



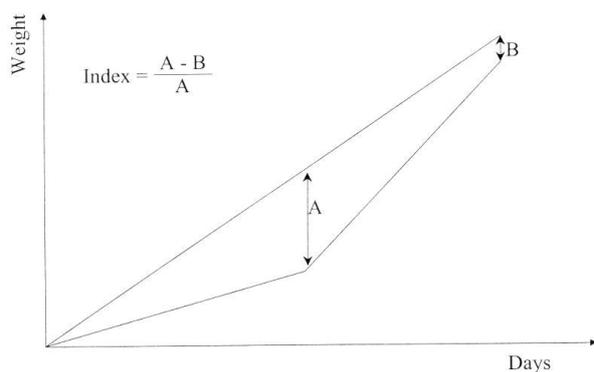
## Supplementary Material

# A Compensatory Growth like Analysis of Common Carp *Cyprinus carpio* L. among Different Combinations in Full Diallel Crossing

Shengyan Su, Zaijie Dong\*, Wenbin Zhu, Lanmei Wang and Jianjun Fu

Key Laboratory of Freshwater Fisheries and Germplasm Resources Utilization, Ministry of Agriculture, Freshwater Fisheries Research Center, Chinese Academy of Fishery Sciences, Wuxi, 214081, China

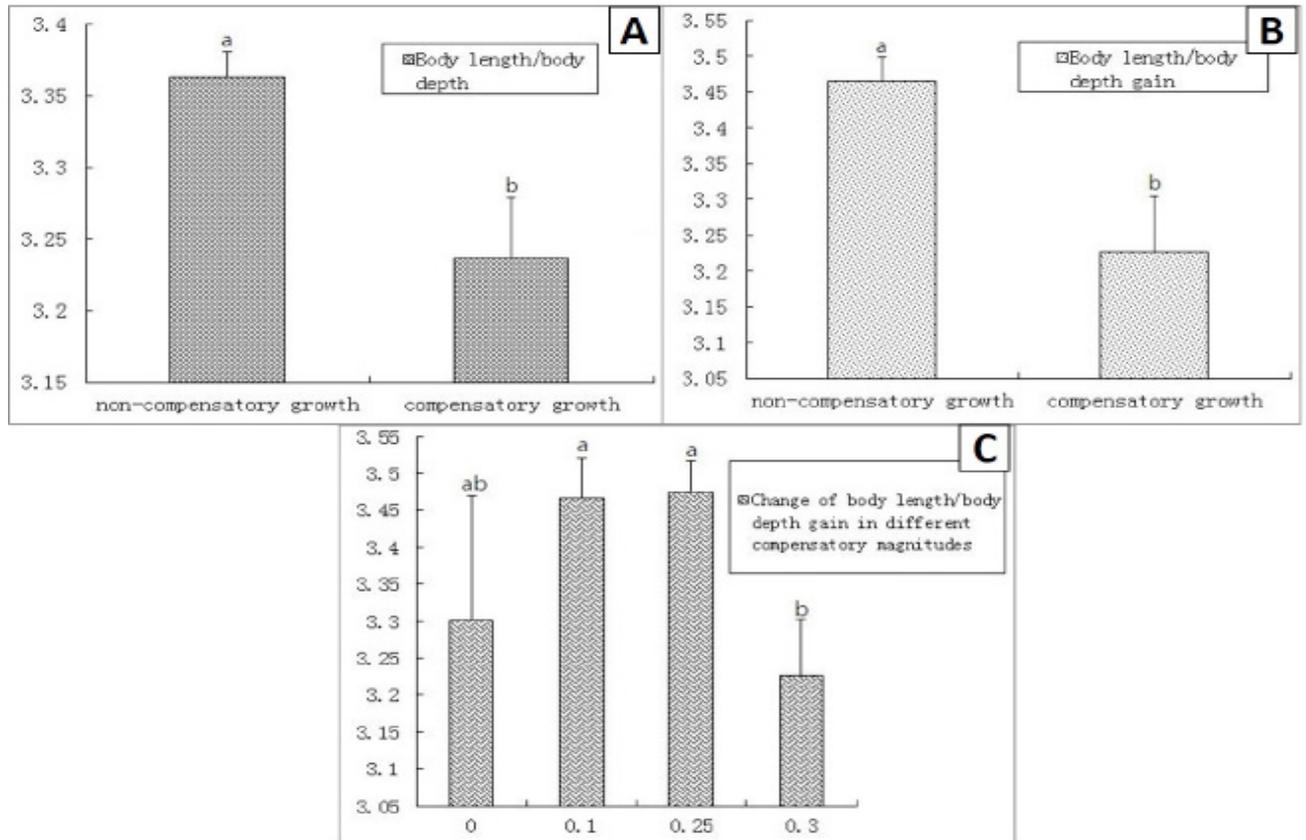
\* Corresponding author: [dongzj@ffrc.cn](mailto:dongzj@ffrc.cn)  
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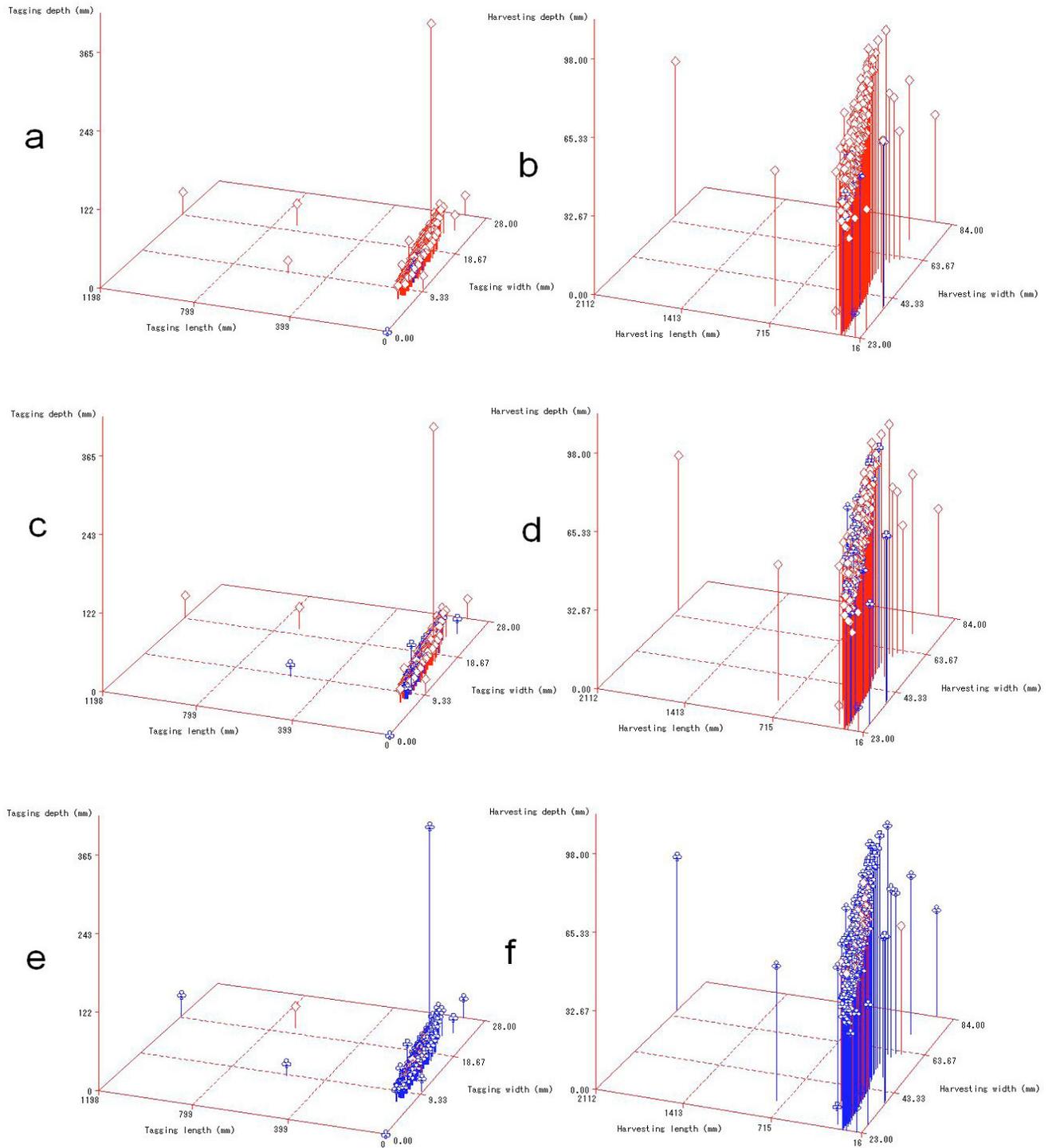
Supplementary Fig. S1. The compensatory index, a method to measure the catch-up growth: A is the difference of body weight during first growth stage (catch-up group influenced by restricted factor and control group with no influence by such factor), B is the difference of body weight during second growth stage where the catch-up group were feed as control group.

Supplementary Table S1.- YN effect of different combinations observed.

Combination	YN effect			
	0.10 (0.90)	0.25(2.25)	0.35(3.15)	
Hh	1	1	0	0
Hj	2	1	1	0
Hy	2	1	1	0
Jh	1	1	0	0
Jj	2	1	1	0
Jy	2	1	1	0
Yh	1	1	0	0
Yj	3	1	1	1
Yy	0	0	0	0
Accumulation	14	8	5	1
Total	72	72	72	72
Ratio(%)	19.40	11.10	6.90	1.40



Supplementary Fig. S2. Magnitude of compensatory growth of the body length/body depth. **A**, compensatory growth effect on body length/body depth, non-compensatory growth group had the higher body length/body depth; **B**, compensatory growth effect on body length/body depth gain, non-compensatory growth group also had the higher body length/body depth gain; **C**, change of body length/body depth under different magnitude of catch-up growth. Both 0.1 and 0.25 levels make the body length/body depth gain bigger than the 0.3 level, while no different significant difference of such ratio was found between compensatory group and control group.



Supplementary Fig. S3. Different compensatory growth magnitude effect on body shape. **a, c and e**, 3D graphs for body length, body width, body depth on PIT tagging; **b, d and f**, 3D graphs for body length, body width, body depth on harvesting; **a and b**, 0.10 level for compensatory growth observed; **c and d**, 0.25 level for compensatory growth observed; **e and f**, 0.30 level for compensatory growth observed; red present non-compensatory growth, blue instead of catch-up growth. From the level 0.1 to level 0.3, body shape on both tagging and harvesting defined as the colour components showed that the compensatory growth observed were increased (with more expanded blue area).

**Supplementary Table S2.- Influences of different classified levels on other growth traits.**

		<b>Different classified levels</b>		
		<b>0.10</b>	<b>0.25</b>	<b>0.30</b>
Tagging length	0	56.92±5.83	65.19±1.77 <sup>a</sup>	65.56±1.10 <sup>a</sup>
	1	59.76±1.08	56.65±1.31 <sup>b</sup>	26.98±2.84 <sup>b</sup>
Harvesting length	0	199.40±6.56 <sup>b</sup>	216.56±2.00	216.93±1.29
	1	217.30±1.21 <sup>a</sup>	216.78±1.48	215.45±3.05
Body length gain	0	142.48±8.30	151.38±2.53 <sup>b</sup>	151.37±1.60 <sup>b</sup>
	1	157.53±1.53	160.13±1.87 <sup>a</sup>	188.48±3.78 <sup>a</sup>
Tagging depth	0	18.38±1.71	20.62±0.52 <sup>a</sup>	21.14±0.32 <sup>a</sup>
	1	19.20±0.32	18.39±0.39 <sup>b</sup>	8.27±0.75 <sup>b</sup>
Harvesting depth	0	59.10±0.93 <sup>b</sup>	64.30±0.29 <sup>b</sup>	64.46±0.18 <sup>b</sup>
	1	64.99±0.17 <sup>a</sup>	65.06±0.21 <sup>a</sup>	66.65±0.44 <sup>a</sup>
Body depth gain	0	40.71±1.80 <sup>b</sup>	43.69±0.55 <sup>b</sup>	43.32±0.33 <sup>b</sup>
	1	45.78±0.33 <sup>b</sup>	46.67±0.41 <sup>a</sup>	58.38±0.78 <sup>a</sup>
Tagging width	0	9.75±0.72	10.34±0.22 <sup>a</sup>	10.67±0.13 <sup>a</sup>
	1	9.68±0.13	9.32±0.16 <sup>b</sup>	4.20±0.31 <sup>b</sup>
Harvesting width	0	32.65±0.60 <sup>a</sup>	35.08±0.19 <sup>a</sup>	35.24±0.12 <sup>b</sup>
	1	35.50±0.11 <sup>b</sup>	35.58±0.14 <sup>b</sup>	36.35±0.28 <sup>a</sup>
Body width gain	0	22.90±0.84 <sup>b</sup>	24.74±0.25 <sup>a</sup>	24.57±0.15 <sup>b</sup>
	1	25.82±0.15 <sup>a</sup>	26.26±0.19 <sup>b</sup>	32.16±0.36 <sup>a</sup>