

Production performance of Native Bhutanese chicken

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Outline of Presentation

- Introduction
- Chicken Population and trends
- Diversity of Local chicken
- Rearing system and housing
- Feeding
- Production performance
- Conclusion
- Way forward



Introduction

- Chickens have existed in Bhutanese villages from time immemorial withstanding changes and test of time.
- They are found in almost all agro-ecological zones ranging from wet subtropical to alpine regions.
- Bhutanese poultry breeds were important contributors to human welfare in the past, and may possess characteristics that will be needed again to meet new or re-emerging needs.
- Conservation through utilization



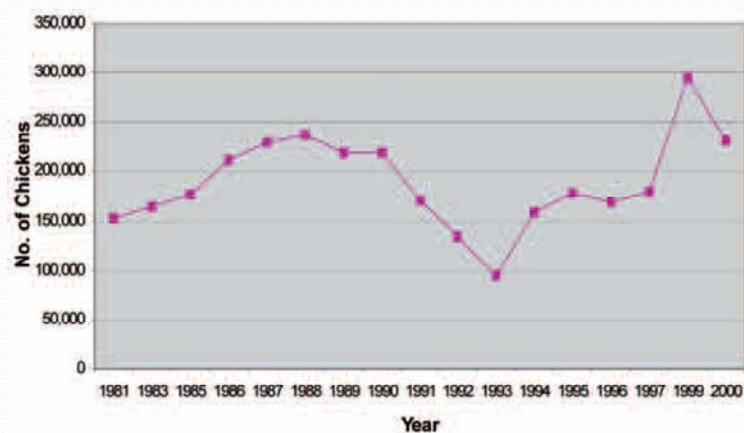
Purpose of chicken rearing

- Source of animal protein in the form of meat and eggs
- Financial security through sale of meat and eggs and live birds
- Pest control
- Provide manure for farm use
- Cultural and religious values

Chicken Population

- Record shows that over 63% households in Bhutan raise chickens.
- The total chicken population-208213 out of which 155790 (75%) is local chicken (Livestock statistics,2008)

Population trends



Diversity of Local chicken

- Bobthra: Seim (Dz), Paile (Lh); Jhapay maap (Dz), Rato baley (Lh).
- Belochem (Dz)
- Native White: Yuebja kaap (Dz)
- Frizzle: Pulom (Dz), Dumshay (Lh)
- Naked Neck: Khuilay (Lh)
- Barred Yubja: Poolsuri (Lh)
- Native Black : Yuebja naap (Dz), Kaalo kukra (Lh)
- Shekheni (Lh)



Seim



Jhapay Maap – Rose comb variant



Jhapay Maap -Single comb variant



Belochem



Naked neck (male)



Naked neck (female)



Frizzle (Female)



Frizzle (male)



Yubjha Barred (female)



Kauray



Shekheni (Male)



Shekheni (female)



Yuebja Kaap



Yubjha Naap

Rearing system and housing

Local chickens in villages are reared mostly in scavenging system (free range).



- Chicken are also sheltered at night in coups in semi-confined backyard system



Feeding

- Predominantly left to fend for themselves
- Kitchen refuses and crop residues

Production Performance

- There has been no attempts to collect systematic and objective data
- Data presented are subjective- farmer's interview

Egg Production

Production Parameters	Nakedneck (N = 20)			Yubjha naap (N = 35)		
	Mean	St Dev	SE Mean	Mean	StDev	SE Mean
Age at 1st lay (month)	6.40	0.67	0.15	6.53	0.43	0.07
Age at peak lay (month)	7.22	0.68	0.15	7.54	0.46	0.08
Broodiness/year	3.08	1.09	0.24	2.96	0.37	0.06
Clutch/yr	2.78	0.34	0.08	2.90	0.34	0.06
Clutch size	19.25	1.71	0.38	23.57	4.06	0.69
No of eggs/year	53.93	8.21	1.85	68.35	9.00	1.52
Egg Weight (gm)	58.72	0.69	0.15	57.10	3.62	0.61

Reproductive performance

Production Parameters	Nakedneck (N = 20)			Yubjha naap (N = 35)		
	Mean	St Dev	SE Mean	Mean	StDev	SE Mean
Fertility %	91.68	7.10	1.59	95	5.29	0.90
Hatchability %	87.22	8.38	1.87	93.20	5.13	0.87

Growth

Production Parameters	Nakedneck (N = 20)			Yubjha naap (N = 35)		
	Mean	St Dev	SE Mean	Mean	StDev	SE Mean
Hatching - Weaning (days)	89.00	13.82	3.09	82.00	14.10	2.38
Wt. of adult male (kg)	3.11	0.57	0.13	3.36	0.34	0.06
Wt. of adult female (kg)	2.38	0.42	0.09	2.26	0.28	0.05

Survivability

Production Parameters	Nakedneck (N = 20)			Yubjha naap (N = 35)		
	Mean	St Dev	SE Mean	Mean	StDev	SE Mean
Chicks Mortality %	16.78	1.90	2.66	1.27	8.84	1.49
Grower Mortality %	12.25	17.99	4.02	9.03	7.73	1.31
Layer Mortality %	2.75	5.04	1.13	9.09	8.56	1.45

Egg quality



Barred yubjha eggs



Eggs from Yubjha naap



Eggs of Naked neck



Conclusion

- Data available are piece meal and subjective
- Need for systematic Research
- Research Fund



Way forward

- Conservation strategy and operational plan
- Conservation through utilization
- Concrete research on production performance
- Research on crossbreeding and breed improvement based on local germplasm.