



UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI MEDICINA VETERINARIA
E SCIENZE ANIMALI



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**Animal Production Science:
innovations and sustainability
for future generations**

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Behavioural characterization of two local Italian chicken breeds

Tuesday, June 13th | Room Daunia

Session 01

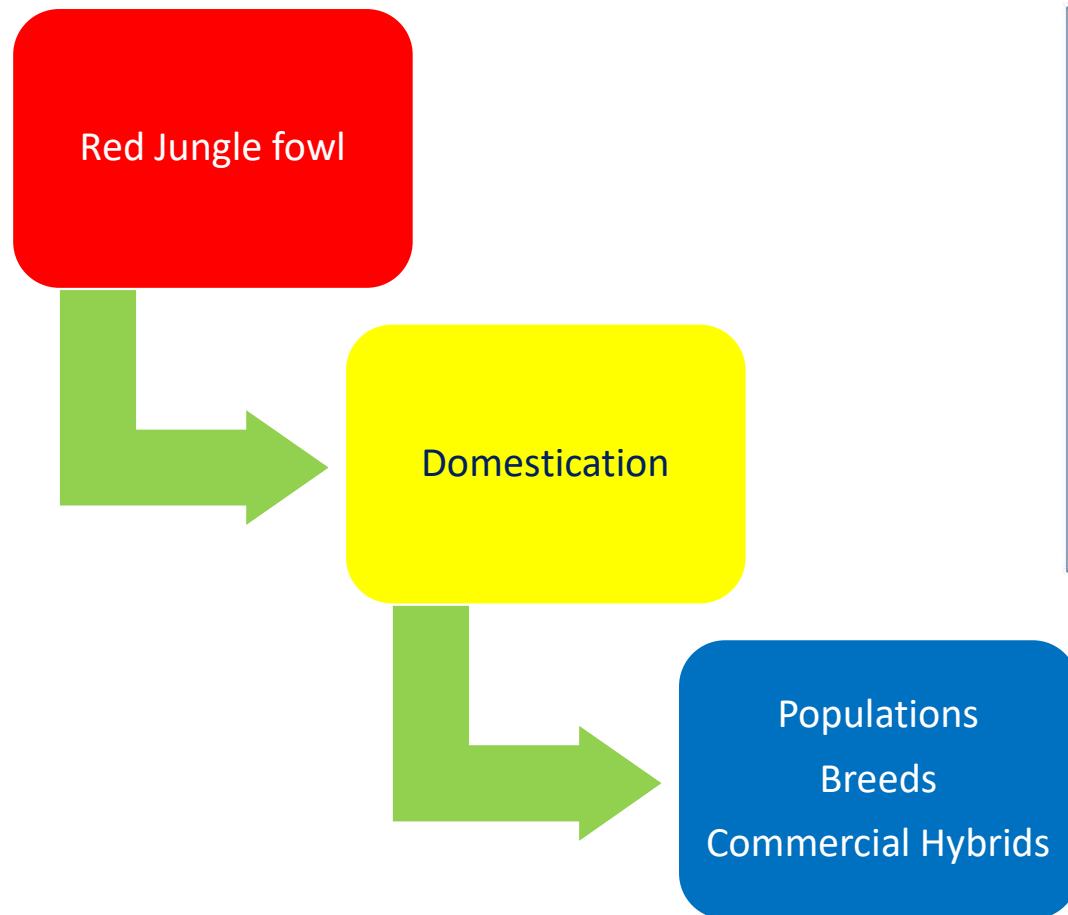
Chicken biodiversity

Chairs: **Iaffaldano Nicolaia –**

Schiavone Achille

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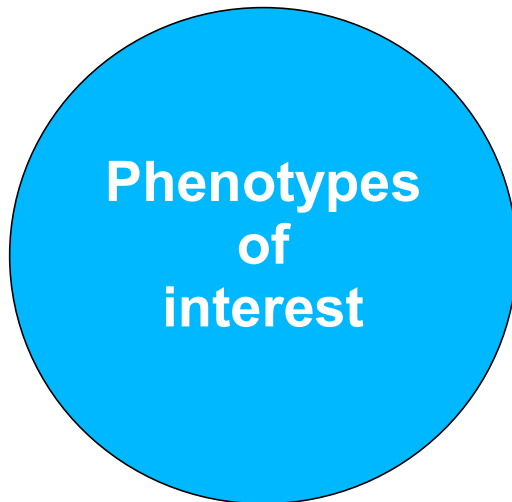
Introduction



Introduction



Introduction



Behavioural investigation:

- phenotypic characterization of traditional poultry breeds
- birds' reactivity and fear responses could supply effective tools in birds' welfare and coping ability analysis - improvement of rearing systems



Materials & methods



The aim: to characterize behavioural traits in 2 local breeds from Lombardy Region (Italy): Mericanel della Brianza (MBZ) and Milanino (MLN).

Five families (1 rooster + 5 hens), housed in the same conditions and fed the same diet, were studied. Birds' weight (WEI) was included in the analysis as dependent variable.

Birds' (1 rooster+2 randomly chosen hens / family) **individual reactivity** was tested by **tonic immobility test (TI)**: number of induction (N, max 3), TI duration (s, max 180 s), number of vocalization and **emergence test (ET)**, max latency time 180s), head emergence out of the box latency (s), first step out of the box latency (s), bird's complete emergence out of the box latency (s), number of vocalizations and defecations. Data have been analysed by ANOVA using SPSS® General Linear Model procedure, sources of variation were breed, sex and breed*sex ($P \leq 0.05$).

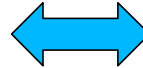
Home-pen based time budget (HPB; 30 min.; 5 min. scan; N of birds performing the behaviour, 7 repetitions; 14 single parameters; 4 cluster parameters; % of the birds performing the recorded behaviour) and **Qualitative Behavioural Assessment (QBA;** 23 variables rated; mm) were performed on the 10 families. A non-parametric Mann–Whitney U test was applied to data analysis considering the breed as the main effect ($P \leq 0.05$).



Materials & methods

Home-pen based time budget:

Eating, Drinking, Feeding, Walking, Ground pecking, Activity, Agonistic, Sitting, Perching, Standing, Resting, Dust bathing, Wing flapping, Wing stretching, Leg stretching, Body shaking, Preening, Comfort



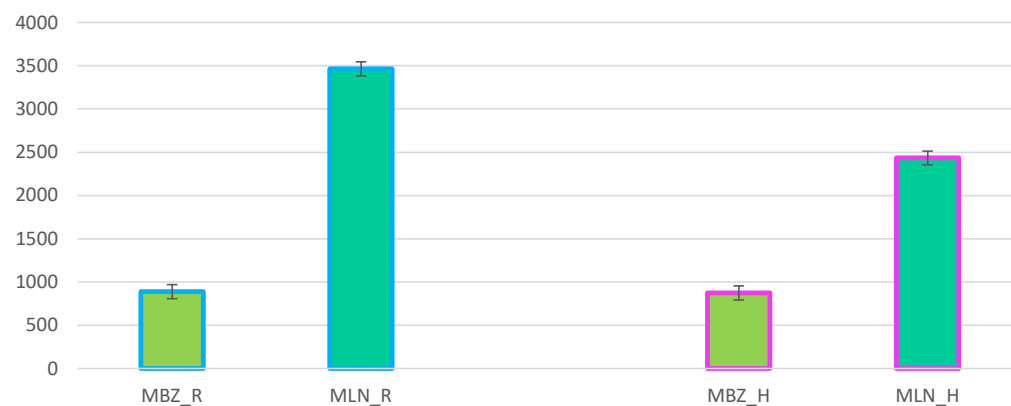
Qualitative Behavioural Assessment:

Active, Relaxed, Helpless, Comfortable, Calm, Content, Tense, Inquisitive, Friendly, Positively Scared, Drowsy, Fearful, Agitated, Confident, Depressed, Unsure, Energetic, frustrated, bored, Playful, Nervous, Distressed,

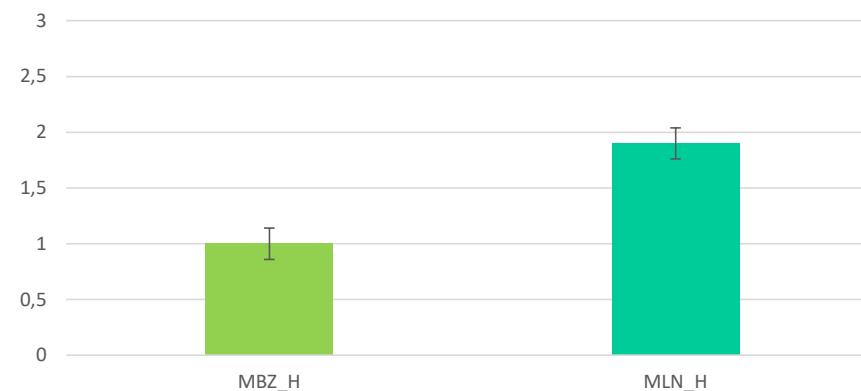


Results

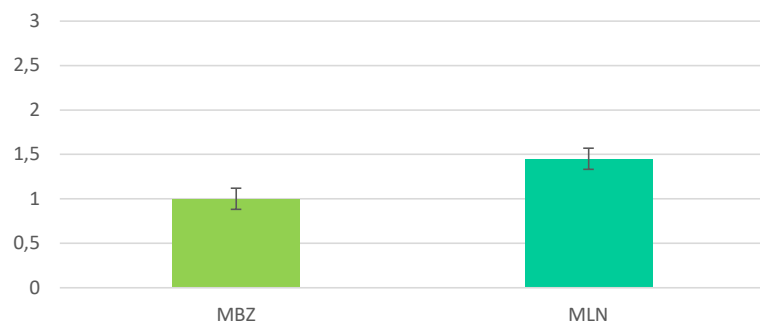
MBZ & MLN mean weight per sex (g; LSMeans \pm s.e.)



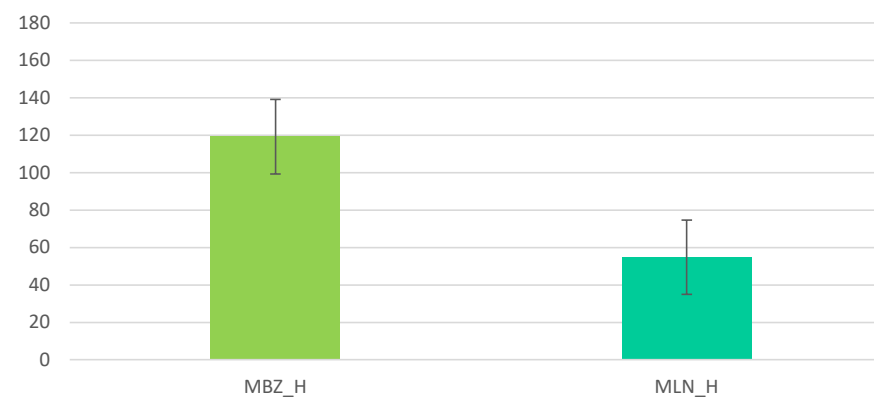
Hens, TI Number of inductions (N; LSMeans \pm s.e.)



TI Number of inductions (N; LSMeans \pm s.e.)

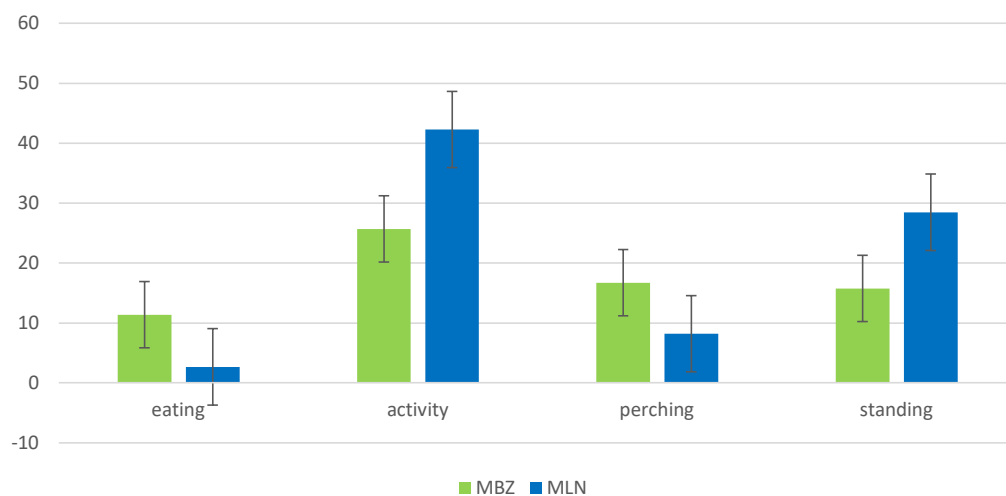


Hens, TI duration (s; LSMeans \pm s.e.)

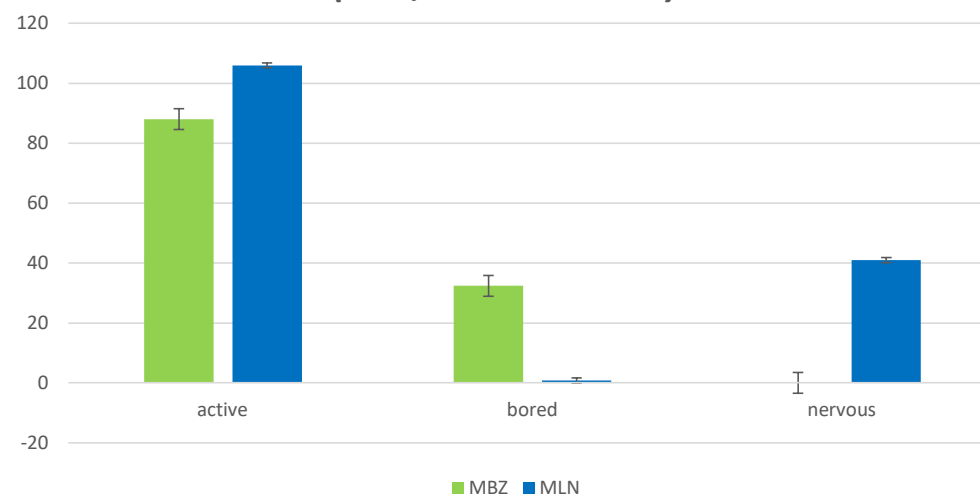


Results

Home Pen Behaviour
(frequency; %; Means \pm s.d.)



Qualitative Behaviour Assessment
(mm; Means \pm s.d.)



Conclusions



Breed specific reactivity



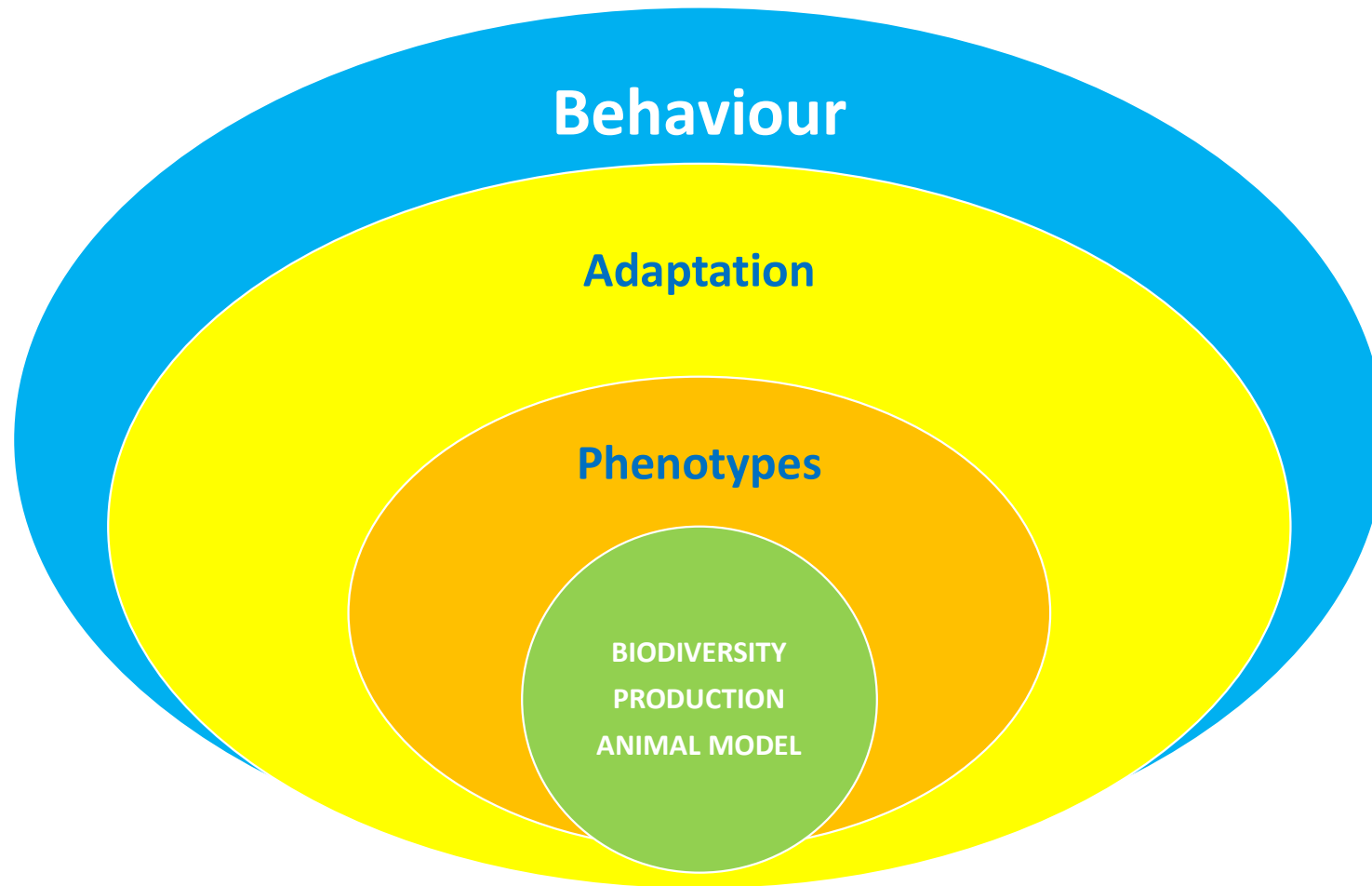
Breed specific fear response



Differences at individual and family/flock level



Conclusions



To read

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