

Obaidat et al. *Anaplasma* spp. in dairy ruminants in Jordan: high individual and herd-level seroprevalence and association with abortions

Supplementary Table 1. Factors associated with *Anaplasma* spp. seropositivity in dairy cow farms in Jordan, 2015–2016.

| Variable | No. of farms | No. positive | <i>p</i> value |
|--|--------------|--------------|----------------|
| Location | | | 1.00 |
| Al-Dulail | 21 | 8 | |
| Highlands | 10 | 3 | |
| Herd size | | | 1.00 |
| Small (10–50) | 13 | 5 | |
| Large (≥ 51) | 18 | 6 | |
| Recent abortions on the farm | | | 1.00 |
| Yes | 6 | 2 | |
| No | 25 | 9 | |
| Abortions occurred on the farm in the past | | | 0.27 |
| Yes | 15 | 7 | |
| No | 16 | 4 | |
| New animals added to herd | | | 0.49 |
| Yes | 13 | 6 | |
| No | 18 | 5 | |
| How often the farmer cleans the farm | | | 1.00 |
| Every week or less | 7 | 2 | |
| Every 2 wk and more | 24 | 9 | |
| How often the farmer cleans the feeders | | | 1.00 |
| Every week or less | 10 | 4 | |
| Every 2 wk and more | 21 | 7 | |

The *p* values were calculated by Fisher exact test, $n = 31$.

Supplementary Table 2. Factors associated with *Anaplasma* spp. seropositivity in sheep and goat farms in Jordan, 2015–2016.

| Variable | No. of farms | No. positive | <i>p</i> value |
|--|--------------|--------------|----------------|
| Species | | | 1.00 |
| Goats | 36 | 34 | |
| Sheep | 68 | 64 | |
| Area | | | 0.88 |
| North | 45 | 43 | |
| South | 25 | 23 | |
| Badia | 14 | 13 | |
| Northern Jordan Valley | 20 | 19 | |
| Flock size | | | 0.37 |
| Small (10–50) | 16 | 14 | |
| Medium (51–100) | 17 | 16 | |
| Large (101–150) | 31 | 29 | |
| Very large (≥ 151) | 40 | 39 | |
| Mixing sheep and goats in one farm | | | 1.00 |
| Yes | 22 | 21 | |
| No | 82 | 77 | |
| Mixing and adding animals from other farms with your animals | | | 0.68 |
| Yes | 49 | 47 | |
| No | 55 | 51 | |
| Using fences around the farm | | | 0.36 |
| Yes | 73 | 70 | |
| No | 31 | 28 | |
| Grazing your animals for more than 5 km | | | 1.00 |
| Yes | 8 | 8 | |
| No | 96 | 90 | |
| How often the farmer cleans the farm | | | 0.59 |
| Sometimes | 84 | 78 | |
| Never | 20 | 20 | |
| How often the farmer cleans the feeders | | | 1.00 |
| Every week or less | 70 | 66 | |
| Every 2 wk or more | 34 | 32 | |
| Water source | | | 0.64 |
| Well on the farm | 49 | 45 | |

| | | | |
|--|----|----|------|
| Spring/lake water | 17 | 17 | |
| Municipal water | 38 | 36 | |
| Recent abortions (within last 2 seasons) on the farm | | | 0.03 |
| Yes | 51 | 51 | |
| No | 53 | 47 | |
| Abortion occurred on the farm in the past | | | 0.09 |
| Yes | 58 | 57 | |
| No | 46 | 41 | |
| Recent mortalities on the farm | | | 0.18 |
| Yes | 31 | 31 | |
| No | 73 | 67 | |

The p values were calculated by Fisher exact test, $n = 104$.