ADAPTATION EXPERIMENTS OF HUNGARIAN TURKEY BREEDS AND THEIR CROSSES IN VIETNAM

(MGE-NEFE project,

Hungary–Vietnam, 2006-2007)

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BACKGROUND AND PRINCIPAL POINT OF VIEW OF THE PROJECT

In **2006** May MGE transferred to Vietnam 1000 **turkey** eggs in order to study the adaptation of Hungarian poultry breeds in Vietnam (Cam Binh- Hai Duong).

- Study on the adaptability of Hungarian Turkey breeds in VN – and propose the subsequent development of breeding stocks which are suitable for keeping on family mixed farms of poor regions of South East Asia (regarding to sustanability and conservation of local poultry genetic resources).

Built in the 1970s **by Hungary** and equiped solely with **Hungarian machines**. All the turkey eggs sent by MGE-NEFE project have been hatched at Cam Binh station

The expansion of our project allows Cam Binh to build relations with Hungary and helps Hungarian experts to provide aid to Vietnam

Results

Hatchability results of turkey eggs in Vietnam and Hungary originated from the Godollo Gene Bank, Hungary (May – June, 2006)		
Breed (genotype)	Hatchability of incubated eggs (%)	
	In Vietnam (unbroken eggs only*)	**In Hungary**
Copper	60,6	**59,4**
Bronze	52,9	**47,4**
Copper ♂ × Bronze ♀	37,1	**46,7**
Bronze ♂ × Copper ♀	48,4	**58,3**

*During the 1st shipping some eggs were delivered broken. Results show the hatchability of unbroken eggs only.

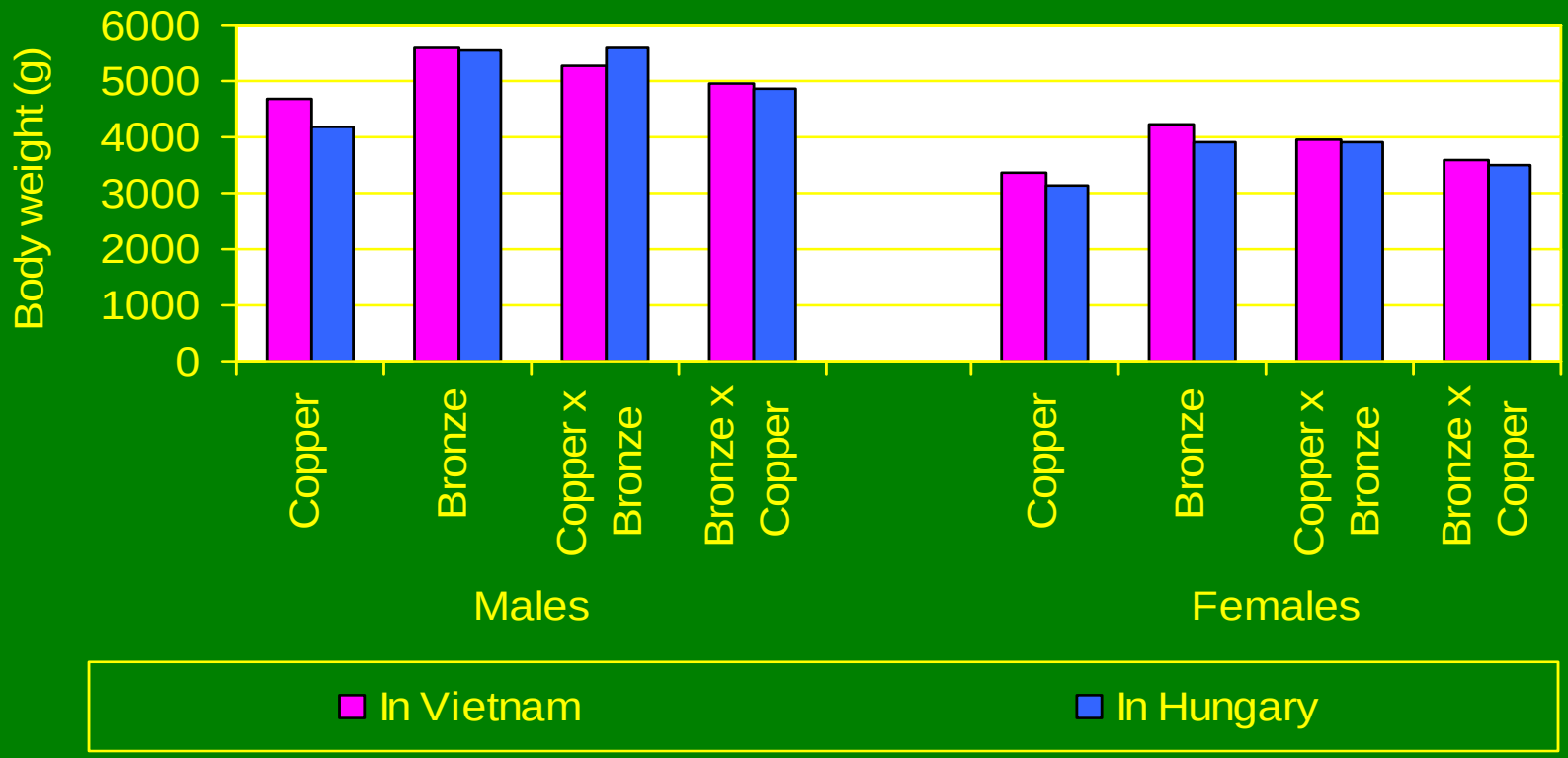
Shipping did not really influence hatching results of turkey eggs: better hatching results were obtained in the case of pure breeds (Copper and Bronze turkey) in Vietnam, while hatching of reciprocal crosses of the two breeds – presumably because of shipping anomalies – showed better results in Hungary

Rearing in the very modest conditions, there is no actual mortality during the first 15 week rearing period. The egg production started in February, 2007.

Mortality results of turkey flocks in Vietnam and Hungary

Breed (genotype)	Mortality till 15 weeks of rearing (%)	
	In Vietnam	In Hungary
Copper	2,9	23,8
Bronze	2,9	16,2
Copper ♂ × Bronze ♀	2,9	10,3
Bronze ♂ × Copper ♀	5,0	6,0

Live body weight (g) of Hungarian turkey breeds and crosses at 20 weeks of age in Vietnam and Hungary (KATKI-POREC data, 2006)

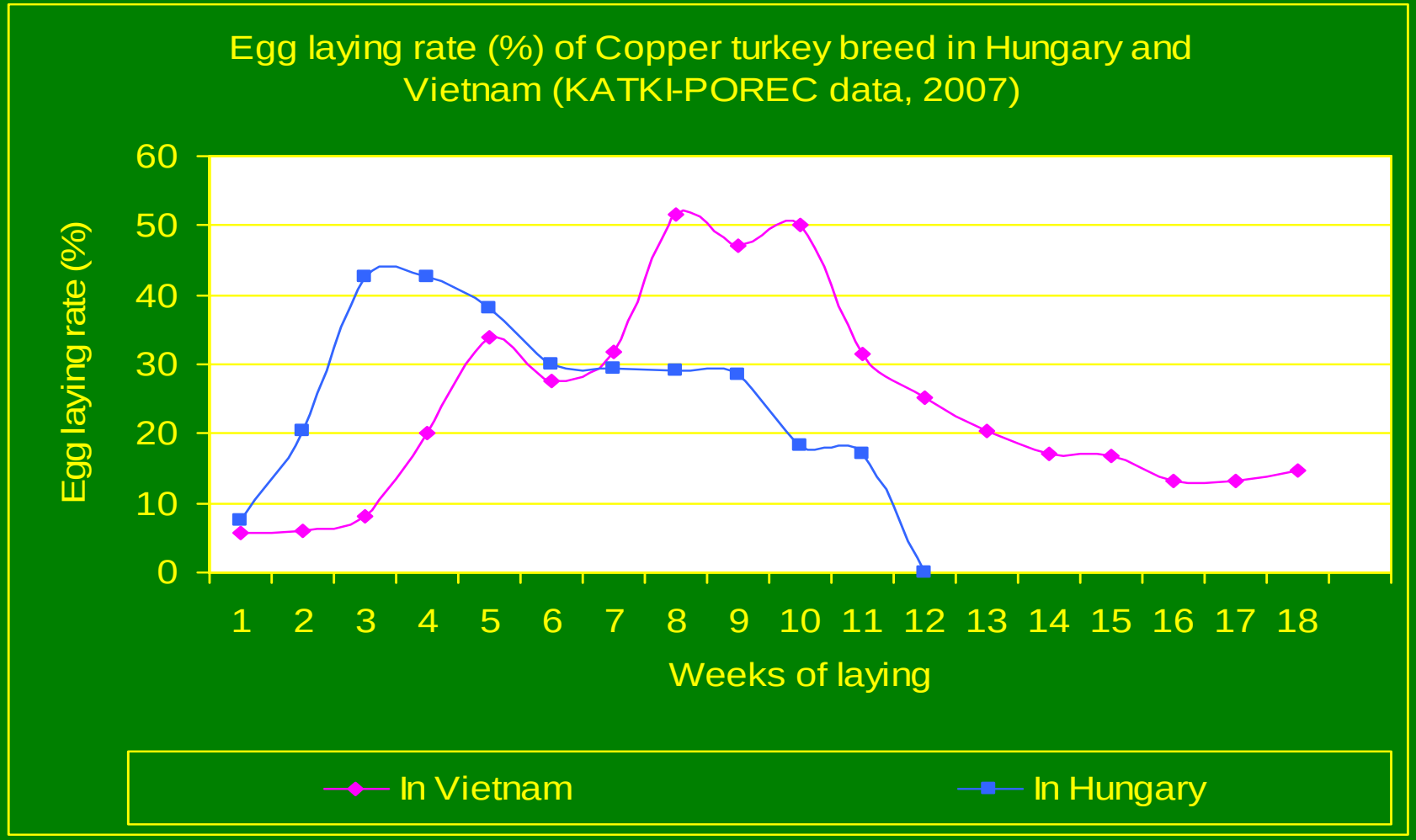


Body weight records of all turkey flocks show that significantly higher body weight in all genotypes studied can be obtained in Vietnam than in Hungary. Bronze turkey showed better results than Copper turkey, and Copper turkey male x Bronze turkey female crosses showed higher body weight than the reciprocal cross in both environments. It is worth mentioning that crossings for the 15 week body weight are characterized by intermedier inheritance in Vietnam, while heterosis is observed in Hungary

HUNGARIAN COPPER TURKEY

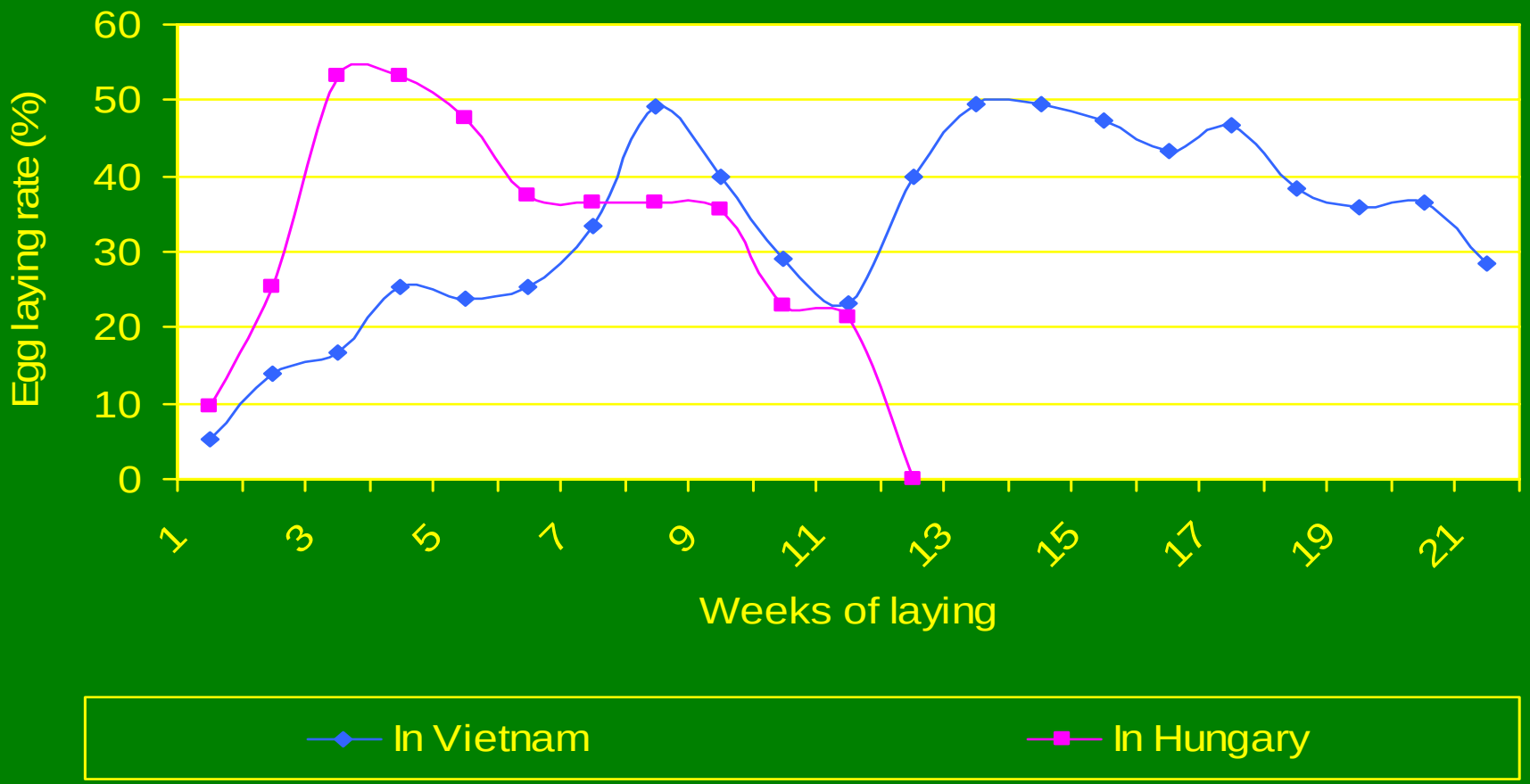
HUNGARIAN BRONZE TURKEY

Sexual maturity – age at first egg (days) (KATKI-POREC data, 2007)		
Breed (genotype)	Age at first egg (days)	
	In Vietnam	In Hungary
Copper	193	302
Bronze	190	309

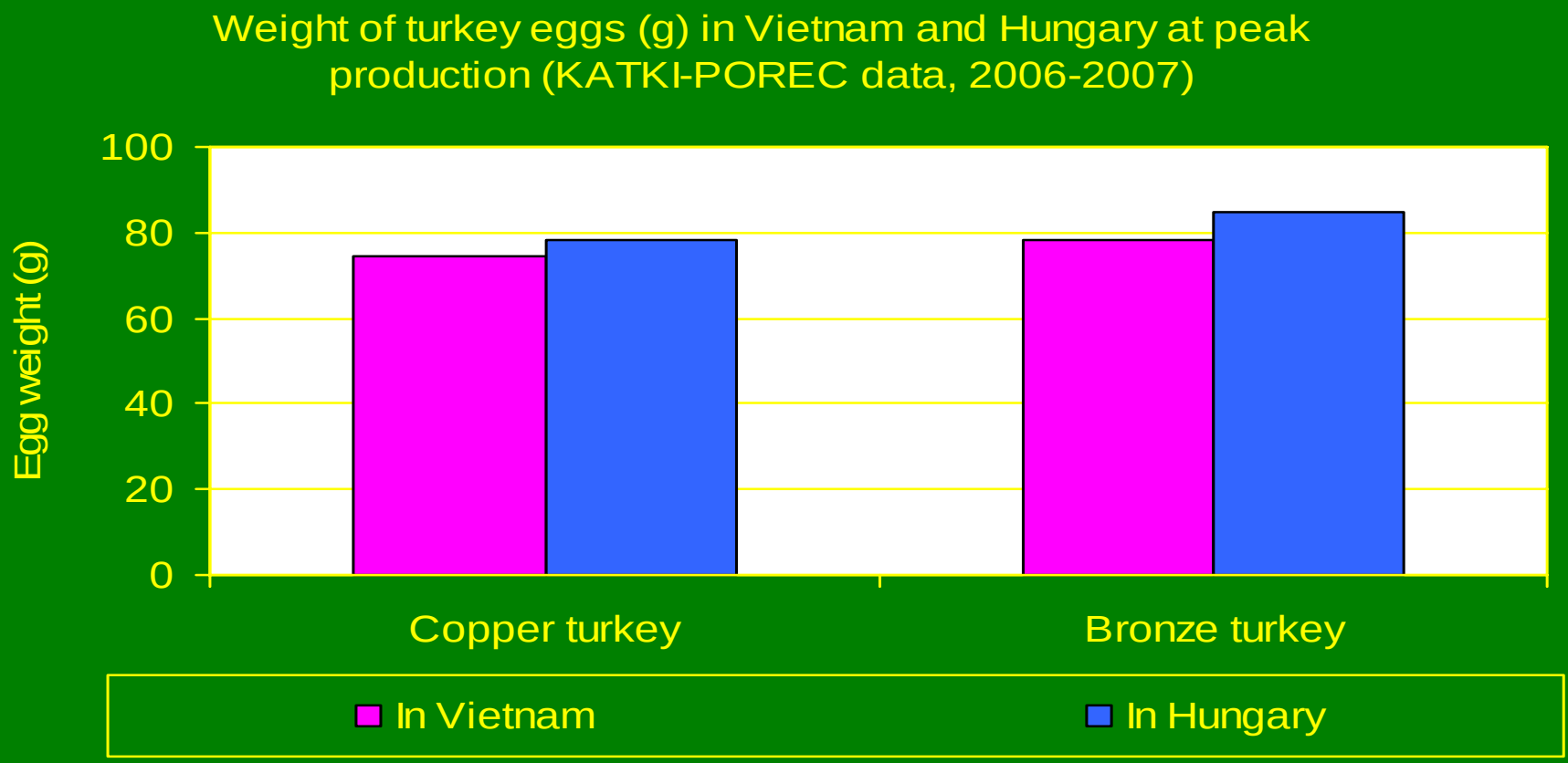


Turkeys start laying more than 100 days earlier in Vietnam, but the rise of egg production curve is somewhat lower. They reach peak production in the 8th week of laying, compared with 3rd week of laying for maximum egg production in Hungary. The season of egg production ends within 12 weeks in Hungary, but lasts as long as 21 weeks (the end of data recording) or more in North-Vietnam. Seasonality differences can be explained by different climate and day-length changes.

Egg laying rate (%) of Bronze turkey breed in Hungary and Vietnam
(KATKI-POREC data, 2007)



Bronze turkeys have somewhat higher peak in Hungary and more elongated egg production in Vietnam. The total number of eggs produced in Vietnam is much higher than in Hungary.



Weight of turkey eggs (g) in Vietnam and Hungary at peak production (KATKI-POREC data, 2006-2007)		
Breed (genotype)	Hatchability of incubated eggs (%)	
	In Vietnam	In Hungary
Copper	74,4	78,4
Bronze	78,2	85,0

CONCLUSIONS

- **Based on the first and second period results of adaptation experiments of Hungarian turkey breeds and their crosses, it can be concluded that turkey genotypes studied can be reared in Vietnam with success.**

•Hatching results of breeding eggs shipped to Vietnam indicate that good, maybe somewhat better results can be obtained in Vietnam than in Hungary. This was confirmed by the hatching results of eggs produced in Vietnam in 2007.

As regards body weight gain and livability till 20 weeks of age, better results can be obtained in Vietnam, than in Hungary.

Crossings of turkey breeds showed heterosis for body weight and feed conversion in Hungary, but not in Vietnam.

In Vietnamese conditions purebred Hungarian Bronze turkey gives the best results in this respect. Livability was found much better in Vietnam in all genotypes studied, but no mortality was observed after 8 weeks of age in either environments.

It also means that 100% of birds survived during egg production too. As regards reproduction characteristics, turkeys start egg production more than 100 days earlier in Vietnam, and produce more but – due to early start of laying and longer production – somewhat smaller eggs.

Data obtained so far on the adaptation of Hungarian turkey breeds and crosses demonstrate well the excellent adaptability of these breeds in Vietnamese environment, however, crosses do not show heterosis for certain traits, as Copper male x Bronze female do in Hungary.

THANK YOU VERY MUCH FOR YOUR ATTENTION!