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Costing a PPR Global Strategy
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• What has been produced in the cost analysis
• The main activities for the strategy proposed
• Comparison between current activities with the proposed strategy
• Key messages
The cost analysis
What is a cost analysis?

- Strategy delivered by a technical team
- The key activities defined
- Costs of the key activities investigated
- The scale of the activities defined through consultation of the strategy team
- Costs indicated are predictive
Cost Analysis

Identification of Activities

Costs Timing Location Scale

Costs by
- Activity
- Region

Additional data
- Prices
- Populations
- Production systems

Cost Benefit Analysis

Decisions on who will pay and how

Strategy

Modifications

• Activity
• Region

Prices
Populations
Production systems
Small ruminant population

- The small ruminant population remains constant throughout the 15 year period.
- The age distribution was assumed to be:
  - 40% are youngstock below six months of age
  - Remaining 60% are adults and are above 6 months of age
Small ruminant population

• The distribution of the small ruminant population by production system is based on modelling the aridity index and aligned to the FAOSTAT population data (Lancelot, 2014).

• Two basic systems are identified and used:
  ▪ mixed crop/livestock system
  ▪ pastoralist/agro-pastoralist system
When to use discounting?

- Where costs and benefits from a strategy are spread over a period of years they need to be discounted in order to compare them as present values.

- The discount factor used should be the best alternative use of money in the economy.

- For a costing analysis there is no need to discount – it provides an indication of the budget required for the strategy.
The main activities of the strategy
Key activities

- Regional and global level coordination
- An *ex-ante assessment* of the PPR situation in the country
- **Surveillance** to follow the disease and to monitor the vaccination efficacy
- **Vaccination** to manage PPR
• Two levels of coordination – global and regional
• Both will have technical staff to coordinate the laboratory diagnostics, epidemiology, socio-economics and disease control
• The global and regional coordination is estimated to cost US$32.1 and US$129 million respectively
• These costs will not vary over the programme
Ex ante assessment

- Ex ante assessment will be used in stages 0 and 1
- They will enable a better understanding of the
  - small ruminant sectors
  - PPR presence – its maintenance and endemic areas
- Three people - 9 person months per country independent of animal population of country size
- The cost will be the same in each strategy considered and will be independent of the country size and animal population
- Total costs per study US$90,000 per country
It is estimated that the ex ante assessment costs will be US$9.99 million over the 15 year period.
• **Surveillance** to follow the disease with the following components
  - **Active surveillance** (mainly active in stage 1, combined in stages 2 and 3) including disease search and investigation, and sero-surveillance
  - **Passive** (mainly passive in stage 4)
• **Surveillance** to verify the **efficacy of vaccination** programmes are included in the post vaccination monitoring component
It is estimated that the surveillance costs will be US$242 million over the 15 year period.
Vaccination

- Vaccination will be carried out in stages 2 and 3
- Vaccine will be targeted at key populations
- Vaccination in the worst scenarios could last up to 8 years
- In some populations two campaigns per season
The average cost of vaccinating one animal is calculated assuming:

- A vaccine cost of US$ 0.10 (vaccine and diluent) regardless the production system
- A cost of delivering the vaccine of US$ 0.60 USD in a mixed crop/livestock system per animal
- A cost of delivering the vaccine of US$ 0.40 in a pastoralist/agro-pastoralist system per animal
Vaccination stage 2

- 50% of the adult populations to be targeted for vaccination in year 1 and again in year 2.
- Either one or two annual campaigns will take place in mixed crop/livestock zones compared with one in pastoral and agro pastoral zones.
The vaccination strategy among adults will depend on the success of stage 2 measured through post-vaccination monitoring (PVM)

- With PPR absence 50% of non-vaccinated adults will be vaccinated for two years
- Where PPR absence has not been demonstrated in vaccinated areas, 100% adult coverage will be targeted.

For the cost analysis it has been assumed that:
- 75% of the adult population will be vaccinated
- 100% coverage of young stock for two successive years irrespective of the PVM results.
It is estimated that the vaccination costs will be US$7.23 billion over the 15 year period.
Summary of the costs
The estimated costs of the strategy

- Total programme costs in undiscounted US$ is between 7.6 and 9.1 billion over a 15 year period
- These are costs for 99 countries
- The activities support a population of 1.8 billion sheep and goats
- These animals provide products for 5.4 billion people
A majority of the costs are from the vaccination of sheep and goats.
It is estimated that the strategy will cost US$ 0.27 per small ruminant year.
It is estimated that the strategy will cost US$ 0.09 per person year.
Comparison
Strategy Costs compared with current Status Quo

- Estimated costs of **current vaccination levels** – the status quo - are estimated to be between US$ 212 to 365 million.

A cost benefit analysis of the strategy would use this figure of US$3.1 billion as a benefit – a cost saved.

- The status quo will **NOT** eradicate PPR – it will ensure a continual cost of vaccination.
Key messages
Key issues – what to focus on

• The costs of the programme are largely made up of vaccines and vaccine delivery
• Vaccination needs to focus on populations at greatest risk and endemic foci
• Good targeting and coordination will ensure cost management and potentially lead to cost savings
• We need cost-effectiveness analysis during the strategy
Key issue – what is missing

• The programmes at national level need to be supported by operational veterinary services

• Additional investments will need to be made on infrastructure and human capacity
What will we get for this investment?

- Better animal welfare
- Improved levels of production
- More stable supplies of meat, milk and wool
- Reduced costs of treatment and vaccination
- Improved consumer supplies
What will we get for this investment?

- Veterinary services with the skill and experience to manage disease control in small ruminant populations.
- A small ruminant sector confident of its future.
- A consumer population with improved small ruminant product supply.

This is a price worth paying.
For today’s consumers

And for the consumers of the future
Thank you

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