

**Geographical Origin Authentication of Edible *Chrysanthemum morifolium* Ramat.
(Hangbaiju) Using Stable Isotopes**

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22 **Supplementary materials**

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24 **Table S1.** Principal component eigenvalues and variance contribution rates of four indexes of
25 different regions of Hangbaiju

Principal Component Number	Eigenvalue λ	Percentage of Variance (%)	Cumulative (%)
1	2.796	69.9	69.9
2	0.755	18.9	88.8
3	0.313	7.8	96.6
4	0.136	3.4	100.0

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Figure S1. Variation characteristics of (a) $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$, (b) $\delta^2\text{H}$ and $\delta^{18}\text{O}$, (c) %C and %N in Zao Hangbaiju samples at different growth stages. The stages 1 to 10 represent (1) seedling, (2) layering, (3) first pinching, (4) second pinching, (5) flower bud stage (stem and leaf only), (6) flower bud, (7) early blooming flower stage (stem and leaf only), (8) early blooming flower (9) mid blooming flower stage (stem and leaf only) and (10) mid blooming flower. Data from each stage represent the mean of three samples with standard errors. Fertilization occurs between Stages 4 and 5 (before pink dotted line). Stages 5 to 6 represents the flower bud stage (between pink to yellow dotted lines), Stages 7 to 8 represents the early blooming flower stage (between yellow to blue dotted lines), and Stages 9 to 10 represents the mid-blooming flower stage (after blue dotted line).

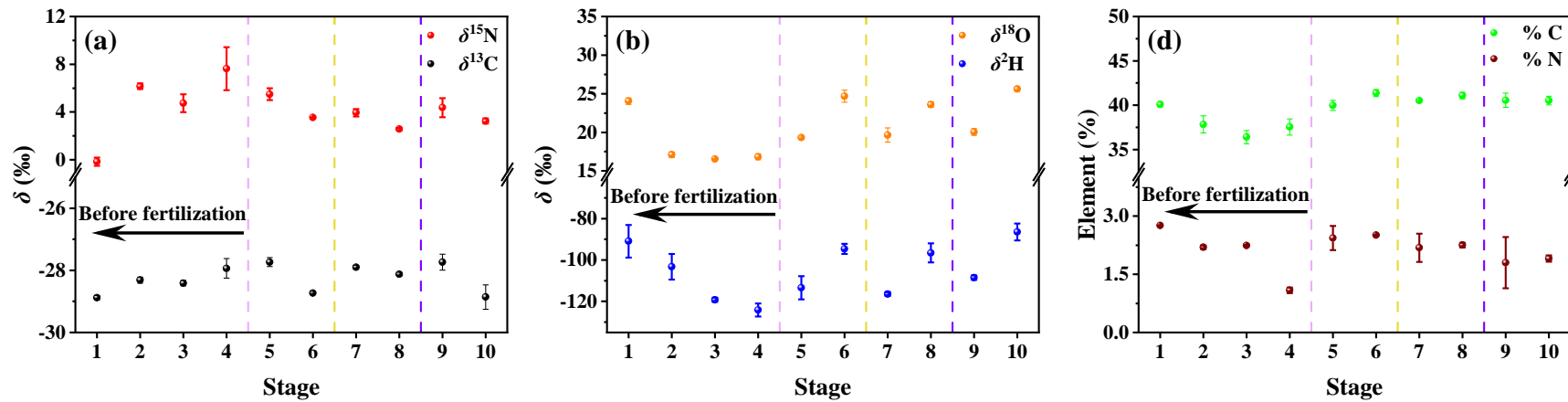


Figure S3. Variation characteristics of (a) $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$, (b) $\delta^2\text{H}$ and $\delta^{18}\text{O}$, (c) %C and %N in Shou2 Hangbaiju samples at different growth stages. The stages 1 to 10 represent (1) seedling, (2) layering, (3) first pinching, (4) second pinching, (5) flower bud stage (stem and leaf only), (6) flower bud, (7) early blooming flower stage (stem and leaf only), (8) early blooming flower (9) mid blooming flower stage (stem and leaf only) and (10) mid blooming flower. Data from each stage represent the mean of three samples with standard errors. Fertilization occurs between Stages 4 and 5 (before pink dotted line). Stages 5 to 6 represents the flower bud stage (between pink to yellow dotted lines), Stages 7 to 8 represents the early blooming flower stage (between yellow to blue dotted lines), and Stages 9 to 10 represents the mid-blooming flower stage (after blue dotted line).

