

**Table S1.** The analysis of variance (ANOVA) for measured agronomic and economic yield traits of spider plant genotypes under nitrogen deficiency stress at vegetative and reproductive stages

Source of variations	Genotypes (A)	Nitrogen levels (B)	Growth stages (C)	AB	AC	BC	ABC
<i>Df</i>	24	1	1	24	24	2	24
SPAD	ns	***	***	ns	ns	ns	Ns
PH	***	***	***	ns	ns	ns	Ns
NPB	ns	***	***	ns	ns	***	Ns
NOL	ns	***	***	ns	ns	ns	Ns
EYFW	***	***	***	*	ns	**	Ns
EYDW	***	***	***	**	ns	***	Ns
MC	ns	ns	***	ns	ns	ns	Ns

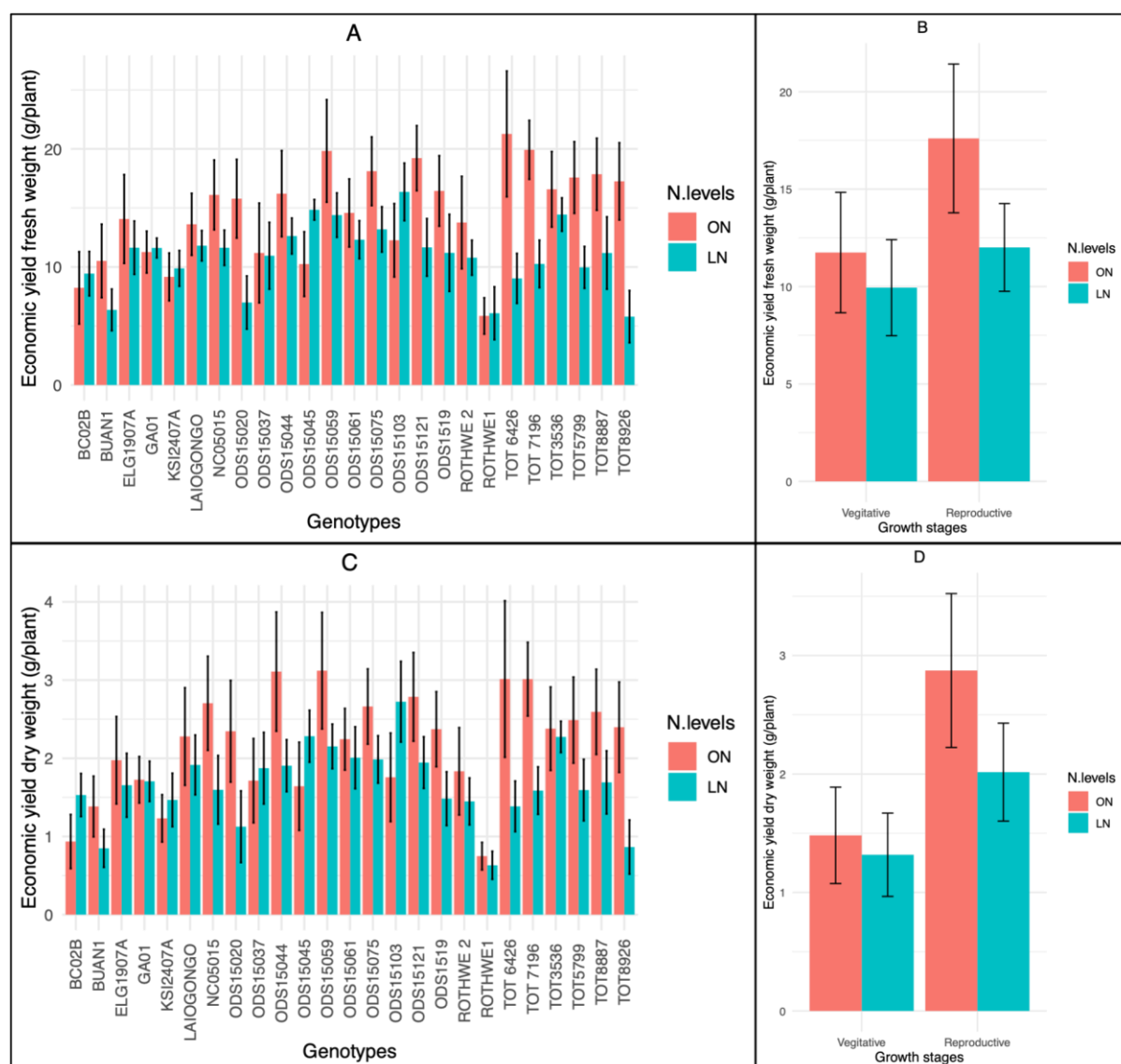
‘ns’, ‘\*’, ‘\*\*’, and ‘\*\*\*’ indicate non-significant at 10 %, significant at 5 %, 1 %, and 0.1 % probability levels, respectively. SPAD: leaf chlorophyll content (SPAD values), PH: Plant height (cm), NPB: number of primary branches, NOL: number of leaves, EYFW: economic yield fresh weight, EYDW: economic yield of fresh weight, EYMC: economic yield moisture content (%)

**Table S2.** The analysis of variance (ANOVA) for the physiological indicators of spider plant grown under optimum nitrogen and nitrogen deficient soil conditions

Sources of Variations	Genotypes (A)	Growth Stages (B)	Soil Nitrogen Level (C)	AB	AC	BC	ABC
<i>df</i>	8	1	1	8	8	1	8
Quantum Efficiency of PSII (FvP/FmP)	***	***	***	*	ns	ns	Ns
Non-Photochemical Quenching (NPQt)	***	***	***	**	ns	ns	Ns
Quantum Yield of PSII (Phi2 )	*	***	***	***	ns	ns	Ns
Quantum Yield of Regulated Non-Photochemical Quenching (PhiNPQ)	***	Ns	***	Ns	ns	ns	Ns
Leaf Chlorophyll Content (mean SPAD)	***	***	***	Ns	ns	ns	Ns
Leaf Stomatal conductance	*	Ns	***	Ns	ns	ns	Ns

Ns, \*, \*\*, and \*\*\* indicate non-significant at 5%, significant at 5 %, 1 %, and 0.1 % probability levels, respectively





**Fig. S3.** The interactive effects of genotypes and soil nitrogen levels on economic yield fresh weight (A) and economic yield dry weight (C), the interactive effects of growth stages and soil nitrogen levels on economic yield fresh weight (B) and economic yield dry weight (D) of spider plants. Soil nitrogen levels are indicated by optimum nitrogen (ON) and low nitrogen (LN), while growth stages indicate the vegetative and reproductive growth stages. All the data are expressed as mean  $\pm$  SEM,  $n = 3$ , according to the MANOVA test ( $P \leq 0.05$ ).