

Supplementary Information

Supplementary Table 1: Colonisation rate of endophytic fungi

Host	H. isora	
No. of segments plated (No. of segments colonized by EF)	Stem	20(15)
	Leaf	20(12)
	Flower	20(9)
	Total	60(36)
No. of EF isolated	Stem	9
	Leaf	8
	Flower	5
	Total	22
CR(%)	Stem	75%
	Leaf	60%
	Flower	45%
	Total	60%

Supplementary Table 2: Relative abundance of fungal isolates

Plant parts	Name of the isolate	No. of isolates (No. of total endophytic isolate)	Relative abundance (%)
Stem	<i>Colletotrichum sp.</i>	4(9)	44%
	<i>Curvularia sp.</i>	1(9)	11%
	<i>Cochliobolus sp.</i>	1(9)	11%
	<i>Fusarium sp.</i>	2(9)	22%
	Sterile hyaline mycelia 1	1(9)	11%
Leaf	<i>Cochliobolus sp.</i>	3(8)	25%
	<i>Fusarium sp.</i>	3(8)	37.5%
	<i>Aspergillus sp.</i>	2(8)	25%
Flower	<i>Nigrospora sp.</i>	2(5)	40%
	<i>Fusarium sp.</i>	2(5)	40%
	Sterile hyaline mycelia 2	1(5)	20%

Supplementary Table 3: Identification of the fungal endophytes

Plant parts	SL. No.	Name of the isolates	Morphological Identification (Plate and microscopic study)	Molecular identification
Stem	1	HelS1	<i>Colletotrichum sp.</i>	OP411023
	2	HelS2	<i>Fusarium sp.</i>	
	3	HelS3	<i>Colletotrichum sp.</i>	
	4	HelS4	Sterile hyaline mycelia 1	
	5	HelS5	<i>Cochliobolus sp.</i>	
	6	HelS6	<i>Colletotrichum sp.</i>	
	7	HelS7	<i>Colletotrichum sp.</i>	
	8	HelS8	<i>Fusarium sp.</i>	
	9	HelS9	<i>Curvularia sp.</i>	
Leaf	1	HelL1	<i>Cochliobolus sp.</i>	
	2	HelL2	<i>Fusarium sp.</i>	
	3	HelL3	<i>Cochliobolus sp.</i>	
	4	HelL4	<i>Cochliobolus sp.</i>	
	5	HelL5	<i>Fusarium sp.</i>	
	6	HelL6	<i>Aspergillus sp.</i>	
	7	HelL7	<i>Aspergillus sp.</i>	
	8	HelL8	<i>Fusarium sp.</i>	
Flower	1	HelF1	<i>Fusarium sp.</i>	
	2	HelF2	<i>Nigrospora sp.</i>	
	3	HelF3	Sterile hyaline mycelia 2	
	4	HelF4	<i>Fusarium sp.</i>	
	5	HelF5	<i>Nigrospora sp.</i>	

Supplementary Table 4: Plant growth promoting activity of the fungal isolates

No	Isolates	IAA production($\mu\text{g ml}^{-1}$)	Phosphate solubilisation		Ammonia production
			Halo zone (cm)	P conc. ($\mu\text{g ml}^{-1}$)	
1.	HelS1	111.13	0.8	47.22	+
2.	HelS2	8.27	-	-	+
3.	HelS3	12.22	-	-	-
4.	HelS4	-	-	-	+
5.	HelS5	29.28	0.2	10.24	+
6.	HelS6	-	-	-	-
7.	HelS7	26.68	-	-	-
8.	HelS8	24.00	-	-	+
9.	HelS9	-	-	-	+
10.	HelL1	-	-	-	-
11.	HelL2	64.70	0.5	42.10	+
12.	HelL3	-	-	-	+
13.	HelL4	12.41	-	-	+
14.	HelL5	30.38	-	-	-
15.	HelL6	-	-	-	-
16.	HelL7	12.40	-	-	+

17.	HelL8	-	-	-	+
18.	HelF1	-	-	-	-
19.	HelF2	64.26	0.5	32.68	+
20.	HelF3	-	-	-	-
21.	HelF4	6.06	-	-	+
22.	HelF5	-	-	-	+

Supplementary Table 5: Analysis of Variance for response surface model

Source	Sum of squares	Degree of freedom	Mean square	F-value	<i>p</i> -value
Model	33879.6	14	2420.0	165.04	0.000
Linear	1805.8	4	451.4	30.79	0.000
A (Incubation time)	75.7	1	75.7	5.16	0.039
B (pH)	257.1	1	257.1	17.53	0.001
C (Sucrose concentration)	405.5	1	405.5	27.66	0.000
D (L-tryptophan concentration)	1067.5	1	1067.5	72.80	0.000
A ²	3815.5	1	10636.8	725.44	0.000
B ²	1436.6	1	5703.4	388.97	0.000
C ²	11107.6	1	15826.2	1079.35	0.000
D ²	13909.5	1	13909.5	948.64	0.000
AB	1017.0	1	1017.0	69.36	0.000
AC	58.0	1	58.0	3.95	0.067
AD	96.7	1	96.7	6.60	0.022
BC	516.0	1	516.0	35.19	0.000
BD	16.9	1	16.9	1.15	0.301
CD	100.0	1	100.0	6.82	0.021
Error	205.3	14	14.7		
Lack-of-Fit	204.8	10	20.5	163.36	0.000

Pure Error	0.5	4	0.1	165.04	0.000
Total	34084.8	28	-	-	-

Note: The adjusted R^2 of 98.80 indicated a correlation between experimental and predicted value having 0.1% of chance of error, F-value of 165.04 implies the model is significant, P-values are statistically significant at $p < 0.05$ probability