

Feline reproduction: a matter of productivity

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Female reproductive performances, mainly queening rate and prolificacy, as well as kitten survival are determining factors for the success of feline breeding, including breeders' own satisfaction together with economic profitability. Nevertheless, parameters affecting the efficiency of feline breeding are poorly studied [1,2]. The objective of this study was to provide reference figures of the number of kittens that could be expected to be sold per mated female.

Data were collected from an online software dedicated to breeding management in catteries (Breeding Management Support®, Royal Canin, Aimargues, France). Information was recorded on a voluntary basis by French breeders from 2011 to 2014. Productivity was expressed as mean number of kittens alive at 2 months of age/mated queen (\pm SD). Descriptive statistics will be provided for the population and the 10 most represented breeds (thanks to Excel software®,

Microsoft corporation, Redmond, Washington, USA).

A total of 9063 estrous periods (in contact with a male of the same breed) from 5303 queens (45 breeds) were recorded. Globally, 78.1% (n=7075) of the mated females gave birth to 28065 kittens within 7075 litters. Mean litter size was 4.0 ± 1.9 kittens. The overall mortality in kittens was 15.9% (n=4450), with 8.5% of stillbirth (n=2380). Among the 25685 kittens alive at birth, 7.9% (n=2028) died before weaning. The general population presented a productivity of 2.6 ± 1.2 alive kittens/mated queen. For the 10 most represented breeds, it ranged from 2.1 to 3.2 alive kittens/mated queen (Table 1). In absolute value, the lowest productivities were for Exotic Shorthair and Persian due to the lowest queening rates and lowest prolificacies. Conversely, Ragdoll, with the highest queening rate and prolificacy, exhibited the highest productivity. In Bengal, despite a high prolificacy, the productivity remained weak due to a low queening rate and a high kitten mortality. Likewise, the British Shorthair lose in productivity due to the worst mortality rate.

Productivity in a non conventional approach of feline reproduction, but is important for the sustainability of breeding catteries. The numerical approach proposed in the present work has now to be associated with a pure economical one, taking into account the production costs (nutrition, care and veterinary costs) and selling price for kittens in each breed.

[1] Sparkes AH et al. J Feline Med Surg 2006;8:145-57.

[2] Ström Holst B and Frössling J. J Feline Med Surg 2009;11:793-802.

Table 1: Productivity of the 10 most represented breeds

Breeds	Queening	Mean (±SD)	Kitten	Productivity (nb of estruses)	rate (%)	litter			
size	mortality(%)	number of alive				kit-			
ten/mated				queen)(±SD)					
Exotic Shorthair (285)	74.0		3.3±1.5	12.7	2.1±1.8	Persian (1940)			
76.4	3.4±1.6	17.0	2.2±1.8	Bengal (444)	72.1	4.1±1.9	16.8	2.5±2.2	Birman
(1077)	81.5	3.7±1.6	14.2	2.6±1.8	Sphynx (166)	78.9	4.0±1.9	18.4	2.6±2.1
British Shorthair (870)	81.8		4.1±1.9	21.5	2.6±2.1	Chartreux (475)			
79.6	4.1±2.0	13.6	2.8±2.2	Norwegian (455)	80.2	4.2±1.8	10.3	3.1±2.4	Maine
Coon (1838)	78.7	4.5±2.2	13.6	3.1±2.2					

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