

**Supplement to:**

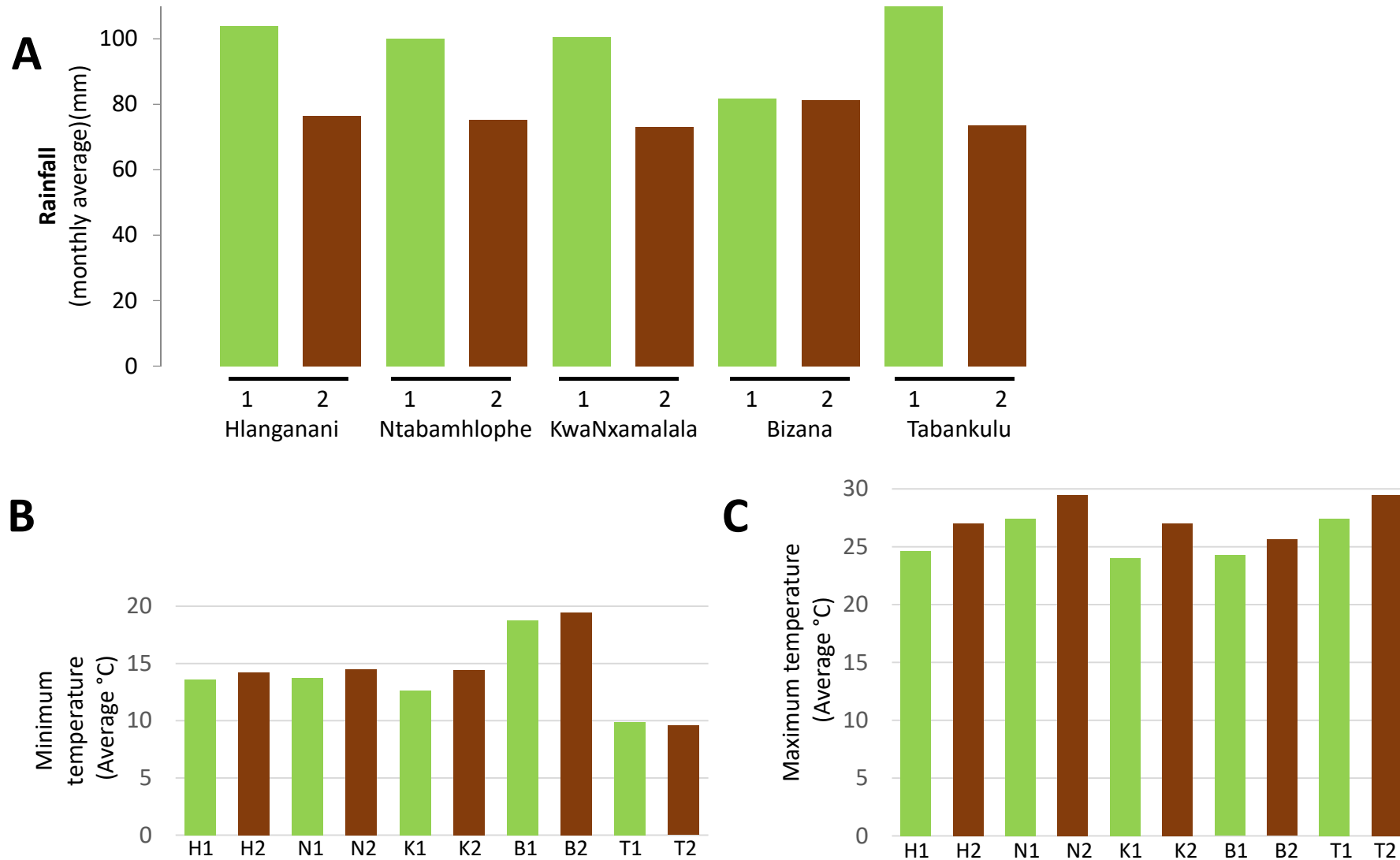
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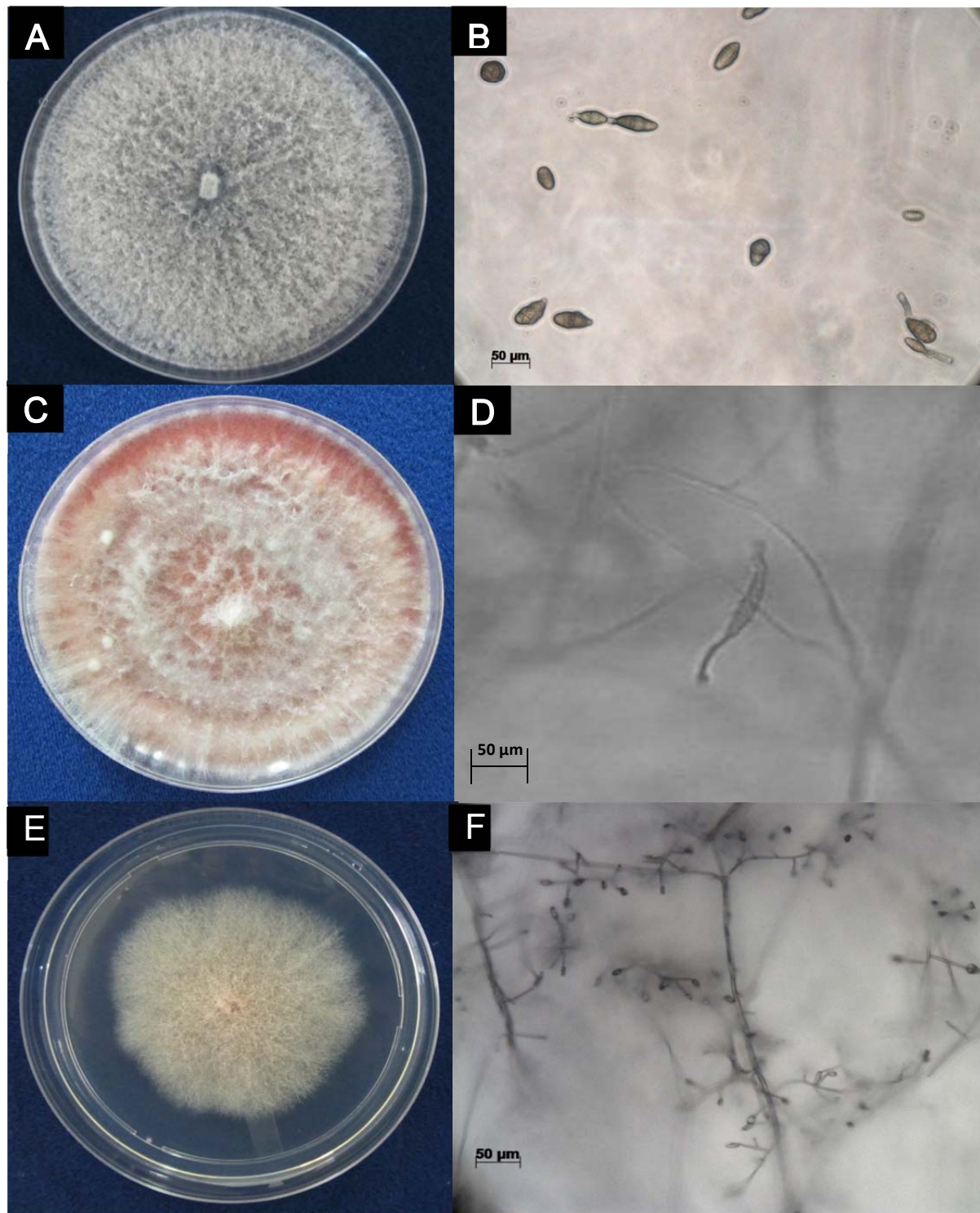


**Seasonal variation in mycoflora associated with asymptomatic maize grain from smallholder farms in two provinces of South Africa**

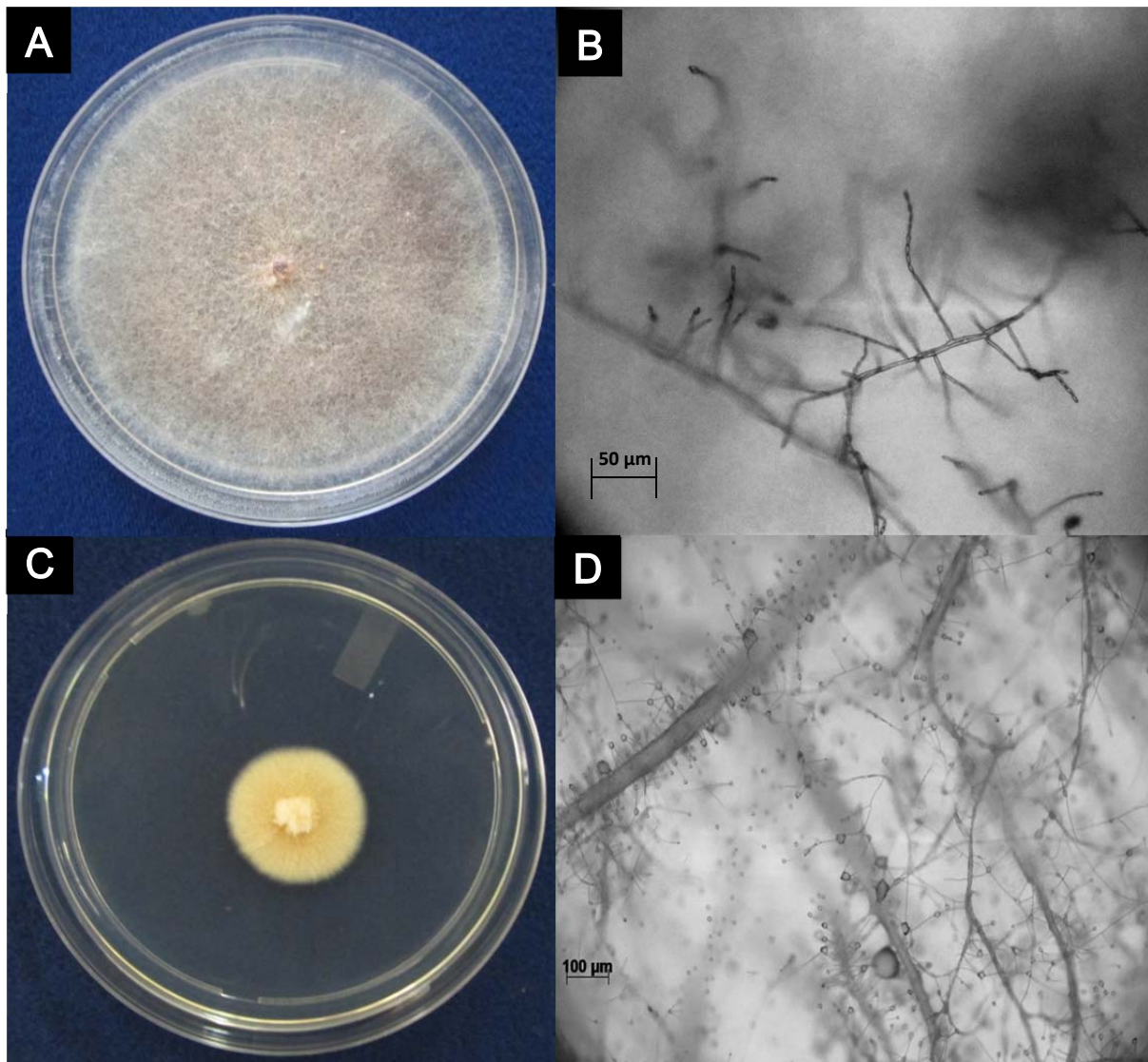
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**Supplementary Figure S1.** Summary of weather data. **A:** Average rainfall (Oct-Feb) for season 1 (2014/2015) and season 2 (2015/2016) at the five sites. **B:** Average daily minimum temperature (°C) at each site for each season (Oct-April): e.g. B1, B2 = Bizana season 1 & 2, respectively. **C:** Average daily maximum temperatures for each season (Oct-April). Data from Supplementary Table S1.



**Supplementary Figure S2:** Morphological characteristics of four fungal species associated with maize grains. (A) Culture of *Stenocarpella maydis*, (B) Conidia of *Alternaria alternata*, (C) Culture of *Fusarium graminearum*, (D) Chlamydo-spore of *F. graminearum*, (E) Culture of *Fusarium subglutinans*, (F) Conidia of *F. subglutinans*. All microscopic images were captured at 40x magnification.



**Supplementary Figure S3:** Morphological characteristics of two fungal species isolated from maize grains. (A) Culture of *Fusarium verticillioides*, (B) Microconidia in chains on hyphae of *F. verticillioides*, (C) Culture of *Sarocladium strictum*, (D) Conidia of *S. strictum*. All microscopic pictures were captured at 40x magnification.

**Supplementary Table S1A.** Average minimum and maximum temperature at sites in KwaZulu-Natal and Eastern Cape provinces of South Africa during the 2014/2015 and 2015/2016 maize growing seasons, named season 1 and season 2, respectively (South African Weather Service, 2016).

Weather station	KwaZulu-Natal								Eastern Cape											
	Ixopo		Estcourt				Cedara		Port Edward		Mzimvubu River (inland)									
Field site	Hlanganani		Ntabamhlophe				KwaNxamalala		Bizana		Tabankulu									
	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016						
	season 1	season 2	season 1	season 2	season 1	season 2	season 1	season 2	season 1	season 2	season 1	season 2	season 1	season 2						
Month	min*	max**	min*	max**	min*	max**	min*	max**	min*	max**	min*	max**	min*	max**	min*	max**	min*	max**	min*	max**
<b>October</b>	11.1	21.5	11.8	27.2	10.8	24.6	12.9	30.4	10.1	21	12.4	27.7	16.2	21.8	19	25.1	7.4	24.6	7.9	30.4
<b>November</b>	12.4	22.5	11.8	24.7	13	25.6	12.1	29.9	11.8	22.2	11.9	25.2	17.7	22.9	18	24.5	9.3	25.6	7	29.9
<b>December</b>	15.1	25.3	15.9	28.1	15.3	28.2	16.3	31.6	13.9	24.7	16.4	28.4	19.4	24.3	20.5	25.8	11.3	28.2	11	31.6
<b>January</b>	15.9	27.5	16.3	27.8	15.9	30	16.2	29.2	14.9	27	16.4	27	20.5	25.7	21.1	27.2	12.2	30	11.7	29.2
<b>February</b>	15.2	26.1	16.1	28.4	15.4	29.4	16.3	29.5	14.3	25.4	16.2	28	20	25.6	20.6	26.6	11.1	29.4	11.2	29.5
<b>March</b>	14.9	26.4	15.5	27.2	14.4	28	15.3	28.7	13.9	25.6	15.4	27.3	20.4	25.6	19.6	25.7	10.9	28	10.4	28.7
<b>April</b>	10.6	23.3	12.3	25.7	11.3	26.3	12.2	27.1	9.7	22.2	12.3	25.7	17.2	23.9	17.3	24.4	6.9	26.3	7.8	27.1
<b>May</b>	7.9	25.2	7.7	23.4	8	25.9	7.4	22.9	7.1	23.6	7.4	22.9	16.8	24	14.8	23.2	5.8	25.9	3.8	22.9
<b>June</b>	4.1	20.8	4.8	22.1	3.6	20.8	5.1	21.2	2.9	19.9	5.5	21.6	14	22.6	12.7	22.1	1.9	20.8	1.9	21.2

\*Average monthly minimum temperature (°C)

\*\*Average monthly maximum temperature (°C)

**Supplementary Table S1B.** Monthly rainfall at sites KwaZulu-Natal and Eastern Cape provinces of South Africa during the 2014/2015 and 2015/2016 maize growing seasons, named season 1 and season 2, respectively (South African Weather Service, 2016).

Weather station	KwaZulu-Natal				Eastern Cape					
	Ixopo		Estcourt		Cedara		Port Edward		Mzimvubu River (inland)	
Field site	Hlanganani		Ntabamhlophe		KwaNxamalala		Bizana		Tabankulu	
	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016	2014/2015	2015/2016
	season 1	season 2	season 1	season 2	season 1	season 2	season 1	season 2	season 1	season 2
<b>October</b>	135.2	36	14	12.4	76.4	19.8	82	36.8	89.2	34.4
<b>November</b>	71.4	41.6	63.8	28.2	118.2	45.4	72.2	100.8	114	57
<b>December</b>	98	85.8	151.8	107.6	115.6	69.6	162.4	98.6	108.8	94.2
<b>January</b>	77.8	100.2	210.2	178.2	114.6	130.2	51.4	69.2	148.8	80.4
<b>February</b>	136.6	118.6	60.4	50.2	77.4	99.8	40.8	101	98.2	102
<b>March</b>	44.2	122.2	62.2	113.2	79.6	88.4	98.8	197.6	76.8	153.6
<b>April</b>	55	42	18.6	11	53	19.4	135.2	21.6	48.6	53.2
<b>May</b>	1	45.8	8	8.2	3.6	20.2	0	58.6	4.2	19.8
<b>June</b>	2.2	2.6	3.2	1	0	2.2	4	7.6	6.6	1.4