 75/102                   | 73.5% | 27/102                      | 26.5% | 102/323    | 31.6% |
| Not touching the eyelashes                                | 81/115                   | 70.4% | 34/115                      | 29.6% | 115/323    | 35.6% |
| Reins   | 267/366                  | 73%   | 99/366                      | 27%   | 366/368    | 99.5% |
| Freely moving   | 265/364                  | 72.8% | 99/364                      | 27.2% | 364/366    | 99.5% |
| Breast collar   | 267/368                  | 72.6% | 101/368                     | 27.4% | 368/368    | 100%  |
| Collar padding  | 108/145                  | 74.5% | 37/145                      | 25.5% | 145/368    | 39.4% |
| Positioned through point of draught                       | 85/132                   | 64.4% | 47/132                      | 35.6% | 132/368    | 35.9% |
| Easily adjustable   | 8/10                     | 80%   | 2/10                        | 20%   | 10/368     | 2.7%  |
| Made from breathable contact materials                    | 188/259                  | 72.6% | 71/259                      | 27.4% | 259/368    | 70.4% |
| Neck strap  | 137/211                  | 64.9% | 74/211                      | 35.1% | 211/368    | 57.3% |
| Easily adjustable   | 12/16                    | 75%   | 4/16                        | 25%   | 16/211     | 7.6%  |
| Made from breathable contact materials                    | 65/101                   | 64.4% | 36/101                      | 35.6% | 101/211    | 47.9% |
| Traces  | 166/246                  | 67.5% | 80/246                      | 32.5% | 246/368    | 68.8% |
| Freely moving   | 90/134                   | 67.2% | 44/134                      | 32.8% | 134/246    | 54.5% |
| Swingle tree  | 101/151                  | 66.9% | 50/151                      | 33.1% | 151/368    | 41%   |
| Freely moving   | 52/72                    | 72.2% | 20/72                       | 27.8% | 72/151     | 47.7% |
| With traces attaching                                     | 100/150                  | 66.7% | 50/150                      | 33.3% | 150/151    | 99.3% |
| Functional swingle tree* <sup>1</sup>                     | 52/72                    | 72.2% | 20/72                       | 27.8% | 72/368     | 19.6% |
| Functional traction* <sup>2</sup>                         | 13/17                    | 76.5% | 4/17                        | 23.5% | 17/368     | 4.6%  |
| Saddle  | 267/368                  | 72.6% | 101/368                     | 27.4% | 368/368    | 100%  |
| Includes a gullet   | 134/203                  | 66%   | 69/203                      | 34%   | 203/368    | 55.2% |
| Positioned at base of the withers                         | 181/246                  | 73.6% | 65/246                      | 26.4% | 246/368    | 66.8% |
| Wide pressure points                                      | 211/294                  | 71.8% | 83/294                      | 28.2% | 294/368    | 79.9% |
| Secured tightly in place (girth not loose)                | 126/173                  | 72.8% | 47/173                      | 27.2% | 173/368    | 47%   |
| Saddle padding  | 267/368                  | 72.6% | 101/368                     | 27.4% | 368/368    | 100%  |
| Padding made from breathable contact materials            | 65/94                    | 69.1% | 29/94                       | 30.9% | 94/368     | 25.5% |
| Functional saddle* <sup>3</sup>                           | 21/33                    | 63.6% | 12/33                       | 36.4% | 33/368     | 9.0%  |
| Back band   | 61/86                    | 70.9% | 25/86                       | 29.1% | 86/368     | 23.4% |
| Belly band  | 43/63                    | 68.3% | 20/63                       | 31.7% | 63/368     | 17.1% |
| Girth   | 258/356                  | 72.5% | 98/356                      | 27.5% | 356/368    | 96.7% |
| Easily adjustable   | 250/347                  | 72%   | 97/347                      | 28%   | 347/356    | 97.5% |
| Made from breathable contact materials                    | 166/248                  | 66.9% | 82/248                      | 33.1% | 248/356    | 69.7% |
| Crupper   | 152/214                  | 71%   | 62/214                      | 29%   | 214/368    | 58.2% |
| Made from breathable contact materials                    | 78/117                   | 66.7% | 39/117                      | 33.3% | 117/214    | 54.7% |
| Tugs  | 261/361                  | 72.2% | 100/361                     | 27.7% | 361/368    | 98.1% |
| Breeching   | 195/277                  | 70.3% | 82/277                      | 29.6% | 277/368    | 75.3% |
| True breeching  | 189/269                  | 70.3% | 80/269                      | 29.7% | 269/277    | 97.1% |
| False breeching   | 6/8                      | 75%   | 2/8                         | 25%   | 8/277      | 2.9%  |
| Correct breeching assembly                                | 39/60                    | 65%   | 21/60                       | 35%   | 60/277     | 21.7% |
| Made from breathable contact materials                    | 115/171                  | 67.3% | 56/171                      | 32.7% | 171/277    | 61.7% |
| Functional breeching* <sup>4</sup>                        | 39/60                    | 65%   | 21/60                       | 35%   | 60/368     | 16.3% |
| Shafts passing through the centre of gravity              | 91/122                   | 74.6% | 31/122                      | 25%   | 122/368    | 33.2% |
| Harness is clean  | 9/15                     | 60%   | 6/15                        | 40%   | 15/368     | 4.1%  |
| Balanced cart axel  | 256/353                  | 72.5% | 97/353                      | 27.5% | 353/368    | 95.9% |

\*<sup>1</sup> Swingle tree is present and moves freely. Traces attach to swingle tree.

\*<sup>2</sup> Adequate position over the point of draught, freely moving traces that attach to a functional swingle tree

\*<sup>3</sup> Adequately positioned, wide pressure points, has gullet, has padding, secured tightly to the animal.

\*<sup>4</sup> Presence of breeching and correctly assembled as either true or false breeching

Supplement 4, Table 2 – Description of the proportion and frequency of structured interview questions to working equid cart-drivers in a cross-sectional study investigating work-equipment and practices in working equids of three Ethiopian locations.

| Structured Interview Questions                         | Equipment-related wounds |                | No equipment-related wounds |                | All equids |                |
|--|--------------------------|----------------|-----------------------------|----------------|------------|----------------|
|  | Median                   | Range          | Median                      | Range          | Median     | Range          |
| Driver age (years)                                     | 29                       | 24 - 70        | 28                          | 18 - 68        | 28         | 24 - 70        |
| Experience with equids (years)                         | 4                        | 1 - 32         | 4                           | 1 - 22         | 4          | 1 - 32         |
| Cost of harness (Ethiopian Birr)                       | 4,000                    | 500 – 25,000   | 4,000                       | 1,000 – 20,000 | 4,000      | 500 - 25,000   |
| Cost of cart (Ethiopian Birr)                          | 17,000                   | 1,200 – 45,000 | 20,000                      | 1,500 – 50,000 | 18,000     | 1,200 - 50,000 |
|  | Frequency                | %              | Frequency                   | %              | Frequency  | %              |
| Driver gender  |                          |                |                             |                |            |                |
| <i>Female</i>  | 2/4                      | 50%            | 2/4                         | 50%            | 4/368      | 1.1%           |
| <i>Male</i>  | 265/364                  | 72.8%          | 99/364                      | 27.2%          | 364/368    | 98.9%          |
| Ownership of equid                                     |                          |                |                             |                |            |                |
| <i>Owner and driver</i>                                | 248/343                  | 72.3%          | 95/343                      | 27.7%          | 343/368    | 93.2%          |
| <i>Driver only</i>                                     | 19/25                    | 76%            | 6/25                        | 24%            | 25/368     | 6.8%           |
| Driver Education                                       |                          |                |                             |                |            |                |
| <i>No formal education</i>                             | 18/28                    | 64.3%          | 10/28                       | 35.7%          | 28/368     | 7.6%           |
| <i>Primary education</i>                               | 100/126                  | 79.4%          | 26/126                      | 20.6%          | 126/368    | 34.2%          |
| <i>Early secondary</i>                                 | 80/107                   | 74.8%          | 27/107                      | 25.2%          | 107/368    | 29.1%          |
| <i>Late secondary</i>                                  | 64/101                   | 63.4%          | 37/101                      | 36.6%          | 101/368    | 27.4%          |
| <i>Tertiary education</i>                              | 4/5                      | 80%            | 1/5                         | 20%            | 5/368      | 1.4%           |
| <i>Prefer not to say</i>                               | 1/1                      | 100%           | 0/1                         | 0%             | 1/368      | 0.3%           |
| Economic comfort level                                 |                          |                |                             |                |            |                |
| <i>Finding it difficult</i>                            | 17/22                    | 77.3%          | 5/22                        | 22.7%          | 22/368     | 6.0%           |
| <i>Just managing</i>                                   | 183/250                  | 73.2%          | 67/250                      | 26.8%          | 250/368    | 67.9%          |
| <i>Comfortable</i>                                     | 67/96                    | 69.8%          | 29/96                       | 30.2%          | 96/368     | 26.1%          |
| <i>Very Comfortable</i>                                | <i>n/a</i>               | <i>n/a</i>     | <i>n/a</i>                  | <i>n/a</i>     | 0/368      | 0%             |
| <i>Prospering</i>                                      | <i>n/a</i>               | <i>n/a</i>     | <i>n/a</i>                  | <i>n/a</i>     | 0/368      | 0%             |
| Source of training about harness assembly and hitching |                          |                |                             |                |            |                |
| <i>Observation and intuition</i>                       | 183/344                  | 53.2%          | 72/344                      | 20.9%          | 344/468    | 73.5%          |
| <i>Other drivers</i>                                   | 67/100                   | 67%            | 22/100                      | 22%            | 100/468    | 21.3%          |
| <i>Harness maker</i>                                   | 17/24                    | 70.8%          | 7/24                        | 29.2%          | 24/468     | 5.1%           |
| Equipment source                                       |                          |                |                             |                |            |                |
| <i>Purchased</i>                                       | 230/310                  | 74.2%          | 80/310                      | 25.8%          | 310/366    | 84.7%          |
| <i>Partly Purchased &amp; Home-made</i>                | 16/31                    | 51.6%          | 15/31                       | 48.4%          | 31/366     | 8.5%           |
| <i>Donated</i>   | 9/13                     | 69.2%          | 4/13                        | 30.8%          | 13/366     | 3.6%           |
| <i>Inherited</i>                                       | 11/12                    | 91.7%          | 1/12                        | 8.3%           | 12/366     | 3.3%           |
| Equipment receives routine maintenance                 | 220/308                  | 71.4%          | 88/308                      | 28.6%          | 308/368    | 83.7%          |
| Previous history of wounds                             | 237/282                  | 84%            | 45/282                      | 16%            | 282/368    | 76.6%          |
| Frequency of wound history:                            |                          |                |                             |                |            |                |
| <i>Rarely</i>  | 82/112                   | 73.2%          | 30/112                      | 26.8%          | 112/368    | 30.4%          |
| <i>Occasionally</i>                                    | 101/109                  | 92.7%          | 8/109                       | 7.3%           | 109/368    | 29.6%          |
| <i>Often</i>   | 48/55                    | 87.3%          | 7/55                        | 12.7%          | 55/368     | 14.9%          |
| <i>Very Often</i>                                      | 6/6                      | 100%           | 0/6                         | 0%             | 6/368      | 1.6%           |
| Took measures to prevent wounds                        | 85/106                   | 80.2%          | 21/106                      | 19.8%          | 106/368    | 28.8%          |
| Wound Prevention measures:                             |                          |                |                             |                |            |                |
| <i>Seek veterinary care</i>                            | 36/45                    | 80%            | 9/45                        | 20%            | 45/368     | 12.2%          |
| <i>Wash or cover developing wounds</i>                 | 32/34                    | 94.1%          | 2/34                        | 5.9%           | 34/368     | 9.2%           |
| <i>Changing the equipment</i>                          | 9/19                     | 47.4%          | 10/19                       | 52.6%          | 19/368     | 5.2%           |
| <i>Traditional treatments</i>                          | 8/8                      | 100%           | 0/8                         | 0%             | 8/368      | 2.2%           |