Supplementary Table 1 Chrome Azurol S (CAS) reaction rate of the metal-tolerant endophytes on solid Potato Dextrose Agar (Agar) supplemented with Cu^{2+}, Pb^{2+}, Zn^{2+} and Cd^{2+} of varying concentrations. The symbols ± for rates < 0.5 mm/day (mild) and + for rates between 0.5-1.0 mm/day (moderate).

Endophytes	Days	Metal concentrations (mg L^{-1})									
		Cu			Pb		Zn		Cd		Control
		10	25	50	10	25	10	25	10	25	0
Bipolaris sp. LF7	7	±	±	±	+	+	+	+	+	±	+
	14	±	±	±	±	±	+	+	+	±	±
	21	±	±	±	±	±	±	±	±	±	±
	28	±	±	±	±	±	±	±	±	±	±
D. miriciae LF9	7	±	+	±	+	+	+	+	±	+	+
	14	±	+	±	+	++	+	+	+	+	+
	21	±	±	±	+	+	+	+	+	+	+
	28	±	±	±	±	+	+	+	+	+	+
T. asperellum LF11	7	±	+	±	++	++	+	++	+	+	++
	14	±	±	±	+	++	+	+	+	+	++
	21	±	±	±	+	++	±	+	+	++	+
	28	±	±	±	+	+	±	+	+	+	+
P. asparagi LF15	7	±	±	±	+	+	+	+	+	+	+
	14	±	±	±	+	+	±	±	±	±	±
	21	±	±	±	±	+	±	±	±	±	±
	28	±	±	±	±	±	+	±	+	+	±
S. bicolour LF22	7	+	±	±	+	+	+	+	+	+	+
	14	±	±	±	±	+	±	+	±	+	±
	21	±	±	±	±	±	±	±	±	±	±
	28	±	±	±	±	±	±	±	±	±	±

Supplementary Table 2 Growth parameters of oil palm ramets inoculated with metal-tolerant *D. miriciae* LF9 in metal-laden soils consisting of Pb^{2+}, Zn^{2+}, Cd^{2+} and Cu^{2+} for *in vivo* plant growth promotion study. Controls were endophyte-free ramets without the presence of metals. Means ± standard deviation (±SD); same letters for each parameter in a metal concentration not significantly different ($HSD_{(0.05)}$).

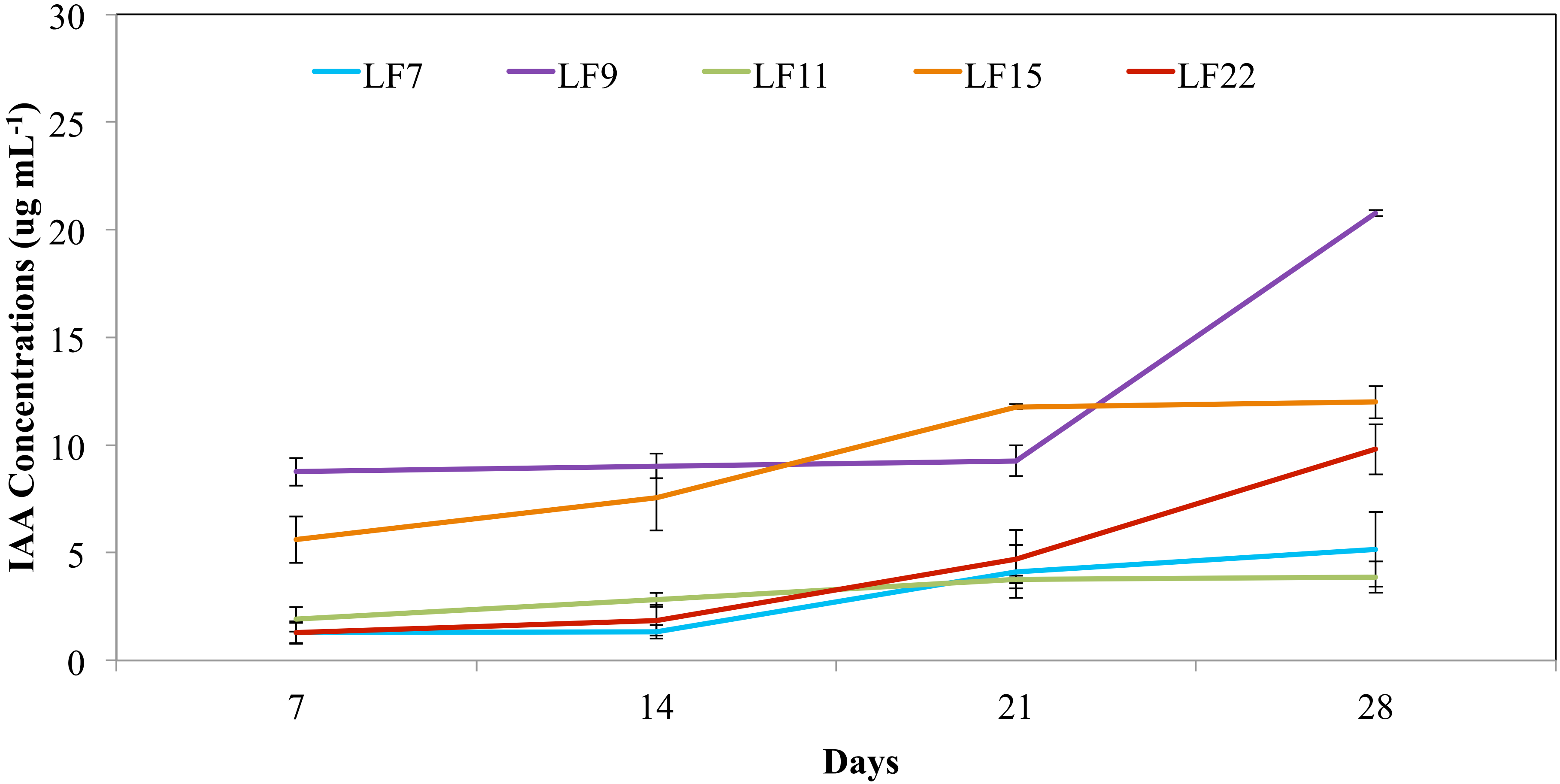
		Pb^{2+}		Zn^{2+}		Cd^{2+}		Cu^{2+}		
	Day	**10**	**25**	**10**	**25**	**10**	**25**	**10**	**25**	**50**
Height (cm)	**7**	13.4±1.4^{a}	12.1±1.0^{b}	13.7±1.3^{b}	13.0±0.5^{b}	13.8±1.2^{a}	13.2±1.0^{a}	14.7±1.7^{a}	13.9±1.7^{a}	12.8±0.7^{a}
	14	13.3±1.5^{a}	13.2±1.0^{ab}	14.0±0.9^{b}	13.7±0.8^{ab}	14.9±3.5^{a}	13.2±1.4^{a}	14.9±0.7^{a}	14.0±0.6^{a}	14.1±3.0^{a}
	21	14.3±1.1^{a}	13.4±0.4^{ab}	15.1±1.0^{ab}	16.2±1.8^{ab}	15.3±0.6^{a}	14.0±1.8^{a}	17.2±3.7^{a}	17.4±3.8^{a}	15.2±2.7^{a}
	28	15.7±4.0^{a}	14.3±0.9^{a}	17.9±2.2^{a}	16.8±1.5^{a}	15.6±0.9^{a}	15.8±3.1^{a}	20.3±1.9^{a}	17.7±4.1^{a}	18.2±4.0^{a}
Weight (g)	**7**	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{b}	0.4±0.1^{a}	0.5±0.1^{b}	0.5±0.1^{a}	0.4±0.0^{c}	0.4±0.1^{a}	0.4±0.1^{a}
	14	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{b}	0.5±0.0^{a}	0.5±0.1^{b}	0.5±0.1^{a}	0.5±0.1^{bc}	0.4±0.7^{a}	0.5±0.1^{a}
	21	0.5±0.1^{a}	0.5±0.2^{a}	0.6±0.2^{ab}	0.5±0.2^{a}	0.6±0.1^{b}	0.6±0.1^{a}	0.6±0.1^{ab}	0.4±0.1^{a}	0.6±0.3^{a}
	28	0.6±0.2^{a}	0.6±0.0^{a}	0.8±0.1^{a}	0.5±0.3^{a}	0.8±0.0^{a}	0.6±0.1^{a}	0.9±0.1^{a}	0.5±0.1^{a}	0.8±0.4^{a}
Root mass (g)	**7**	0.2±0.1^{a}	0.2±0.1^{a}	0.2±0.1^{a}	0.2±0.1^{a}	0.2±0.1^{b}	0.2±0.0^{a}	0.2±0.0^{b}	0.2±0.1^{a}	0.2±0.1^{a}
	14	0.3±0.0^{a}	0.2±0.1^{a}	0.2±0.1^{a}	0.2±0.0^{a}	0.2±0.0^{b}	0.2±0.0^{a}	0.2±0.1^{ab}	0.2±0.1^{a}	0.3±0.1^{a}
	21	0.3±0.0^{a}	0.2±0.1^{a}	0.3±0.1^{a}	0.2±0.1^{a}	0.2±0.1^{b}	0.3±0.1^{a}	0.3±0.1^{ab}	0.3±0.0^{a}	0.3±0.1^{a}
	28	0.3±0.0^{a}	0.3±0.2^{a}	0.3±0.1^{a}	0.3±0.0^{a}	0.4±0.0^{a}	0.3±0.1^{a}	0.3±0.1^{a}	0.5±0.4^{a}	0.3±0.0^{a}
Stem circumference (cm)	**7**	0.3±0.0^{a}	0.3±0.0^{a}	0.3±0.1^{a}	0.3±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{a}	0.3±0.1^{a}	0.3±0.1^{a}
	14	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.0^{a}	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{a}	0.4±0.1^{a}
	21	0.4±0.1^{a}	0.4±0.0^{a}	0.4±0.0^{a}	0.4±0.1^{a}	0.4±0.2^{a}	0.4±0.1^{a}	0.4±0.0^{a}	0.4±0.1^{a}	0.4±0.0^{a}
	28	0.5±0.1^{a}	0.4±0.1^{a}	0.4±0.0^{a}	0.4±0.0^{a}	0.5±0.0^{a}	0.5±0.1^{a}	0.4±0.0^{a}	0.4±0.0^{a}	0.5±0.1^{a}

Supplementary Table 3 Growth parameters of oil palm ramets inoculated with metal-tolerant *T. asperellum* LF11 in metal-laden soils consisting of Pb^{2+}, Zn^{2+}, Cd^{2+} and Cu^{2+} for *in vivo* plant growth promotion study. Controls were endophyte-free ramets without the presence of metals. Means ± standard deviation (±SD); same letters for each parameter in a metal concentration not significantly different ($HSD_{(0.05)}$).

		Pb^{2+}		Zn^{2+}		Cd^{2+}		Cu^{2+}		
	Day	**10**	**25**	**10**	**25**	**10**	**25**	**10**	**25**	**50**
Height (cm)	**7**	13.4 ± 0.8^{a}	13.1 ± 1.5^{a}	13.0 ± 1.3^{a}	13.0 ± 0.4^{a}	14.7 ± 0.3^{a}	14.2 ± 1.9^{a}	15.3 ± 2.5^{a}	15.6 ± 1.8^{a}	14.6 ± 1.5^{ab}
	14	14.5 ± 0.7^{a}	15.1 ± 1.1^{a}	14.4 ± 2.6^{a}	13.5 ± 1.3^{a}	14.9 ± 2.0^{a}	15.3 ± 2.6^{a}	14.3 ± 1.2^{a}	15.4 ± 1.8^{a}	18.2 ± 0.4^{a}
	21	15.0 ± 1.8^{a}	14.8 ± 1.5^{a}	15.3 ± 1.8^{a}	15.5 ± 1.4^{a}	15.6 ± 0.0^{a}	15.3 ± 0.0^{a}	13.9 ± 2.9^{a}	14.8 ± 0.7^{a}	13.7 ± 2.3^{b}
	28	13.6 ± 0.6^{a}	14.2 ± 0.9^{a}	13.4 ± 0.0^{a}	13.7 ± 1.3^{a}	11.4 ± 0.3^{b}	13.7 ± 0.3^{a}	13.1 ± 2.0^{a}	14.5 ± 1.9^{a}	13.9 ± 0.2^{b}
Weight (g)	**7**	0.4 ± 0.0^{a}	0.3 ± 0.1^{a}	0.4 ± 0.1^{a}	0.4 ± 0.2^{a}	0.4 ± 0.0^{a}	0.5 ± 0.0^{a}	0.4 ± 0.1^{a}	0.4 ± 0.1^{a}	0.4 ± 0.0^{a}
	14	0.4 ± 0.1^{a}	0.3 ± 0.1^{a}	0.5 ± 0.1^{a}	0.4 ± 0.0^{a}	0.4 ± 0.1^{a}	0.4 ± 0.1^{ab}	0.5 ± 0.2^{a}	0.3 ± 0.1^{a}	0.4 ± 0.1^{a}
	21	0.3 ± 0.1^{ab}	0.3 ± 0.0^{a}	0.3 ± 0.0^{ab}	0.4 ± 0.1^{a}	0.5 ± 0.2^{a}	0.3 ± 0.0^{bc}	0.3 ± 0.1^{a}	0.2 ± 0.1^{a}	0.4 ± 0.2^{ab}
	28	0.2 ± 0.0^{b}	0.4 ± 0.2^{a}	0.2 ± 0.0^{b}	0.3 ± 0.0^{a}	0.2 ± 0.1^{a}	0.2 ± 0.0^{c}	0.3 ± 0.1^{a}	0.2 ± 0.1^{a}	0.2 ± 0.0^{b}
Root mass (g)	**7**	0.3 ± 0.0^{a}	0.2 ± 0.0^{a}	0.2 ± 0.1^{a}	0.2 ± 0.1^{a}	0.3 ± 0.0^{a}	0.3 ± 0.0^{a}	0.2 ± 0.0^{a}	0.2 ± 0.0^{a}	0.3 ± 0.1^{a}
	14	0.3 ± 0.0^{a}	0.2 ± 0.1^{a}	0.3 ± 0.1^{a}	0.2 ± 0.0^{a}	0.3 ± 0.0^{a}	0.2 ± 0.1^{a}	0.3 ± 0.1^{a}	0.2 ± 0.1^{a}	0.2 ± 0.0^{ab}
	21	0.1 ± 0.0^{b}	0.2 ± 0.1^{a}	0.2 ± 0.1^{a}	0.2 ± 0.1^{a}	0.2 ± 0.1^{a}	0.2 ± 0.0^{ab}	0.2 ± 0.1^{a}	0.1 ± 0.0^{a}	0.2 ± 0.1^{ab}
	28	0.1 ± 0.0^{b}	0.2 ± 0.1^{a}	0.1 ± 0.0^{b}	0.1 ± 0.0^{a}	0.1 ± 0.1^{a}	0.1 ± 0.0^{b}	0.2 ± 0.1^{a}	0.1 ± 0.1^{a}	0.1 ± 0.0^{b}
Stem circumference (cm)	**7**	0.4 ± 0.1^{a}	0.4 ± 0.0^{a}	0.5 ± 0.1^{a}	0.3 ± 0.0^{a}	0.3 ± 0.0^{a}	0.5 ± 0.1^{a}	0.4 ± 0.1^{a}	0.4 ± 0.0^{a}	0.4 ± 0.0^{a}
	14	0.4 ± 0.1^{a}	0.4 ± 0.1^{a}	0.4 ± 0.1^{a}	0.3 ± 0.0^{a}	0.3 ± 0.1^{a}	0.4 ± 0.1^{ab}	0.4 ± 0.1^{a}	0.3 ± 0.0^{b}	0.3 ± 0.1^{ab}
	21	0.3 ± 0.0^{a}	0.3 ± 0.1^{a}	0.3 ± 0.0^{a}	0.3 ± 0.1^{a}	0.4 ± 0.1^{a}	0.3 ± 0.0^{b}	0.3 ± 0.1^{a}	0.3 ± 0.0^{b}	0.3 ± 0.0^{ab}
	28	0.3 ± 0.0^{a}	0.3 ± 0.0^{a}	0.3 ± 0.0^{a}	0.3 ± 0.1^{a}	0.3 ± 0.1^{a}	0.3 ± 0.0^{b}	0.3 ± 0.0^{a}	0.3 ± 0.1^{b}	0.2 ± 0.0^{b}

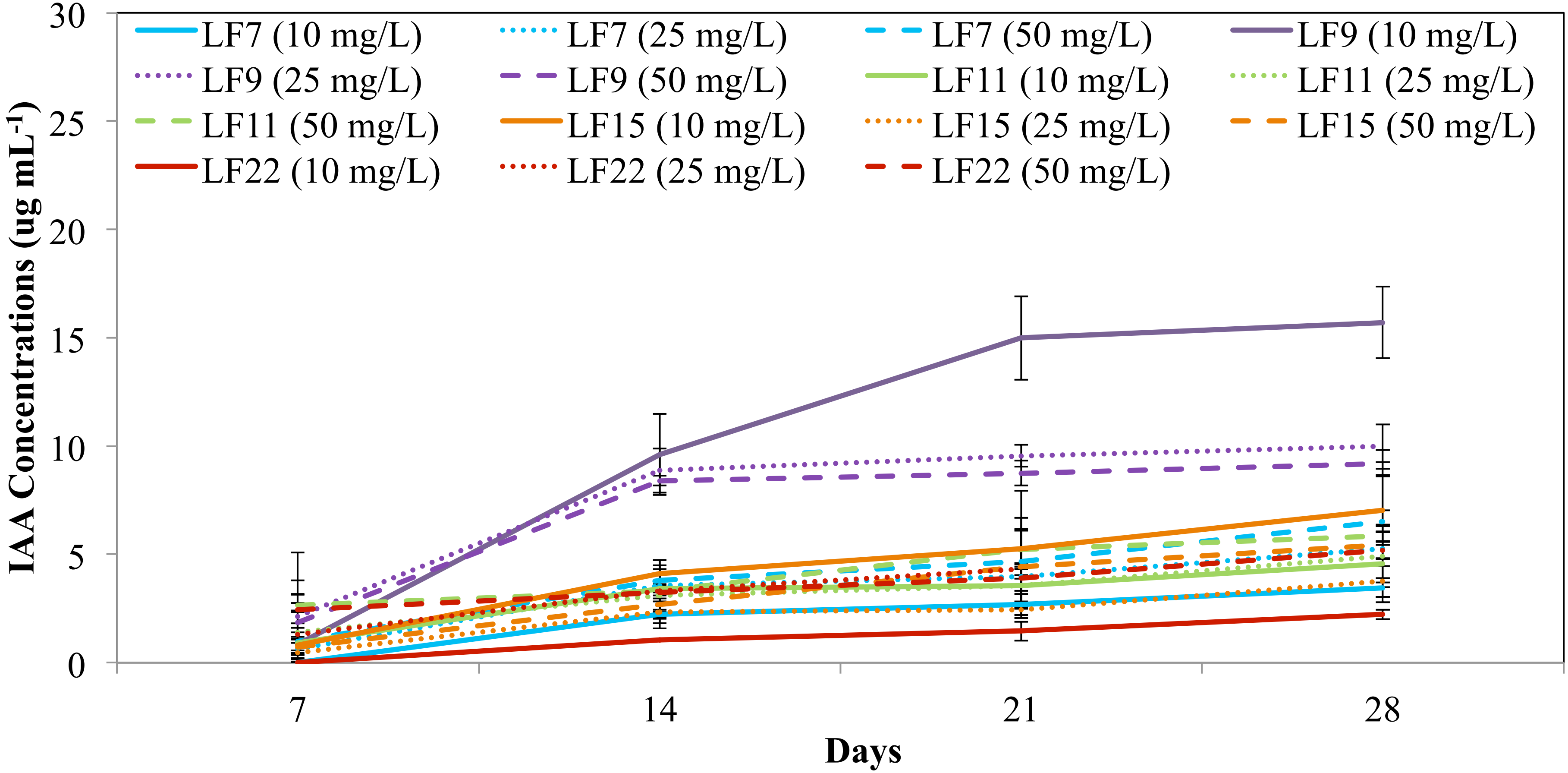
Supplementary Fig. 1 Indole-acetic acid (IAA) (µg mL^{-1}) produced by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(A)



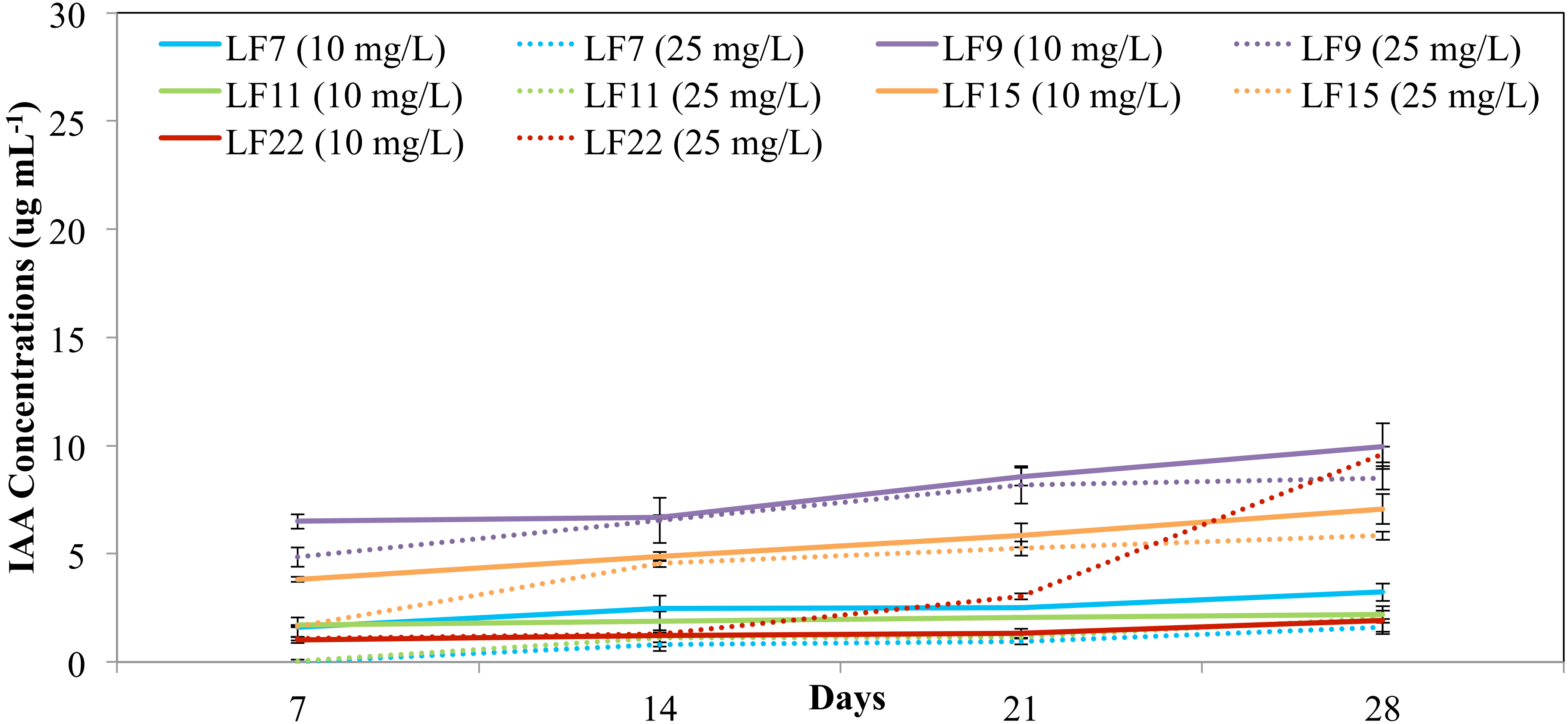
Supplementary Fig. 1 Indole-acetic acid (IAA) (μg mL^{-1}) produced by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(B)



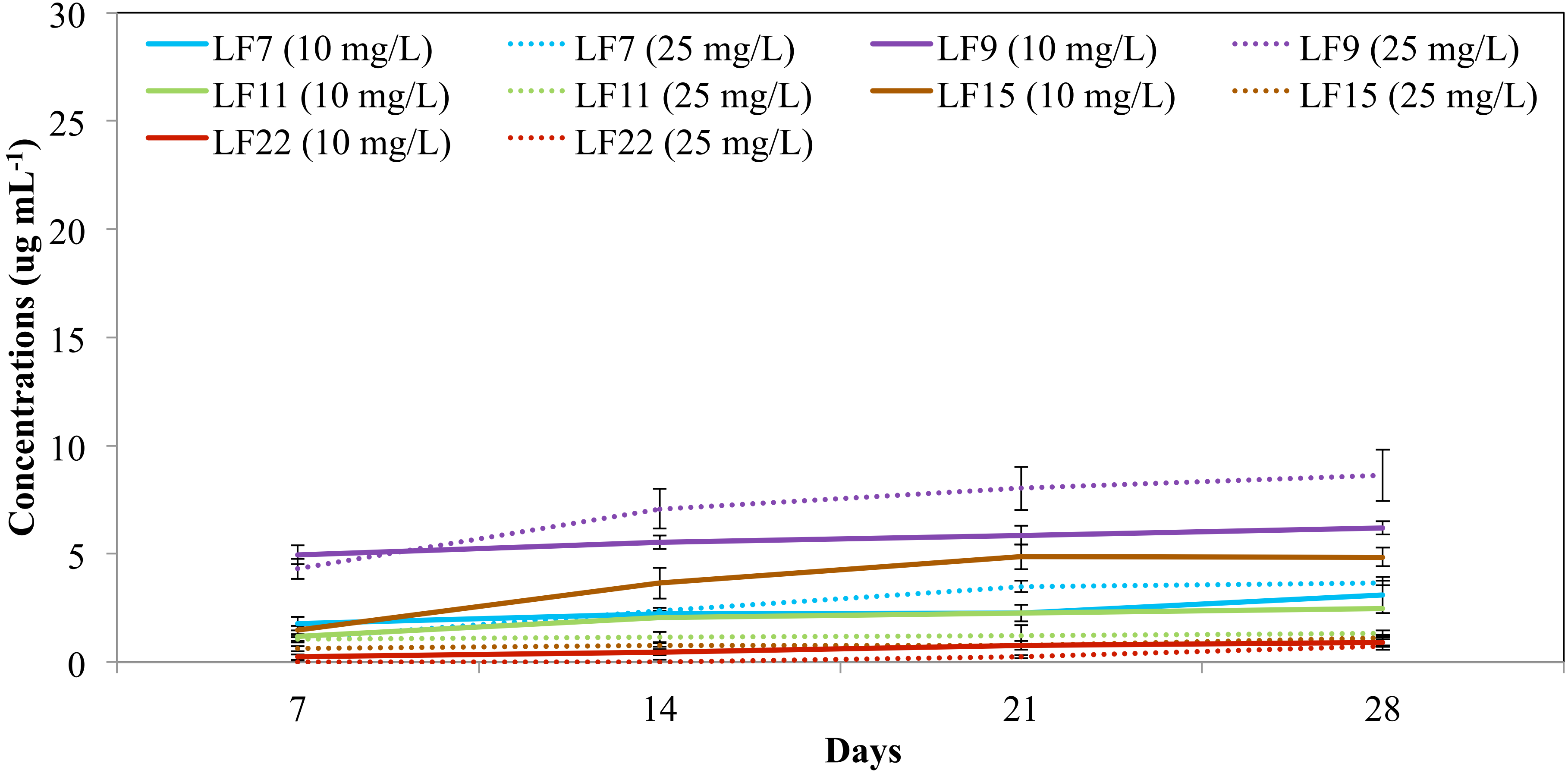
Supplementary Fig. 1 Indole-acetic acid (IAA) (μg mL^{-1}) produced by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(C)



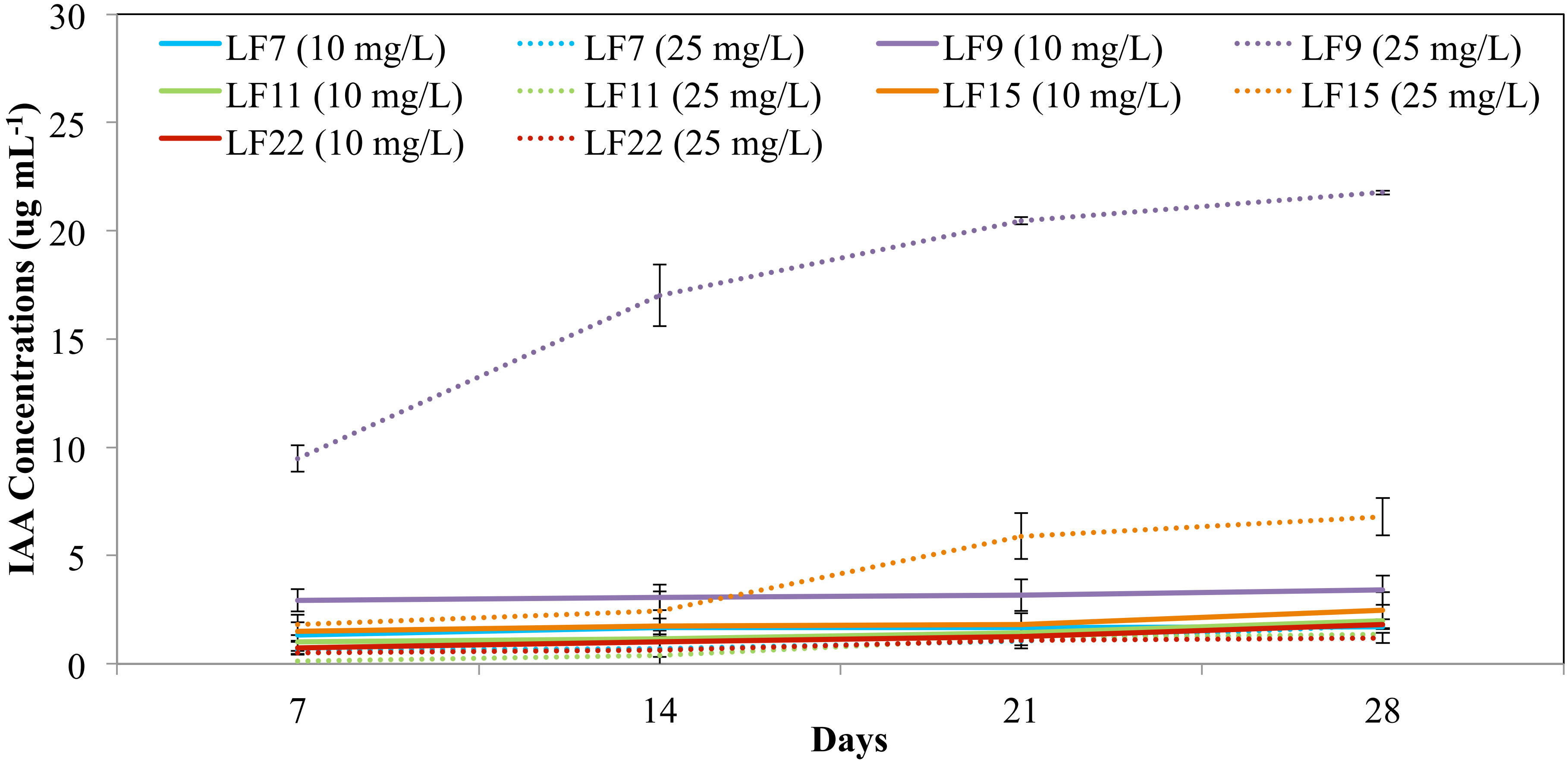
Supplementary Fig. 1 Indole-acetic acid (IAA) (μg mL^{-1}) produced by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(D)



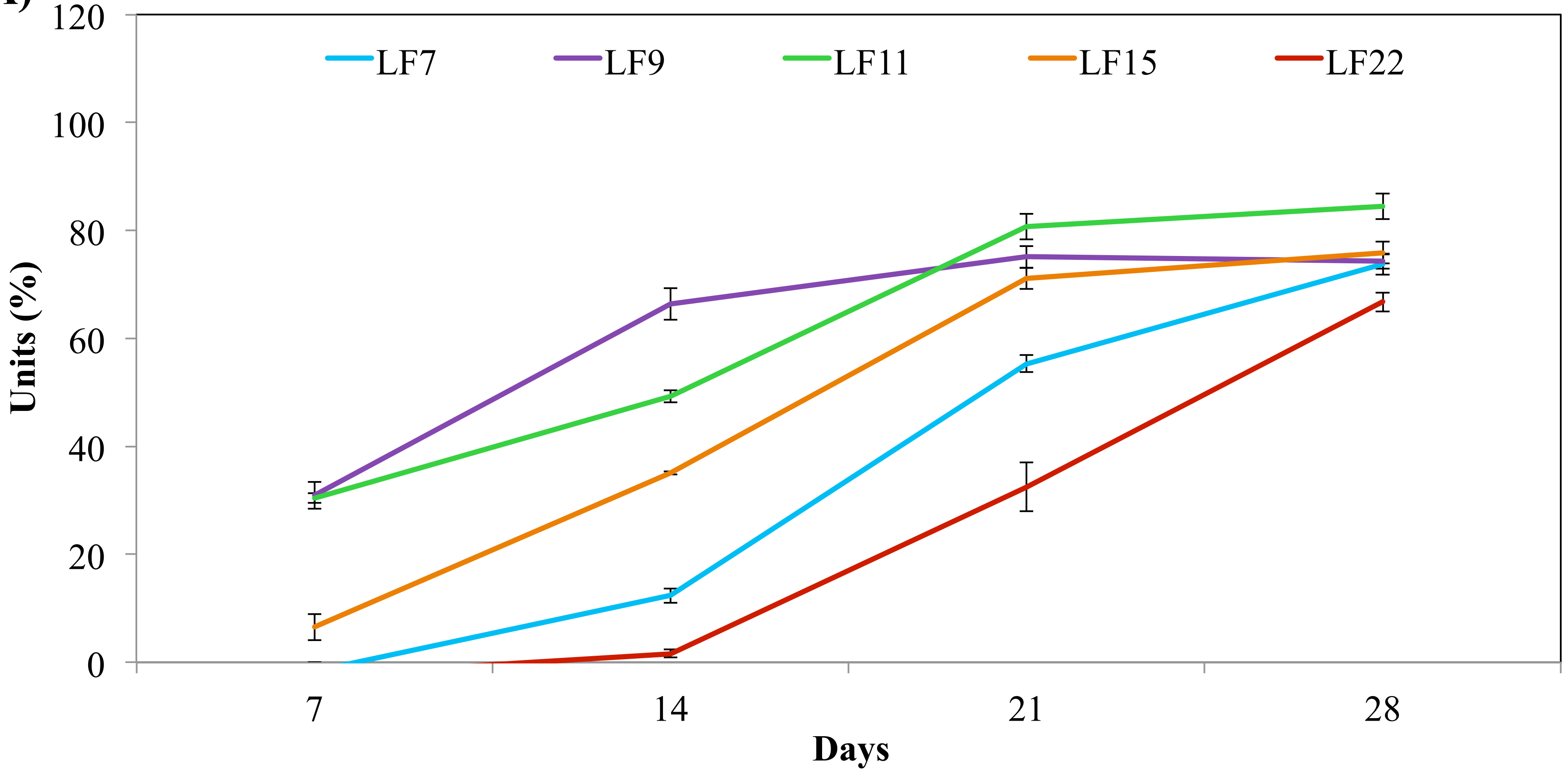
Supplementary Fig. 1 Indole-acetic acid (IAA) (μg mL^{-1}) produced by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(E)



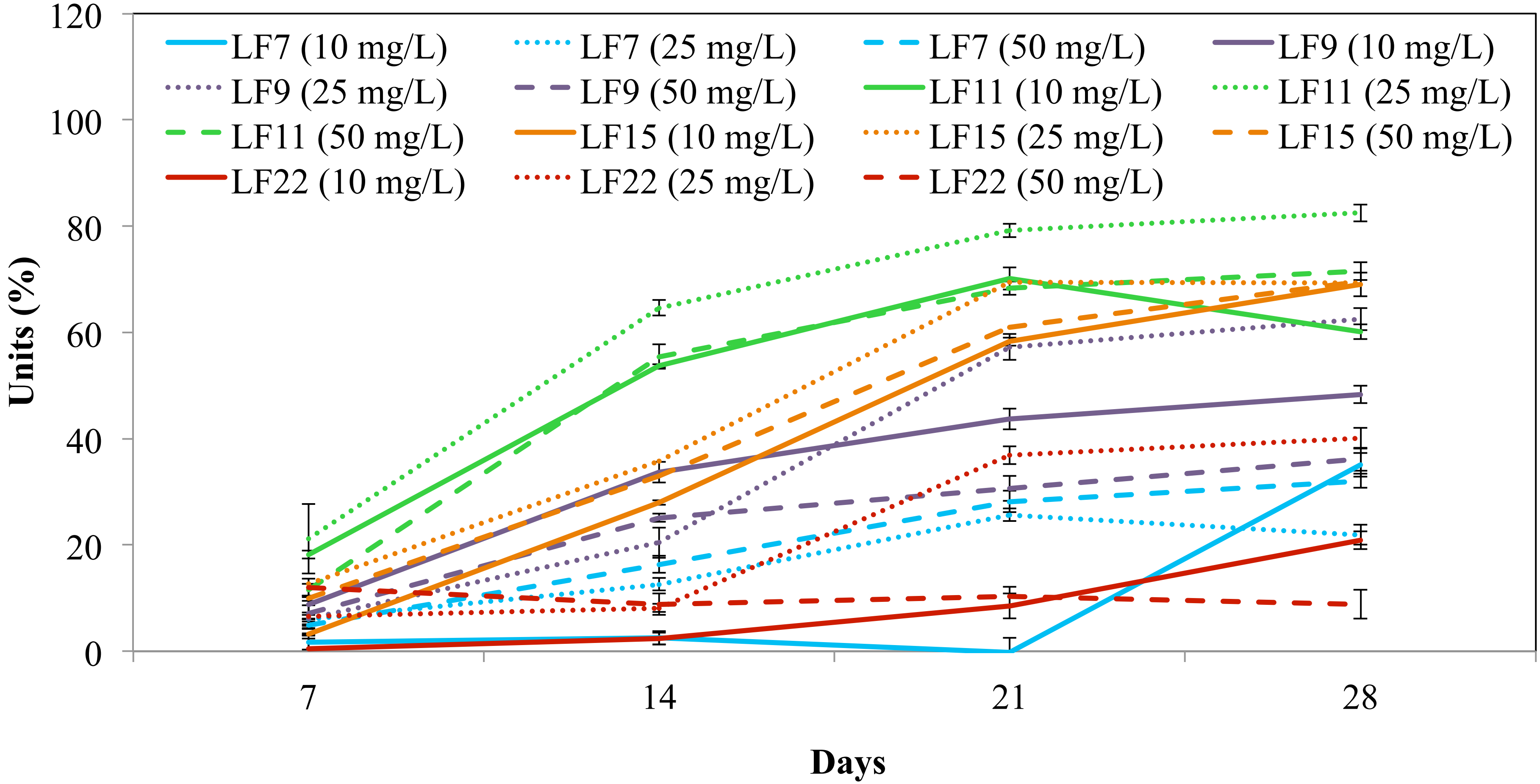
Supplementary Fig. 2 Production of siderophore (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(A)



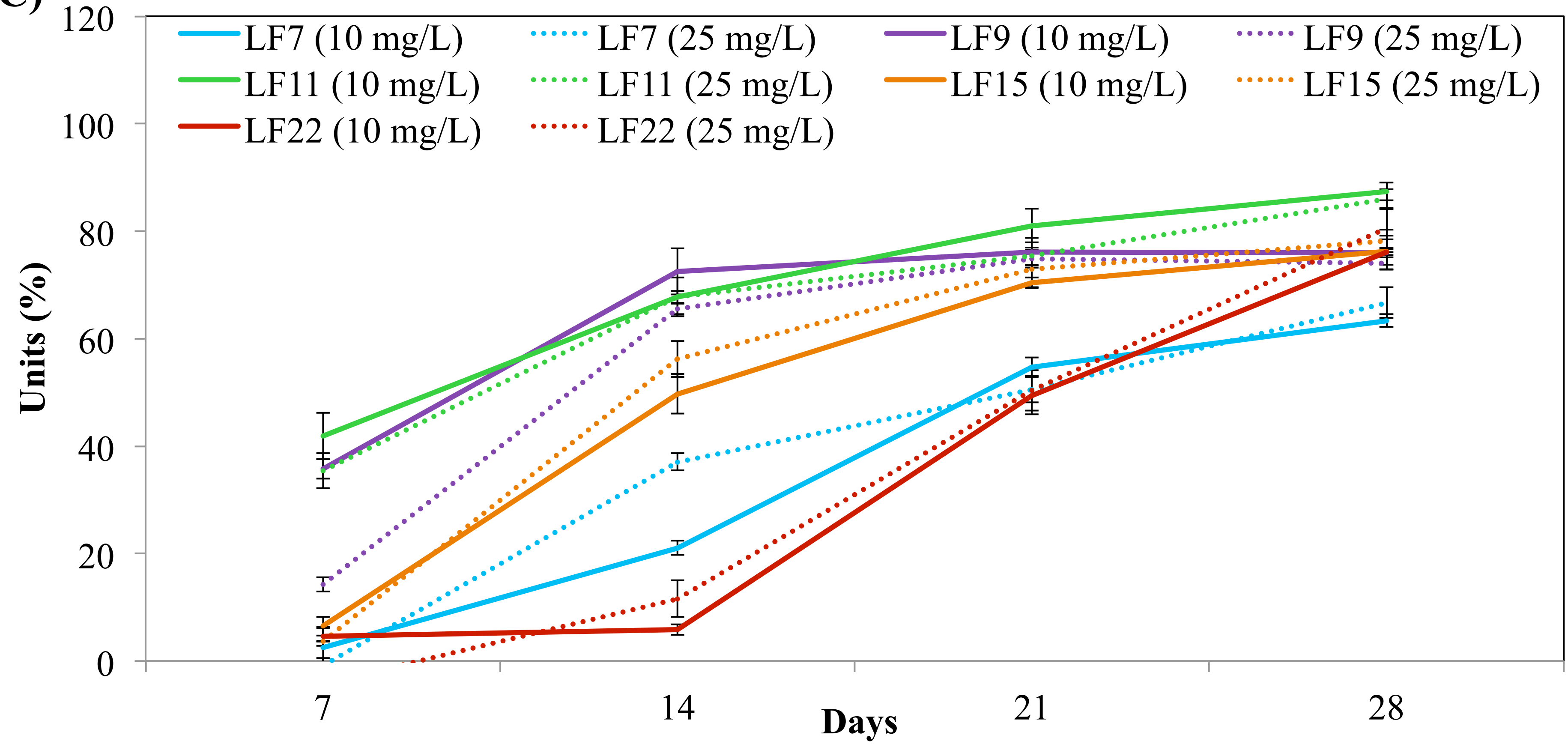
Supplementary Fig. 2 Production of siderophore (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(B)



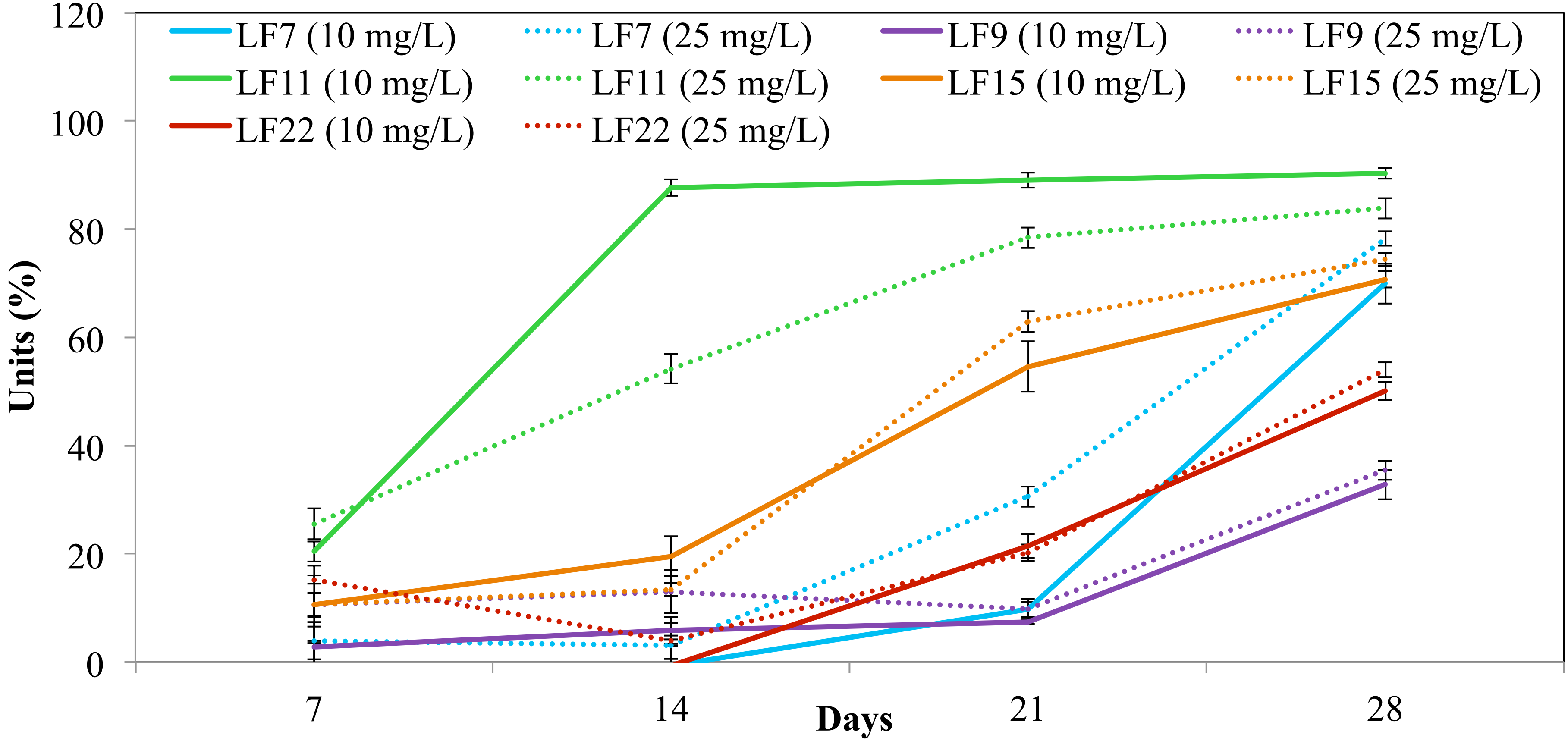
Supplementary Fig. 2 Production of siderophore (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(C)



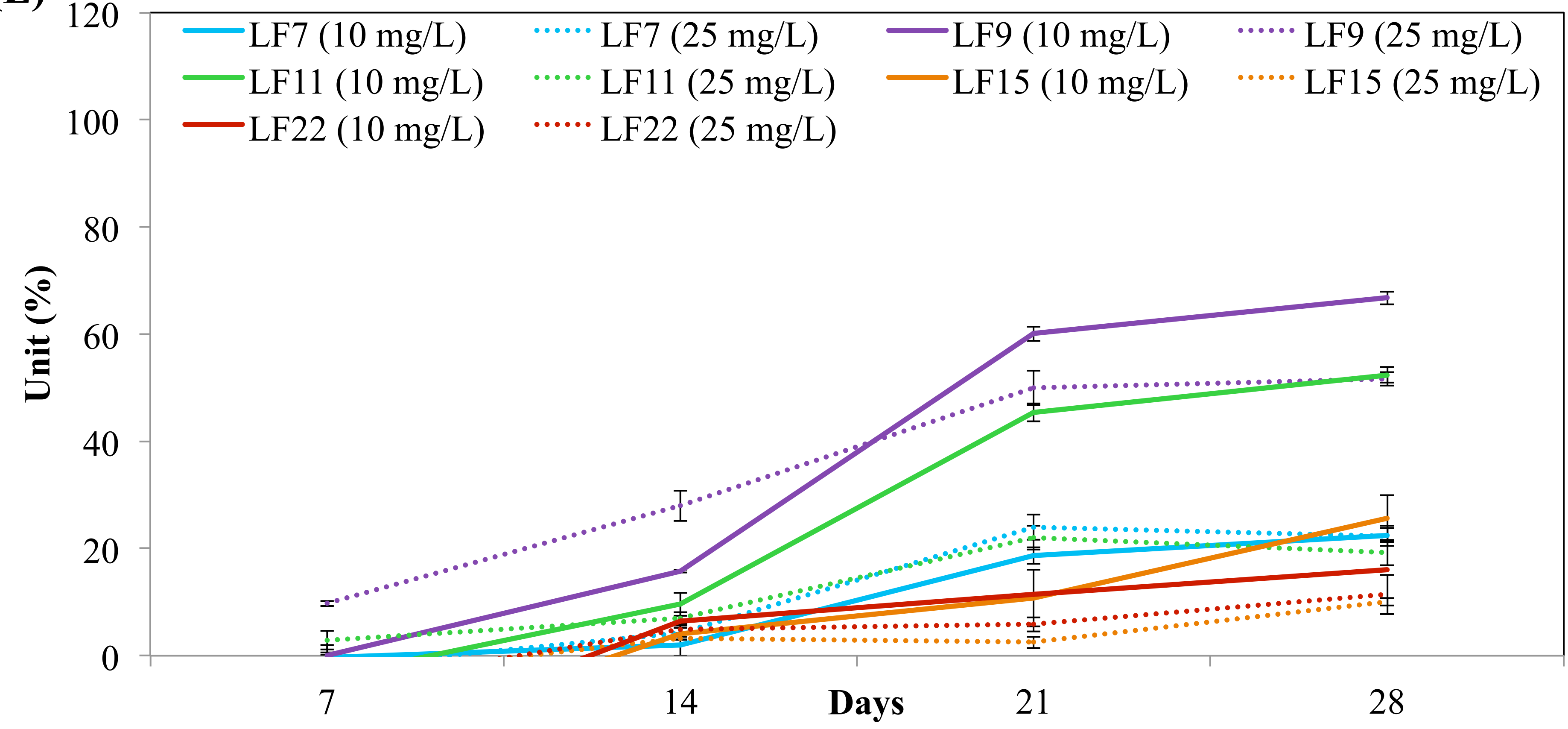
Supplementary Fig. 2 Production of siderophore (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(D)



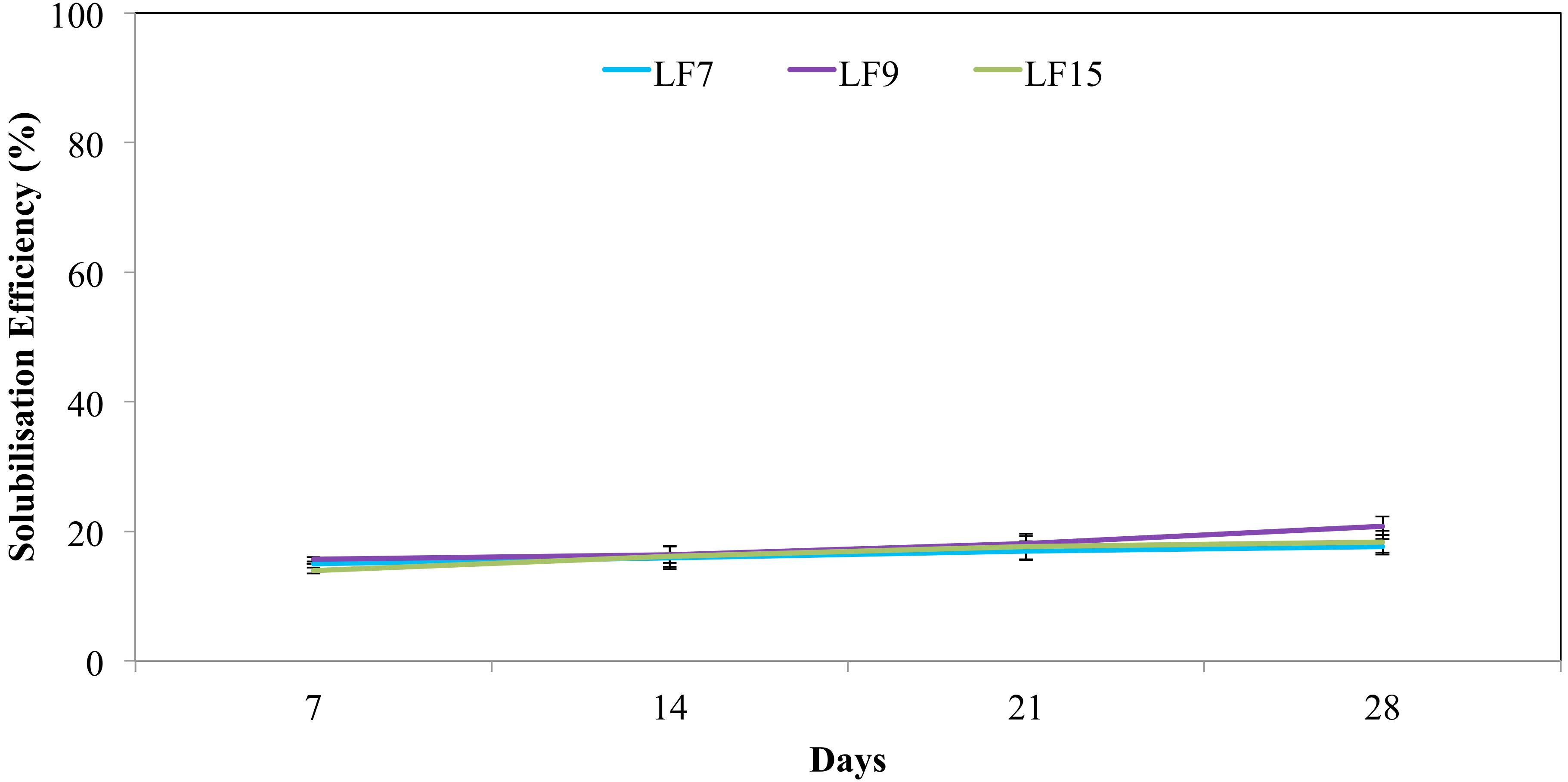
Supplementary Fig. 2 Production of siderophore (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(E)



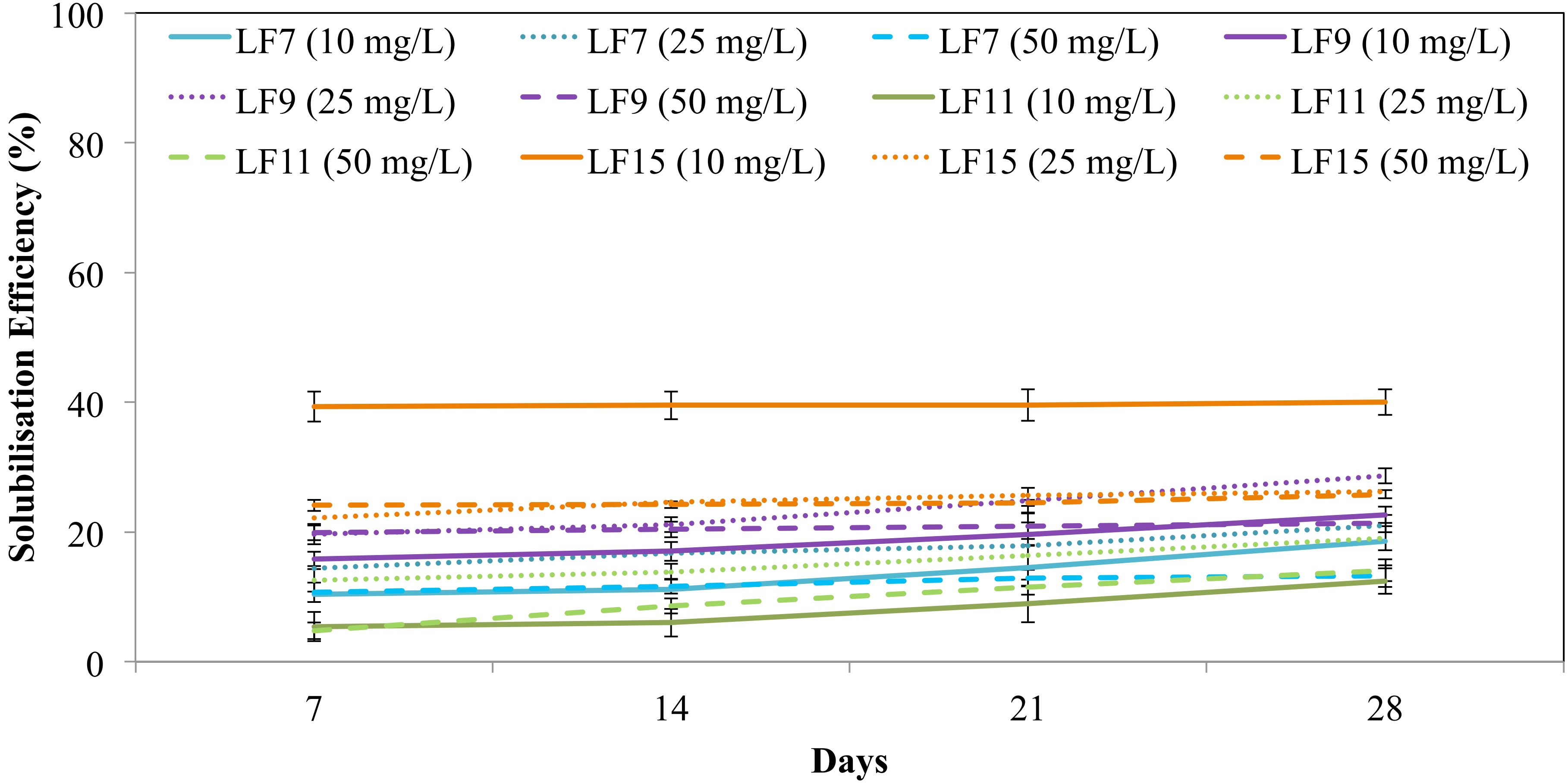
Supplementary Fig. 3 Phosphate solubilisation efficiency (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11 and *P. asparagi* LF15 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(A)



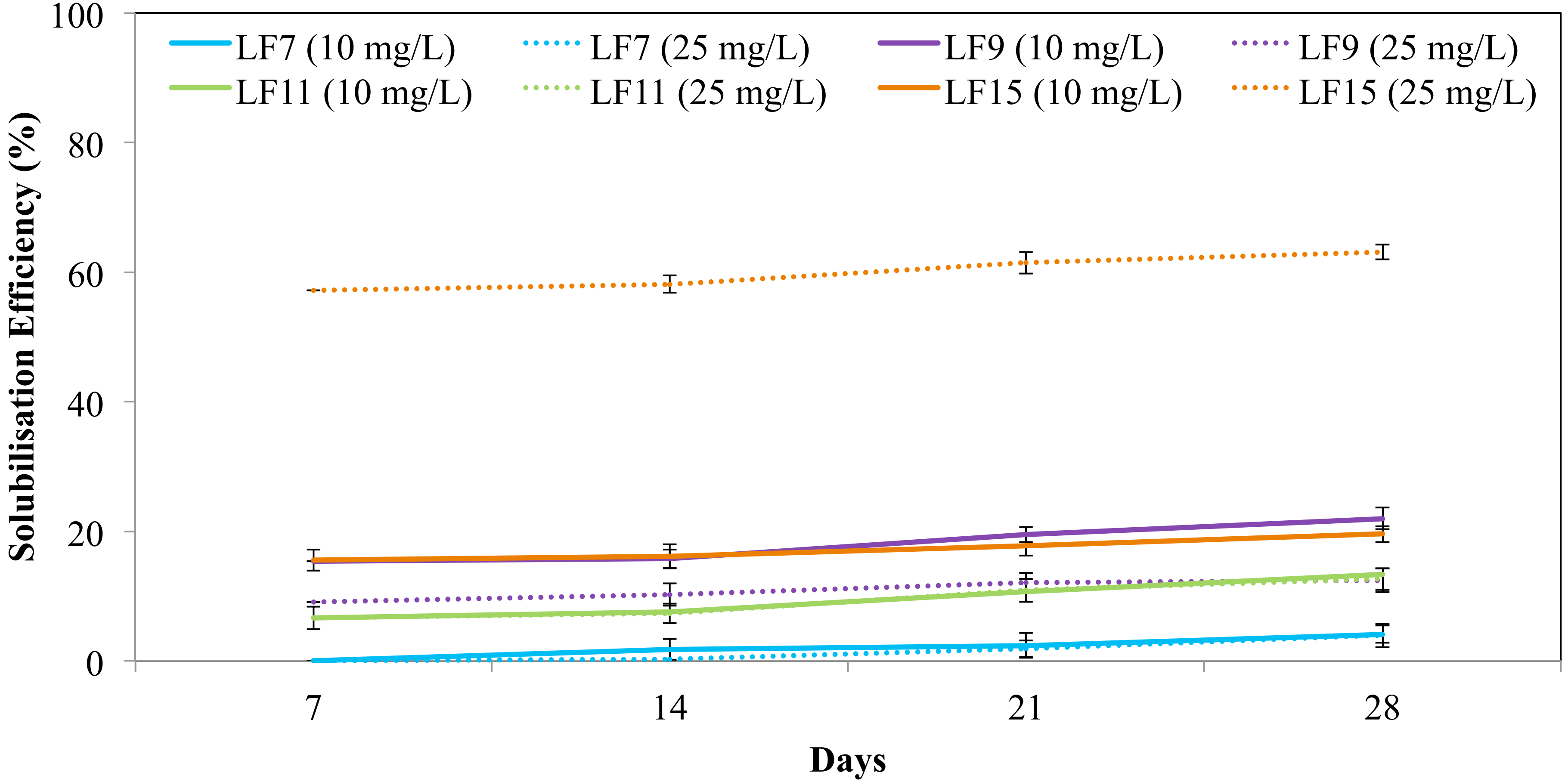
Supplementary Fig. 3 Phosphate solubilisation efficiency (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11 and *P. asparagi* LF15 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(B)



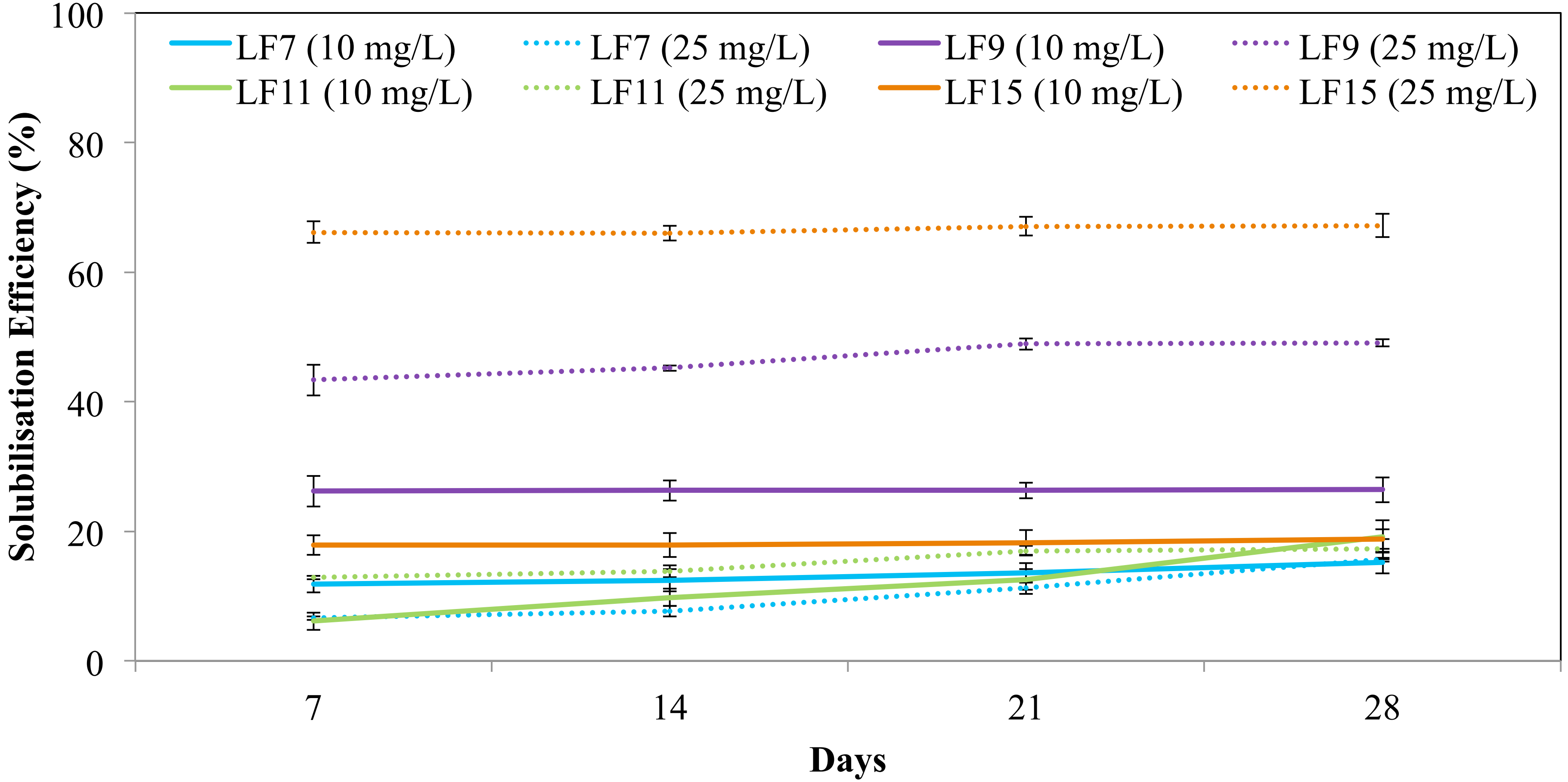
Supplementary Fig. 3 Phosphate solubilisation efficiency (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11 and *P. asparagi* LF15 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(C)



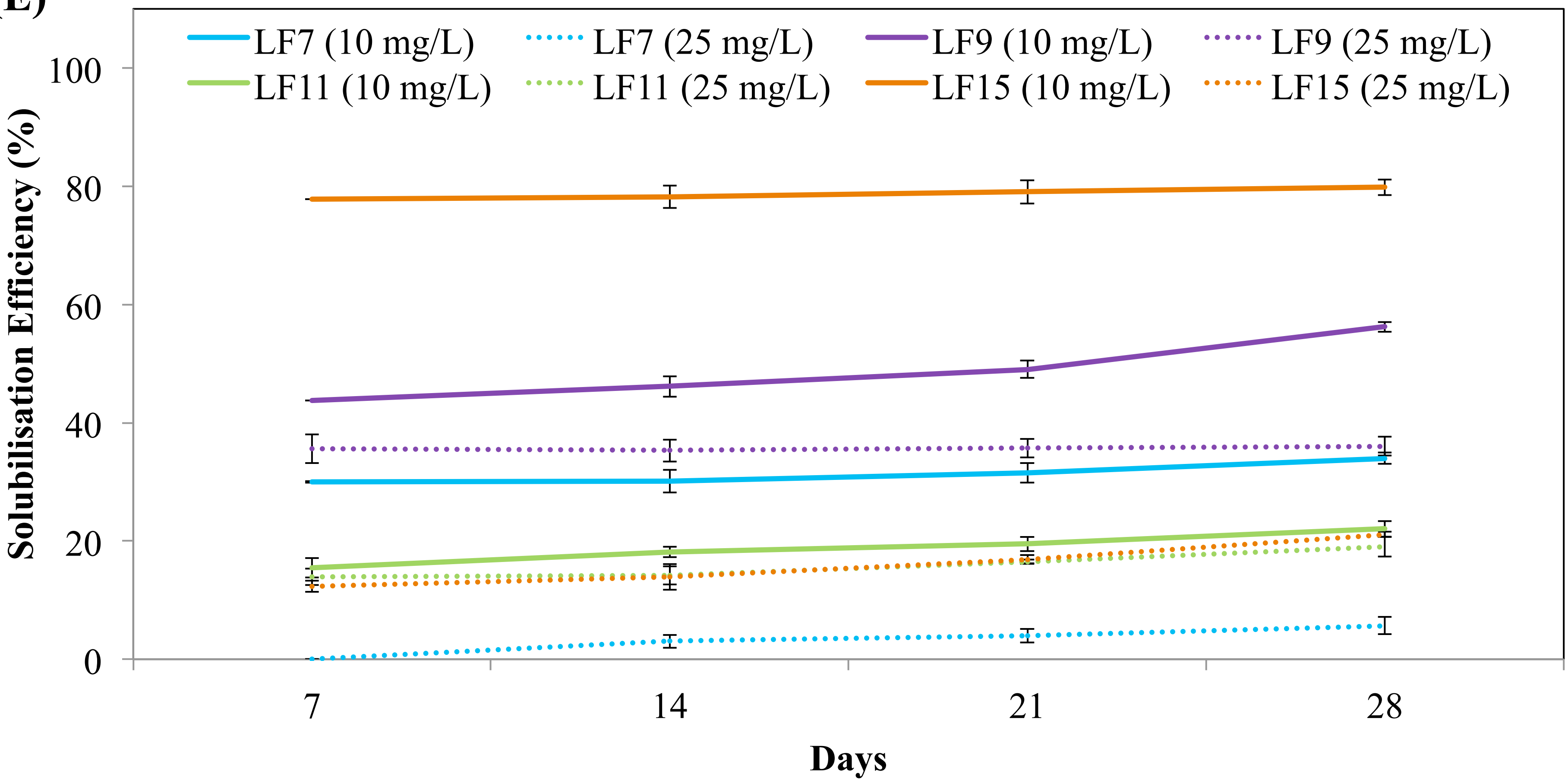
Supplementary Fig. 3 Phosphate solubilisation efficiency (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11 and *P. asparagi* LF15 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(D)



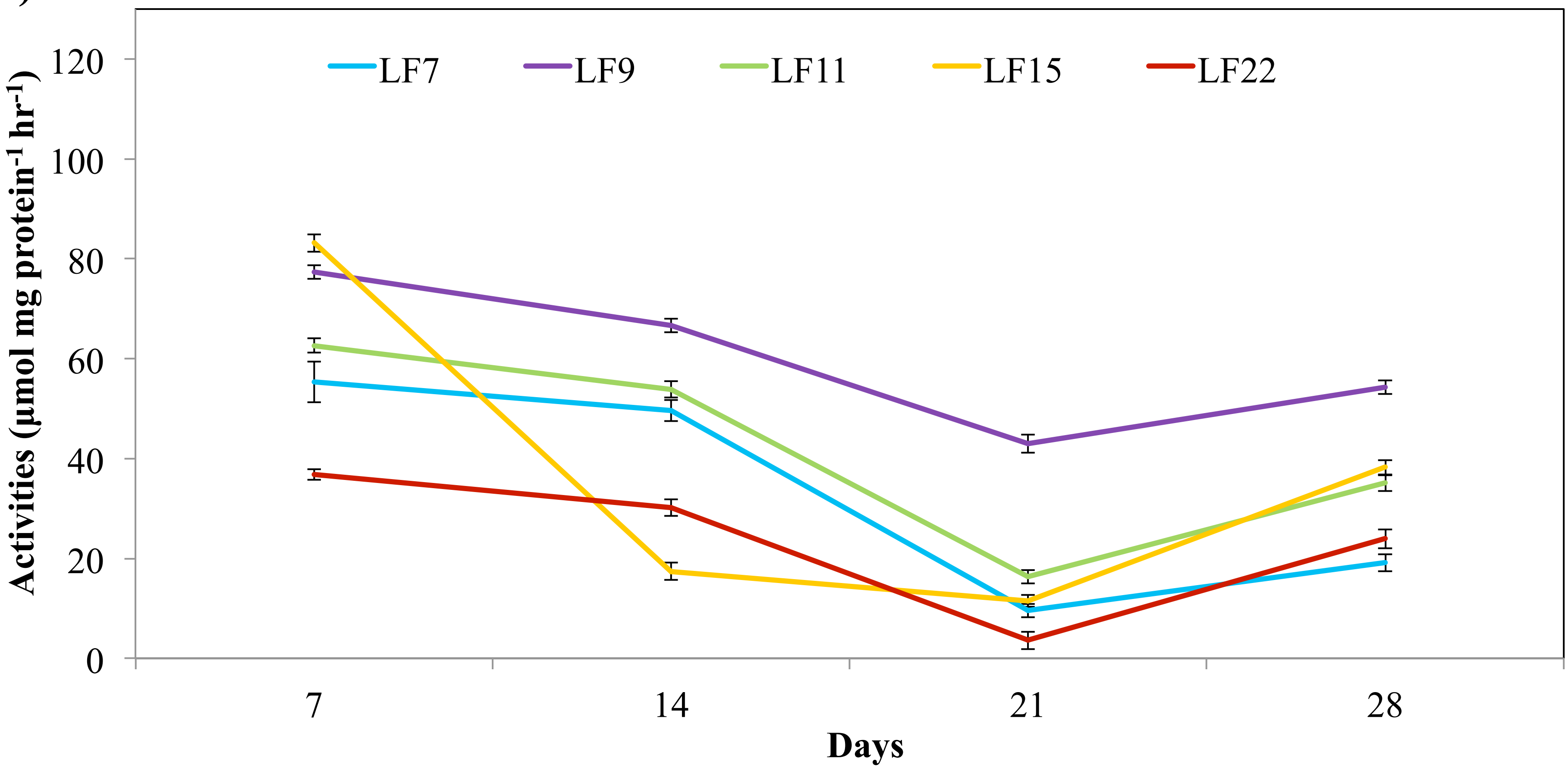
Supplementary Fig. 3 Phosphate solubilisation efficiency (%) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11 and *P. asparagi* LF15 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(E)



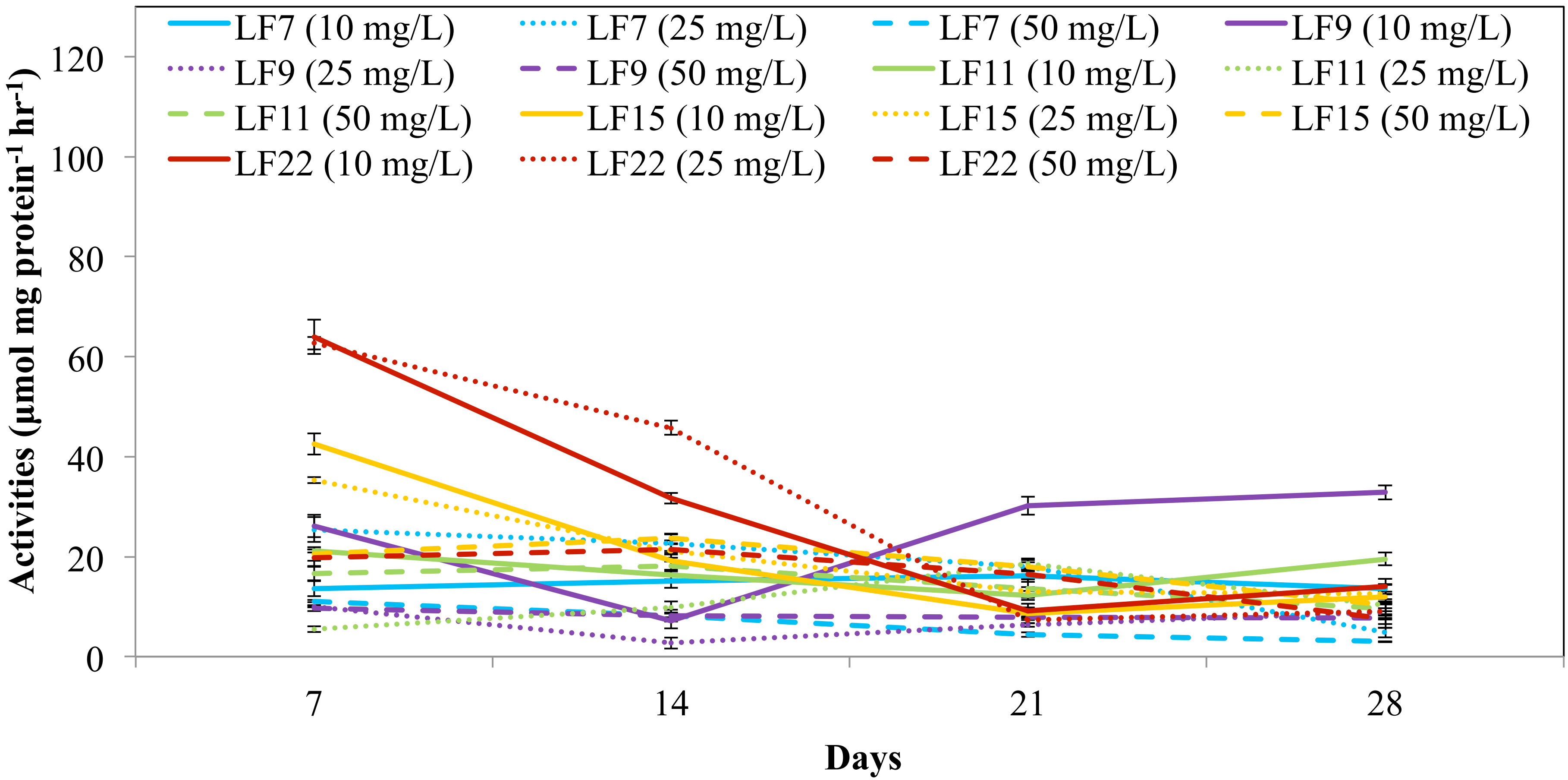
Supplementary Fig. 4 Activities of ACC deaminase (μmol mg protein^{-1} hr^{-1}) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(A)



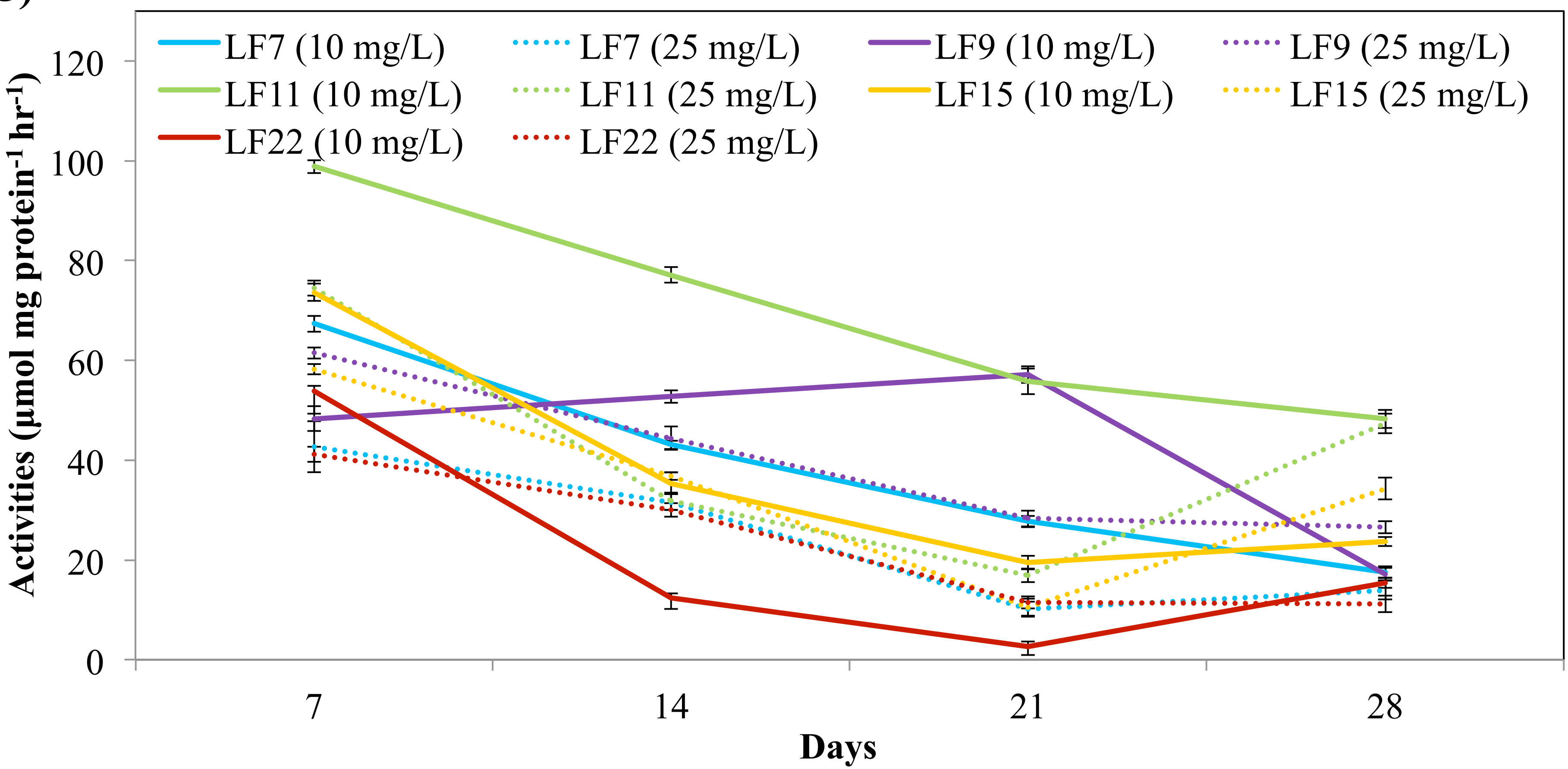
Supplementary Fig. 4 Activities of ACC deaminase (µmol mg protein^{-1} hr^{-1}) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(B)



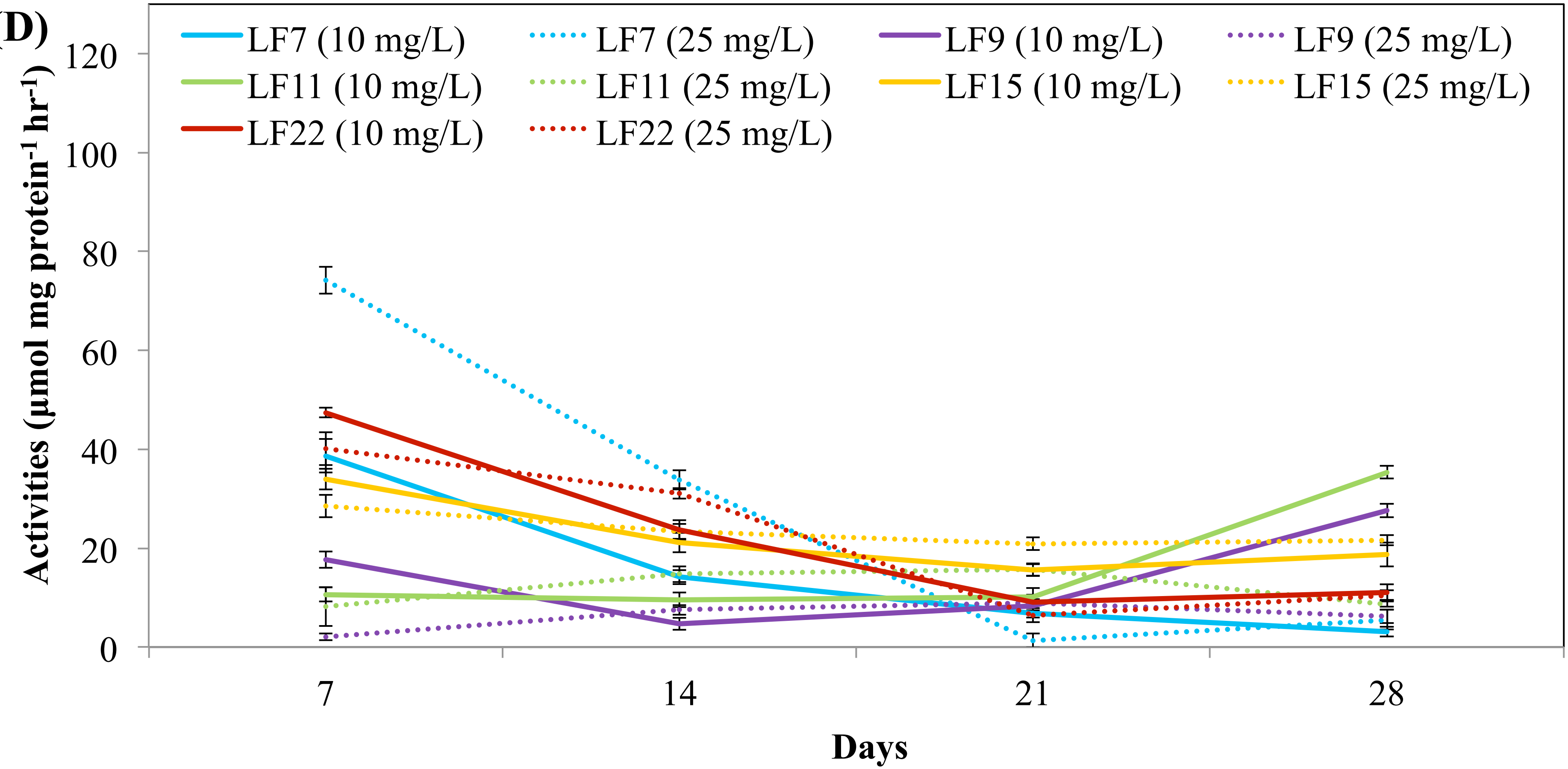
Supplementary Fig. 4 Activities of ACC deaminase (μmol mg protein^{-1} hr^{-1}) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(C)



Supplementary Fig. 4 Activities of ACC deaminase (µmol mg protein^{-1} hr^{-1}) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).

(D)



Supplementary Fig. 4 Activities of ACC deaminase (µmol mg protein^{-1} hr^{-1}) by metal-tolerant endophytes *Bipolaris* sp. LF7, *D. miriciae* LF9, *T. asperellum* LF11, *P. asparagi* LF15 and *S. bicolour* LF22 in (A) non-metal control as well as under the influence of (B) Cu^{2+} (C) Pb^{2+} (D) Zn^{2+} (E) Cd^{2+}. Metal solutions supplemented were 10 and 25 mg/L, with additional 50 mg/L for Cu^{2+} (as bracketed in legends).