

**Table S1. PPR cases in goats - initial alerted outbreaks - chronological list. Tissues consisted of pieces of spleen, lymph nodes, lung, liver, heats and kidney. Swabs were ocular, nasal and rectal.**

| N° | Date      | District     | GPS              | Province  | Season | Farming system  | Sample nature        | cELISA   | RT - PCR | Observations            |
|----|-----------|--------------|------------------|-----------|--------|-----------------|----------------------|----------|----------|-------------------------|
| 1  | Sept 2008 | Lukunga      | 4°19'S, 15°19'E  | Kinshasa  | rainy  | Back yard       | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 2  | Sept 2008 | Funa         | 4°19'S, 15°19'E  | Kinshasa  | rainy  | Back yard       | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 3  | Sept 2008 | Funa         | 4°19'S, 15°19'E  | Kinshasa  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | negative | No clinical disease     |
| 4  | Sept 2008 | Masisi       | 23°54'S,28°48'E  | Nord Kivu | rainy  | commercial farm | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 5  | Sept 2008 | Tshiangu     | 4°23'S,15°58'E   | Kinshasa  | rainy  | commercial farm | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 6  | Sept 2008 | Walikale     | 1°25'S, 28°4' E  | Sud Kivu  | rainy  | commercial farm | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 7  | Dec 2008  | Matadi       | 5°49'S,13°28' E  | Bas Congo | rainy  | Abattoir        | Sera, Swabs, Tissues | positive | negative | No clinical disease     |
| 8  | Dec 2008  | Matete       | 4°19'S, 15°19'E  | Kinshasa  | rainy  | Market          | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 9  | Jan 2009  | Bulungu      | 4°32'S,18°36'E   | Bandundu  | rainy  | Back yard       | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 10 | Jan 2009  | Masimanimba  | 4°46'S, 17°53'E  | Bandundu  | rainy  | Back yard       | Sera, Swabs, Tissues | Positive | positive | No clinical disease     |
| 11 | Jan 2009  | Lukaya       | 4°35'S, 15°10' E | Bas Congo | rainy  | Back yard       | Sera, Swabs, Tissues | Positive | positive | No clinical disease     |
| 12 | Feb 2009  | Kikwit       | 5°01'S, 18°49'E  | Bandundu  | rainy  | Back yard       | Sera, Swabs, Tissues | negative | negative | No clinical disease     |
| 13 | Apr 2009  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 14 | Jun 2009  | Kinshasa     | 4°19'S, 15°19'E  | Kinshasa  | rainy  | Back yard       | Sera, Swabs, Tissues | not done | positive | Severe clinical disease |
| 15 | Aug 2009  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 16 | Oct 2009  | Tshela       | 5°20'S,13°16' E  | Bas Congo | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 17 | Nov 2009  | Kwilu        | 5°07'S,18°39' E  | Bandundu  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positiv  | Severe clinical disease |
| 18 | Nov 2009  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positiv  | Severe clinical disease |
| 19 | May 2010  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 20 | July 2010 | Lukunga      | 4°19'S, 15°19'E  | Kinshasa  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 21 | Sept 2010 | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 22 | Oct 2010  | Mont Ngafula | 4°25'S,15°17' E  | Kinshasa  | rainy  | Commercial farm | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 23 | Oct 2010  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 24 | Nov 2010  | Mont Ngafula | 4°25'S,15°17' E  | Kinshasa  | rainy  | Commercial farm | Sera, Swabs, Tissues | not done | positive | Severe clinical disease |
| 25 | Jan 2011  | Madimba      | 4°59'S, 15°07'E  | Bas Congo | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 26 | Feb 2011  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | dry    | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 27 | Mar 2011  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | dry    | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 28 | Apr 2011  | Tshuapa      | 0°44'S, 19°11'E  | Equateur  | rainy  | Back yard       | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |

|    |           |           |                  |           |       |           |                      |          |          |                         |
|----|-----------|-----------|------------------|-----------|-------|-----------|----------------------|----------|----------|-------------------------|
| 29 | May 2011  | Tshuapa   | 0°44'S, 19°11'E  | Equateur  | rainy | Back yard | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 30 | July 2011 | Yakuma    | 4°05'N, 22°26'E  | Equateur  | rainy | Back yard | Sera, Swabs, Tissues | positive | positiv  | Severe clinical disease |
| 31 | Sept 2011 | Lisala    | 4°05'N, 21°30'E  | Equateur  | rainy | Back yard | Sera, Swabs, Tissues | positive | positiv  | Severe clinical disease |
| 32 | Sept 2011 | Gbadolite | 4°17'N, 21°37'E  | Equateur  | rainy | Back yard | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 33 | Sept 2011 | Gemena    | 3°15'N, 19°46' E | Equateur  | rainy | Back yard | Sera, Swabs, Tissues | positive | positiv  | Severe clinical disease |
| 34 | Oct 2011  | Lisala    | 4°05'N, 21°30'E  | Equateur  | rainy | Back yard | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |
| 35 | Mar 2012  | Tshela    | 5°20'S, 13°16' E | Bas Congo | rainy | Back yard | Sera, Swabs, Tissues | positive | positive | Severe clinical disease |

Supplementary Table 2. Estimate losses in USD during PPR outbreaks in caprine in some rural and peri-urban areas of DRC, 2010-2012.

| Year | Province          | District        | Location          | Mortality | Unit price (usd) | Total (usd) |
|------|-------------------|-----------------|-------------------|-----------|------------------|-------------|
| 2010 | Equateur          | Sud Ubangi      | Zongo             | 7312      | 40               | 292480      |
|      |                   | Sud Ubangi      | Gemena            | 6808      | 40               | 272320      |
|      |                   | Sud Ubangi      | Kungu             | 8026      | 35               | 280910      |
|      |                   | Equateur        | Bomongo           | 37        | 35               | 1295        |
|      |                   |                 | Mbandaka          | 117       | 60               | 7020        |
|      | Bandundu          | Tshuapa         | Boende            | 5229      | 30               | 156870      |
|      |                   | Mongala         | Lisala            | 1472      | 40               | 58880       |
|      |                   | Kwilu           | Gungu             | 519       | 50               | 25950       |
|      |                   | Mai-Ndombe      | Oshue             | 196       | 30               | 5880        |
|      |                   | Mai-Ndombe      | Mushie            | 2021      | 30               | 60630       |
|      |                   | Plateau         | Kwamouth          | 298       | 50               | 14900       |
|      |                   | Kwilu           | Gungu             | 7262      | 50               | 363100      |
|      |                   | Kwilu           | Kikwit            | 4257      | 50               | 212850      |
|      |                   | Kwilu           | Idiofa            | 4715      | 40               | 188600      |
|      |                   | Kwilu           | Bulungu           | 2150      | 40               | 86000       |
|      |                   | Kwilu           | Bagata            | 3176      | 40               | 127040      |
|      |                   | Kwilu           | Masimanimba       | 3962      | 50               | 198100      |
|      |                   | Kwilu           | Bandunduville     | 52        | 50               | 2600        |
|      |                   | Kwango          | Kenge             | 248       | 50               | 12400       |
|      |                   | Kwango          | Kasongo Lunda     | 1037      | 40               | 41480       |
|      |                   | Kwango          | Feshi             | 522       | 40               | 20880       |
|      | Kasaï Or.         | Sankuru         | Lodia             | 75        | 50               | 3750        |
|      |                   | Sankuru         | Lodia             | 24        | 50               | 1200        |
|      | Bas Congo         | Lukaya          | Madimba           | 11        | 50               | 550         |
|      |                   | Boma            | Boma              | 14        | 50               | 700         |
|      |                   | Bas-Fleuve      | Tshela            | 4636      | 50               | 231800      |
|      | Kasaï Occ.        | Lukaya          | Inkisi            | 289       | 60               | 16800       |
|      |                   | Lulua           | Ndemba            | 64703     | 50               | 3235150     |
|      |                   | Lulua           | Dibaya            | 17487     | 45               | 786915      |
|      |                   | Lulua           | Dimbelenge        | 35779     | 50               | 1788950     |
|      |                   | Lulua           | Kazumba           | 62197     | 40               | 2487880     |
|      |                   | Lulua           | Lwiza             | 120113    | 50               | 6005650     |
|      |                   | Kasaï           | Dekese            | 1765      | 40               | 70600       |
|      |                   | Kasaï           | Ilebo             | 19017     | 50               | 950850      |
|      |                   | Kasaï           | Luebo             | 71891     | 45               | 3235095     |
|      |                   | Kasaï           | Mweka             | 194613    | 50               | 9730650     |
|      |                   | Kasaï           | Tshikapa          | 28634     | 50               | 1431700     |
|      |                   | Kasaï           | Ville de Kananga  | 7630      | 70               | 534100      |
|      |                   | Kasaï           | Ville de Tshikapa | 1931      | 70               | 135170      |
|      | Ville de Kinshasa | Lukunga         | Kimwenza          | 37        | 80               | 2960        |
|      |                   | Lubero          | Lubero            | 358       | 40               | 14320       |
| 2011 | Nord-Kvu          | Kwilu           | Bulungu           | 3696      | 40               | 147840      |
|      |                   | Kwilu           | Masimanimba       | 35 459    | 50               | 1772950     |
|      | Bandundu          | Kwilu           | Kikwit            | 921       | 50               | 46050       |
|      |                   | Kwilu           | Gungu             | 2481      | 50               | 124050      |
|      |                   | Kwilu           | Idiofa            | 545       | 40               | 21800       |
|      |                   | Kwango          | Feshi             | 80        | 40               | 3200        |
|      |                   | Kwango          | Kenge             | 2887      | 50               | 144350      |
|      |                   | Plateau         | Kwamouth          | 192       | 50               | 9600        |
|      | Equateur          | Sud Ubangi      | Gemena            | 2853      | 40               | 114120      |
|      |                   | Sud Ubangi      | Budiala           | 100       | 35               | 3500        |
|      |                   | Sud Ubangi      | Kungu             | 176       | 35               | 6160        |
|      |                   | Sud Ubangi      | Libenge           | 301       | 35               | 10535       |
|      |                   | Sud Ubangi      | Makanza           | 47        | 40               | 1830        |
|      |                   | Sud Ubangi      | Bikoro            | 924       | 40               | 36960       |
|      |                   | Mongala         | Lisala            | 2751      | 40               | 110040      |
|      | Bas Congo         | Songololo       | Songololo         | 67        | 50               | 3350        |
|      |                   | Cataractes      | Mbanza-Ngungu     | 42        | 60               | 2520        |
|      |                   | Bas Fleuve      | Boma              | 292       | 50               | 14600       |
|      |                   | Ville de Matadi | Matadi            | 57        | 60               | 3420        |