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#### ABBREVIATIONS AND SYMBOLS

etc. Et cetera Gram or gravity Nitrogen Phosphorus Potassium K EDB Endophytic diazotrophic bacteria Arbuscular mycorrhizal fungi AMF Percent % Micromole μmol  $C_2H_2$ Acetylene Hour hr Indole acetic acid **IAA** Milliliter

C. alismatifolia Gagnep.

 $^{\rm o}C$ 

Microgram

Degree of Celsius

Curcuma alismatifolia Gagnep.

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WAP	1010	Weeks after planting
cm	HE1	Centimeter
MS medium	E 0,0	Murashige and Skoog medium
mg/L		Milligram per liter
BAP		Benzalamino puirine
L	=	Liter
e.g.	= 3	Exempli gratia (for example)
i.e.	=	Id est (it is or that is)
VAM	=	Vesicular arbuscular mycorrhiza
UV		Ultraviolet
РН	= 60000	Potential of hydrogen ion
N <sub>2</sub>	=	Dinitrogen
Mo	_UN	Molybdenum
Fe	=	Iiron
SSUM	3ne	Sulphur
ATP	Chia	Adenosine triphosphate
${\rm Mg_2}^+$	₹ s	Magnesium ion
ADP	=	Adenosine diphosphate

$\mathrm{H}^{+}$	=	Hydrogen iron
N <sub>2</sub> H <sub>2</sub>	3181	Diazene
N <sub>2</sub> H <sub>4</sub>	FOI	Hydrazine
NH <sub>3</sub>		Ammonia
H <sub>2</sub> O		Water
$H_2$	= 8	Hydrogen gas
<sup>15</sup> N	= 3	Radioactive isotope of nitrogen
ABA	=	Acetylene reduction assays
λ	=	Lamda
$\mathrm{C_2H_2}$	=	Ethylene
e <sup>-</sup>	= 0000	Electron
16S rDNA	=	16S ribosomal deoxyribonucleic acid
RNA	UN	Ribonucleic acid
LSU	=	Large subunit
SSU	9n8	Small subunit
mRNA	This	Messenger ribonucleic acid
rRNA		Ribosomal ribonucleic acid
DNA	T S	Deoxyribonucleic acid

ATPase	=	Adenosine triphosphate synthase
ITS	FIEL.	Intragenic transcribe spacer
IGS	£0,1	Intergenic spacer
PCR		Polymerase chain reaction
Ca	- 8	Calcium
Mg	=	Magnesium
Cu	= 6	Cupper
Mn	=	Manganese
Zn	=	Zinc
ST	=	Saithong National Park
PH	= 6000	Paa Hinngarm National Park
BL	=	Chiayaphoom province
DD	4 = U 1	San Sai district farmers
YK	=	Yangkram subdistrict
PVLG	3118	Polyvinyl alcohol-lactic acid-glycerol
cv. htC	<sup>−</sup> Chia	Cultivar
MAP	Ŧ 6	Months after planting
CRD	=	Completely Randomized Design

USA =	United State of America
LSD =	Least significant difference
μ1 =	Microliter
$dH_2O$ =	De-ionized water
sec =	Seconds
TM =	Trademark
Min =	Minute
V =	Volt
rpm =	Revolutions per minute
SOC medium =	Super optimal broth medium
YT medium =	Yeast extract and tryptone medium
μm =	Micrometer
kb =	Kilo base
ns =	Not significantly different
mg =	Milligram
$KH_2PO_4$ =	Potassium Dihydrogen Phosphate
$K_2SO_4 =$	Potassium sulfate
$MgSO_4.7H_2O =$	Magnesium sulphate heptahydate

CaCl <sub>2</sub> .2H <sub>2</sub> O	=	Calcium Chloride Dihydrate
Fe-citrate	1918	Lron-citrate
MnSO <sub>4</sub> .H <sub>2</sub> O	EQ	Manganese sulphate monohydrat
$H_3BO_4$		Boric acid
ZnSO <sub>4</sub> .7H <sub>2</sub> O	- 8	Zinc sulfate heptahydrate
CuSO <sub>4</sub> .5H <sub>2</sub> O	=	Copper sulphate pentahydrate
CoSO <sub>4</sub> .7H <sub>2</sub> O		Cobalt sulfate heptahydrate
$Na_2MoO_4.2H_2O$	=	Sodium molybdate dihydrate
SEM	=	Scanning electron microscopy
v/v	=	Volume in volume
w/v	= 676	Weight in volume

Osmium tetroxide

kV = Kilovolt

 $O_2O_4$ 

nmole = Nanomole

nl = Nanoliter

cm<sup>2</sup> = Square centimeter

RH = Relative humidity

pg = Pictogram

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Fresh weigh FW Dry weigh DW kg/ha Kilogram per hectare Year Potassium ion  $NO_3$ Nitrate ion Nitrogen fixation gene nif gene Guanine G Cytosine Thymine C MAI Adenine