Understanding socio-economic aspects for sustainable interventions to reduce antimicrobial usage and antimicrobial resistance in small and household poultry farms in Vietnam

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Introduction

The ViParc project (ViParc) aims to reduce levels of antimicrobial usage (AMU) and antimicrobial resistance (AMR). It is a randomised before-and-after controlled trial of a veterinary intervention on 120 randomly selected small and household chicken farms in the Mekong Delta of Vietnam.

Research study in Vietnam

Objectives

- Assess the socio-economics of AMU
- Explore the poultry farmers’ behaviour of AMU before and after the intervention

Activities for the Year 1 (2017)

Activity 1: Understanding farmers’ knowledge and behaviour on AMU and AMR

Methods: participatory approaches (focus-group and individual interviews, proportional piling…)

Data analysis: on going

<table>
<thead>
<tr>
<th></th>
<th>Chicken farm</th>
<th>Duck farm</th>
<th>Free-rang duck</th>
<th>Vet</th>
<th>Vet shop owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of group</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Participants in</td>
<td>49</td>
<td>30</td>
<td>46</td>
<td>39</td>
<td>34</td>
</tr>
<tr>
<td>Average</td>
<td>8.85</td>
<td>7.5</td>
<td>9.2 (5.13)</td>
<td>7.8 (8.11)</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>7.5</td>
<td>7.5</td>
<td>12.3 (5.9)</td>
<td>7.8 (8.11)</td>
<td></td>
</tr>
<tr>
<td>Gender ratio</td>
<td>M:F</td>
<td>43:6</td>
<td>29:1</td>
<td>45:1</td>
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<tr>
<td>Average</td>
<td>45.69</td>
<td>44.7</td>
<td>42.32</td>
<td>36.69</td>
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<td>Data:</td>
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<td>27:70</td>
<td>(19:65)</td>
<td>(38:54)</td>
<td></td>
</tr>
</tbody>
</table>

Activities for the Year 2 (2018)

Activity 1: Evaluation the marginal costs and benefits of the interventions

Method: partial budget analysis framework before and after the intervention

Data: (1) changes in production; (2) potential changes in costs due to disease and production change; (3) reduced costs in antimicrobials; (4) costs of the intervention; (5) potential for behaviour change; and (6) observed AMR reductions.

Activity 2: Description the perceptions and behavior change before and after intervention

Methods: Q methodology (semi-quantitative)

Expected outcome

The study will provide insight into public and private good generation and help guide the formulation of pricing mechanisms and interventions with the highest likelihood of being sustainable in the long term to incentivize AMU reductions.