OIE conference

Evolving veterinary education for a safer world

Maison de la Chimie, Paris, 12-14 Oct 2009

Session 2: Early detection, notification and surveillance

Participatory surveillance (involving farmers and paraprofessionals)

A. Shimshony

Participatory surveillance (involving farmers and paraprofessionals)

- Ethnoveterinary medicine
- Participatory epidemiology (PE) and participatory disease surveillance (PDS)
- Veterinary schools & participatory epidemiology
- Veterinary paraprofessionals, CAHWs and small farmers

Ethnoveterinary medicine

- Validates traditional knowledge of disease ("existing veterinary knowledge") and its applications.
- Gathers information on livestock healing practices, medicines and methods suited to the local environment.
- Seeks solutions to diseases against which vaccination is unrealistic or which are subject to drug resistance.
- being increasingly integrated into "participatory epidemiology" to improve epidemiological surveillance in remote areas and encourage community participation in disease control.

Ethnoveterinary medicine

REVUE

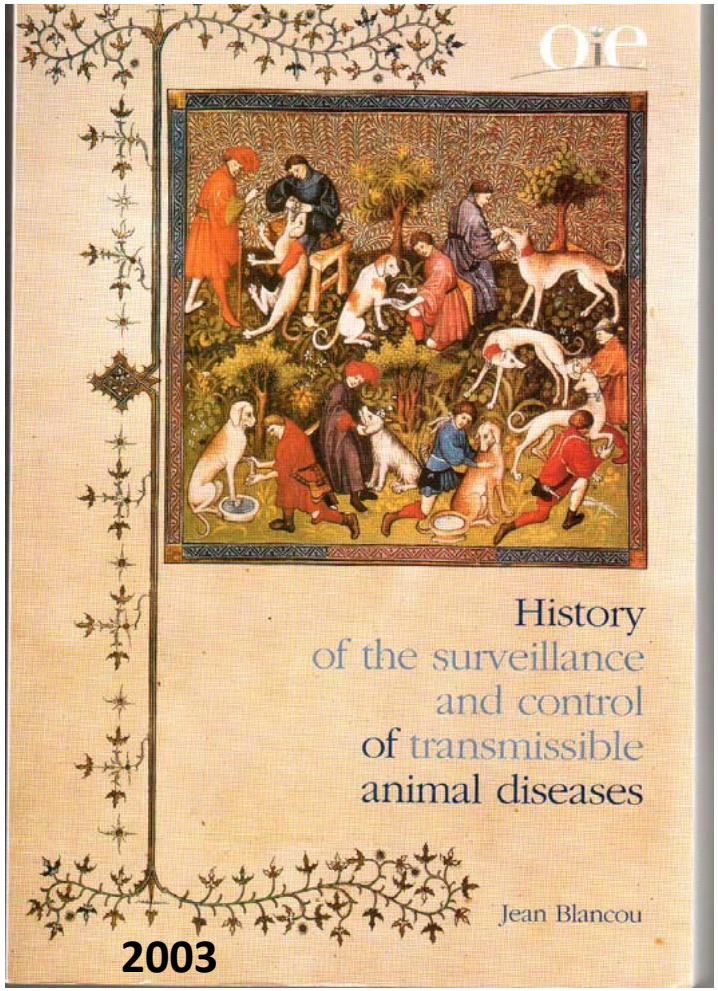
SCIENTIFIQUE ET TECHNIQUE

Anciennes méthodes de prophylaxie des maladies animales

Early methods of animal disease control

Los antiguos métodos de profilaxis de las enfermedades animales

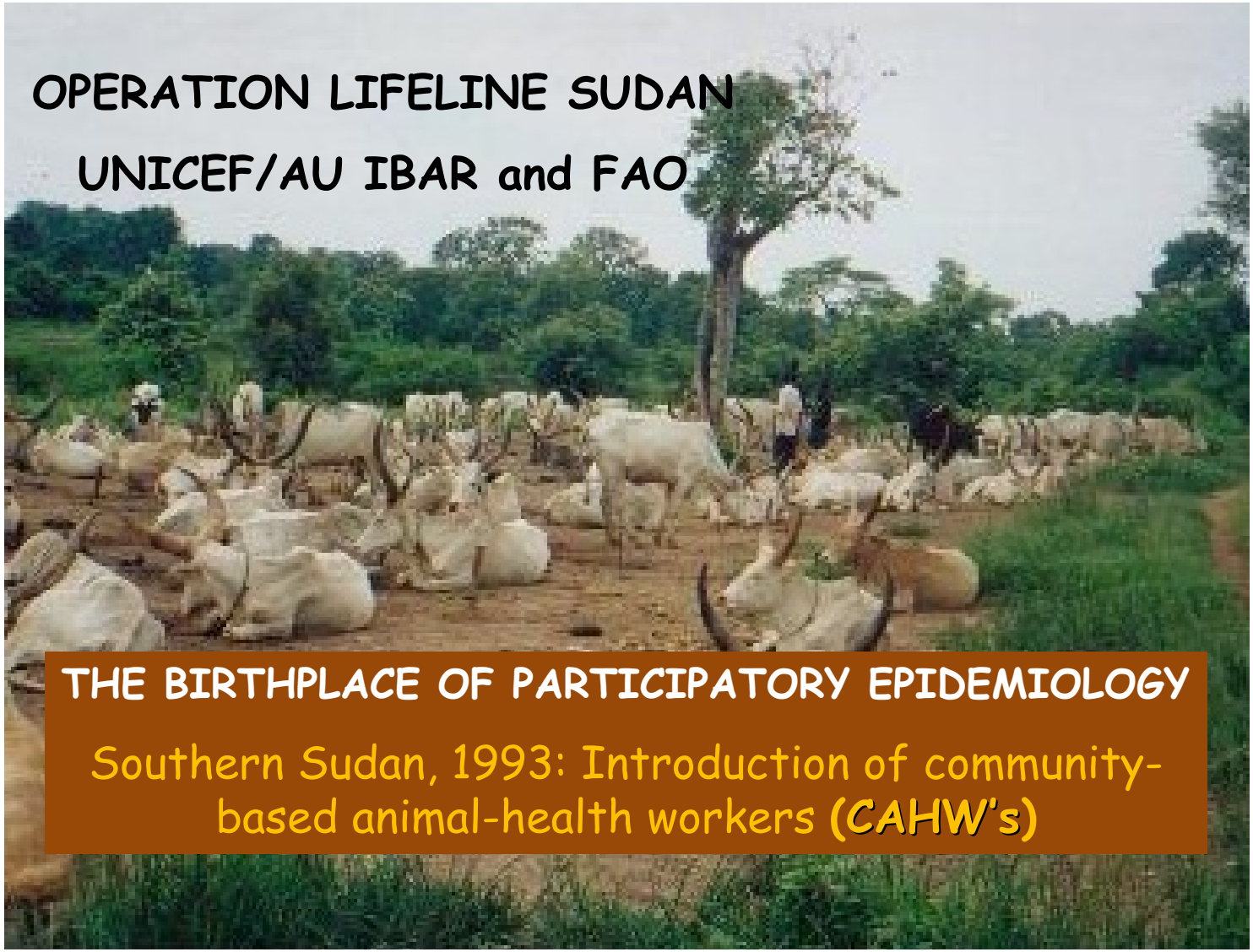
VOL. 13, N° 2
JUIN - JUNE - JUNIO
1994



"Behold, the hand of the Lord is upon thy cattle which is in the field" Exodus 9, 2-7

Between 1711 and 1769 nearly 10,000 animals died each day from rinderpest in Europe

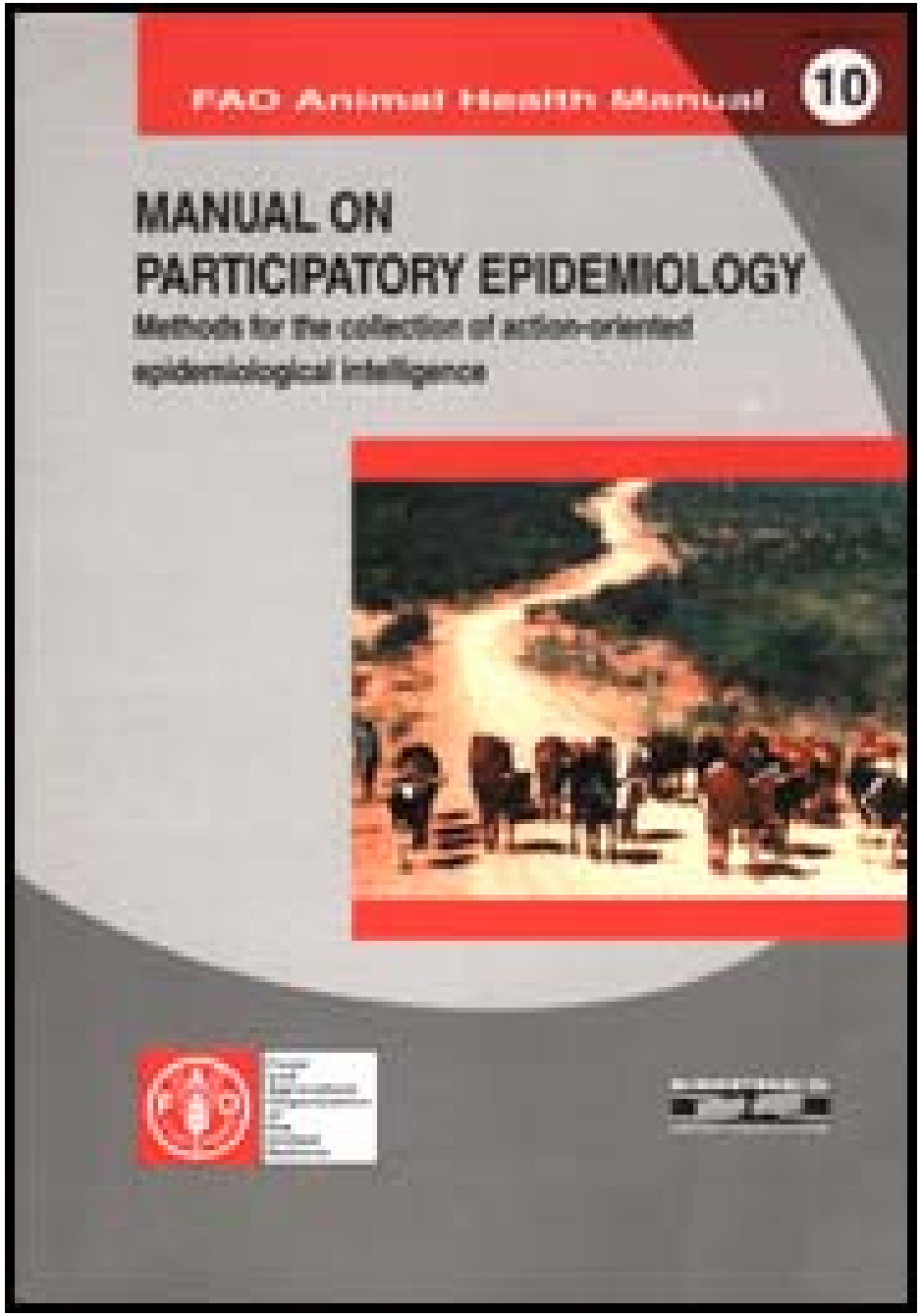
Lithograph from the period ('The hand of God struck the Netherlands, afflicting its cattle with rinderpest')



After P. Roeder, 2006

Participatory epidemiology and participatory disease surveillance

- Participation: The empowerment of stakeholders to identify and solve their own problems.
- Participatory epidemiology (PE): The application of participatory approaches to epidemiology.
- Participatory disease surveillance (PDS): *A* form of active clinical surveillance, intended to detect clinical cases; case detection can be confirmed by biological testing.



FAO Animal Health Manual 10
Manual on Participatory Epidemiology - Methods for the Collection of Action-Oriented Epidemiological Intelligence

Text Prepared by Jeffrey C. Mariner (Consultant to FAO) additions by Roger Paskin (Animal Health Officer, Infectious Disease Emergencies, FAO)

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS - Rome 2000

PE and PDS: overview

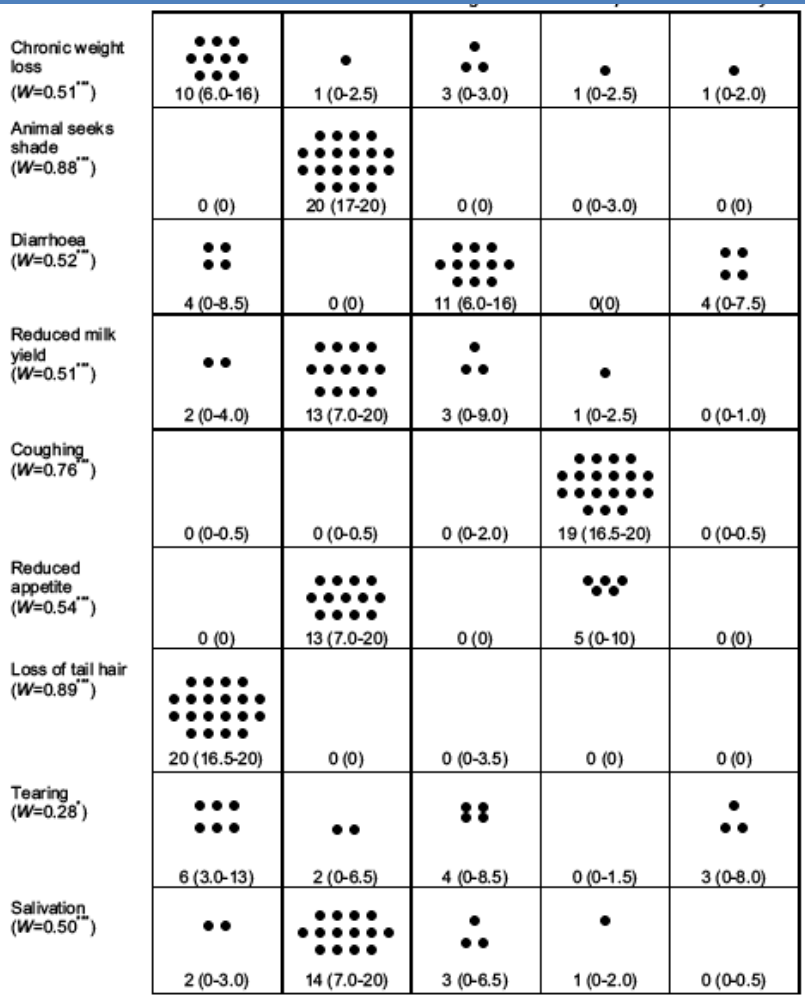
- Overcome limitations of conventional epidemiological methods to address animal health surveillance and research
- Developed in small-scale, community animal health programmes, then applied to major international disease control efforts.
- Requires problem-solving skills and the ability to be adaptable. "Not just knowledge; it is learned behaviour".
- Global Rinderpest Eradication Program (GREP) adopted PE and PDS as a surveillance tool for controlling rinderpest (RP).
- Recognised by OIE for countries' historical RP assessment and as a component of clinical RP surveillance.
- Subsequently used in both rural and urban settings in Africa and Asia, for FMD, PPR and HPAI.
- Contributed towards controlling rare and common diseases.

Participatory appraisal methods

The main methods for collecting information:

- semi-structured interviews
- Scoring and ranking
- visualization

Matrix scoring, diseases signs adult cattle, S. Sudan Nuer 'chronic wasting cattle disease' names



Notes for Figure 1

FMD **CBPP**

Participatory disease surveillance programmes, 2001 - 2009

Country	Targeted						Non targeted; 'discovered' syndromes
	RP	FMD	HPAI	PPR	RVF	CCPP	
1. Afghanistan	X	X		X			Endoparasites, HS
2. Ethiopia	X					X	RP-like syndrome
3. Kenya	X		X		X		FMD, RP-like synd., ECF
4. Pakistan	X						FMD, PPR, HS; 'Post parturient haematuria'
5. Somalia	X						
6. Sudan	X		X				FMD, PPR, MCF, ECF, NCD
7. Tajikistan	X	X		X			PPR, Blackleg, Theileriosis
8. Uganda	X						CBPP, ECF, Helminthosis; 'Bloody diarrhea'
9. Uzbekistan	X	X		X			Brucellosis, pasteurellosis, haemoparas., endoparasites
10. Yemen	X						
11. Turkey		X					
12. Egypt			X				
13. Indonesia			X				NCD
14. Zimbabwe							Bov. Dermatophylosis, target
Total	10	4	4	3	1	1	

Refs. 1-9, 13: Jost, Mariner et al, 2007; 10 – Roeder, 2006; 11,12 – FAO, 2005, 2009; 14 - Chatikobo et al, 2009

Veterinary para-professionals

OIE definition

"a person who, for the purposes of the Terrestrial Code, is authorized by the veterinary statutory body to carry out certain designated tasks (dependent upon the category of veterinary para-professional) in a territory, and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary para-professional should be defined by the veterinary statutory body depending on qualifications and training, and according to need."

Traditional :

- stock-inspectors
- veterinary technicians
- veterinary assistants
- Feldschers
- meat inspectors

New/Candidate:

- Community Animal Health Workers (CAHWs).
- Small farmers

Type of poultry	Nr infected flocks	%	Nr culled flocks
Layers	168	25%	673
Turkeys	18	29%	62
Breeders	34	31%	110
Broilers	2	2.4%	84
Ducks 2 (4.3%) 46	2	4.3%	46
Backyard (pets)	13	0.07%	17,421
Others	4	1.4%	280

Stegeman, Bouma, Elbers et al (2005):
Transmission of avian influenza virus (H7N7) between flocks in Netherlands,

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RESOLUTION No. XXXI

Participation of Small Farmers in Animal Health Programmes

Adopted by the International Committee of the OIE on 29 May 2008, 76th General session , PARIS

4. **Passive and active disease surveillance should be applied using conventional and participatory approaches to enhance small farmer inclusion and the sensitivity and representativeness of animal health information systems.**
5. **The OIE review international standards, definitions and guidelines to identify opportunities to encourage small farmer participation, under the supervision of Veterinary Services and enhance equity and efficiency in animal health programmes and trade.**

OIE PVS Tool (Evaluation of Performance of Vet Services)
Competencies of veterinary para-professionals (VPP's)

Levels of advancement: (1 – lowest)

1. No formal entry-level training.
2. training of very variable standard, allowing the development of limited animal health competencies.
3. Training of a uniform standard, allowing the development of basic animal health competencies.
4. Training of a uniform standard, allowing the development of some specialist animal health competencies (e.g. meat inspection).
5. Training of a uniform standard, subject to regular evaluation and/or updating.

Veterinary schools: Is PE/PDS included in your curriculum?

Region	Contact	Response	Curriculum includes PE/PDS		
			Undergrad	Postgrad	total
N.America	10	9	1	2	3
S. America	2	0			
Africa	1	1	1		1
Asia	2	2		1	1
Europe	15	6	1	1	2
Oceania	1	1			
Total	31	19 (64.5%)	3	4	7

Proposed/drafted recommendations

- Incorporating ethnoveterinary medicine and participatory approaches to epidemiology into university curricula will have a long-term impact on the veterinary profession.
- Debate, discussion and consultation continue to further the process of integrating participatory methods with conventional epidemiological approaches and with key international guidelines.
- Participatory methodologies are useful to improve the diagnostic and anamnestic qualifications of veterinary graduates.
- Veterinary schools are encouraged to participate in the development and assessment of teaching methods for the training of veterinary para-professionals, community animal health workers, small farmers and other stakeholders, while preserving the leading role of the veterinary profession.
- Veterinary graduates should be trained to be prepared for their expected contribution in such activities.

Acknowledgements

Dr Jeff Mariner and Dr Peter Roeder are gratefully acknowledged for their support & provided data on PE and PDS.