

WHAT DID WE LEARN FROM RINDERPEST ERADICATION REGARDING FUTURE DISEASE ERADICATION EFFORTS SUCH AS PPR

Professor Martyn Jeggo, Deakin University, Australia

*Lessons learned from human and animal disease eradication
programmes to help inform the peste des petits ruminants global
eradication programme (PPR GEP)*

21 February 2022

SUMMARY OF GREP

- Essentially ran from 1986 – 2011
- Estimated cost \$635 million
- Followed an **agreed national pathway** involving an **initial vaccination** phase, followed by **cessation of vaccination** and **demonstration of clinical freedom**, followed by **demonstration of virus elimination**.
- Funded by the European Union, FAO, IAEA, a number of individual donor countries (e.g. UK, Sweden, France, Netherland) and significantly the participating countries themselves
- The PPR GEP (under GCEP) 2017-2021 took account of many findings from GREP
- This short talk will (re)highlight these as a basis for GEP 2022-2030

SETTING THE SCENE

- Will cover four main areas
 - Technological issues
 - Logistical issues (including organizational)
 - Economic issues (including funding)
 - Political issues (including people)

TECHNOLOGICAL ISSUES

- Disease mostly understood and key technologies in place from outset – vaccines, laboratory tests, disease epidemiology
- Gaps in technologies and disease understanding were researched and resolved as the program developed – thermo-stabile vaccines, pen-side tests, role of wildlife, development of mild disease, targeted vaccination, use of social science and participatory epidemiology
- Key element one of standardization at all times, of vaccines, laboratory tests, vaccination and surveillance protocols and reporting
- Driven through dialogue AND a cascading top-down approach from global (through UN) to regional (e.g through OAU) and national leadership
- LESSON 1 - not all technological issues need to be resolved from the outset (but for PPR role of wildlife is a critical issue)
- LESSON 2 – standardization key in terms cost, ease of training, technology transfer and performance monitoring

LOGISTICAL ISSUES

- A clear, well articulated plan essential from the outset (but amenable to change and focus over time)
- Summarisable on a page!
- Global leadership vital (UN or equivalent body)
- But continuous dialogue and collaboration from top down and bottom up approaches e.g participatory epidemiology with daily discussions with livestock keepers (learning to listen!)
- Networks essential (of laboratories, of CVOs, of vaccinators, of surveillance teams)
- LESSON 1 - critical role for global leadership
- LESSON 2 - collaboration and cooperation through continuous dialogue and discussion
- LESSON 3 – Networks play a crucial supportive role

ECONOMIC ISSUES

- Vital to put eradication into a plausible economic argument
- This was poorly undertaken for rinderpest, although it improved over time. Even now the true cost is still unclear
- Funding was often woefully inadequate and never continuous
- Donor funding was enormously variable with different timelines and significant gaps
- Global, regional and national managers needed to be adaptive and creative to maintain continuity of effort
- Today an economic framework argument must go far beyond simple cost benefit ratios and include impact on trade, on food security, on livelihoods, on human health, on GDP and on SDG
- Continuous funding is vital but full funding to completion a difficult prerequisite
- Never under-estimated the importance or value of the contribution of participating countries

ECONOMIC ISSUES

- LESSON 1 - a viable economic framework is the prerequisite to funding and ultimately a successful eradication program
- LESSON 2 – this framework must include a serious impact assessment at national, regional and global levels
- LESSON 3 – the contributions from participating countries is vital to articulate and critical for success

POLITICAL (AND PEOPLE) ISSUES

- Single disease eradication was a political goal in the 1980's following smallpox eradication and included polio, malaria and even cancer!
- Generous development aid was a clear prerogative without too many strings attached or serious participating country contributions
- Things changed as the program developed but the underlying culture persisted and “strengthen of veterinary services” still a second level issue
- This is simply NOT the same today. Investments of this level demand multiple level impacts (e.g. food security, human health) and adherence to SDGs, One Health principles, measurable contributions, gender issues etc.
- Non-Government support and funding is now equally important (e.g. BMG)
- For GREP, people made it succeed not organizations. Identifying, fostering and supporting key people was the critical element to success
- Having the right people in the right place at the right time was critical. And this operates at all levels (global, regional and national). Leadership, balanced teams and a culture of collaboration are essential prerequisites

POLITICAL (AND PEOPLE) ISSUES

- LESSON 1 – the “political” world is very different now. Philanthropic funding is as important as that from Governments
- Lesson 2 -must understand and respond to donor and participating countries current demands and needs.
- LESSON 2 – single disease eradication, whilst a goal, it is now insufficient alone for global funding. And must deliver on these other goals! And is a 20 year program now feasible?
- LESSON 3 – people matter more than organizations. Unpalatable as this is to large organizations and governments, it remains as true today as it was to GREP.

FAO/IAEA RINDEPEST LABORATORY NETWORK

- Crucial technologies in place from outset. Others developed as needed
- Standardization at all levels (tests, processes, reporting)
- Individuals identified and supported through a research contract
- Individual provided with funding, training and annual technical meetings
- Some 40 national laboratories supported through individual FAO/IAEA Technical Co-operation projects
- Routine proficiency testing with over 95% adherence
- Key success elements;- standardization, people, funding and networks

BOTTOM LINE

People, politics and economics are far more important than technologies and organizations

The impact of COVID on such programs has yet to be understood but will be profound