

## Supplementary Material

### Supplementary Tables

**Supplementary Table S1.** List of samples with their respective symptoms observed in the field.

County	S/No	Sample ID	Symptoms Observed in the Field
Kitui	1	KT001-A	Small and elongated elliptical necrotic lesions on the leaf blade
	2	MUT006-B	Small, elliptical red lesions with tan centers Presence of fruiting bodies on dark lesions
	3	IKA009-G	Small and elongated elliptical necrotic lesions on the leaf blade
	4	KY006	Small, elliptical red lesions with tan centers Presence of fruiting bodies on dark lesions
	5	WA022	Small, elliptical red lesions with tan centers Presence of fruiting bodies on dark lesions
	6	KAY062	Small, elliptical red lesions with tan centers Reddish discoloration on the midrib
	7	IKU027	Small, elliptical red lesions with tan centers Reddish discoloration on the midrib
	8	IKT011	Dark brown circular spots Necrotic sunken lesions on the leaf surface
	9	KY049	Both small and elongated elliptical necrotic lesions on the leaf blade Red lesions on the midrib and leaf sheath
	10	KAM035	Small and elongated elliptical necrotic lesions on the leaf blade Necrotic sunken lesions on the leaf blade
Makueni	11	KAT015-A	Both small and elongated elliptical necrotic lesions on the leaf blade
	12	MAK007-D	Dark brown circular spots Necrotic sunken lesions on the leaf surface
	13	W008-L	Small and elongated elliptical necrotic lesions on the leaf blade
	14	MAV071	Dark brown circular spots Necrotic sunken lesions on the leaf surface
	15	KAT055	Small and elongated elliptical necrotic lesions on the leaf blade Necrotic sunken lesions on the leaf blade
	16	KAT050	Small and elongated elliptical necrotic lesions on the leaf blade Necrotic sunken lesions on the leaf blade
	17	KK038	Both small and elongated elliptical necrotic lesions on the leaf blade
Machakos	18	MTH022-A	Small and elongated elliptical necrotic lesions on the leaf blade Necrotic sunken lesions on the leaf blade
	19	KI080	Small and elongated elliptical necrotic lesions on the leaf blade Necrotic sunken lesions on the leaf blade
	20	MKS078	Red lesions on the midrib and leaf sheath
	21	MV089	Small, elliptical red lesions with tan centers Presence of fruiting bodies on dark lesions
	22	MAT094	Small, elliptical red lesions with tan centers Reddish discoloration on the midrib
	23	ND098	Small, elliptical red lesions with tan centers Reddish discoloration on the midrib
	24	MTH092	Small, elliptical red lesions with tan centers Reddish discoloration on the midrib
	25	MAS101	Dark brown circular spots Necrotic sunken lesions on the leaf surface

	26	MAS103	Dark brown circular spots Necrotic sunken lesions on the leaf surface
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**Supplementary Table S2.** Results of pathogenicity tests at 10 d after inoculation of the sorghum cultivars expressed as a disease severity score (mean  $\pm$  standard deviation). Severity score 0 –no symptoms, 1 – discrete lesions (necroses) less than 2 mm in length, 2 – lesion occupying less than 25 % of leaf surface, 3 – lesion occupying half of leaf surface, 4 – lesion occupying entire leaf surface and 5 –lesion with abundant sporulation .

County	Isolate ID	Pathogenicity
Makueni	KAT015-A	3.7 $\pm$ 1.3
Kitui	KAT001-A	4.3 $\pm$ 0.9
Makueni	W008-L	4.0 $\pm$ 1.4
Kitui	MUT006-B	3.9 $\pm$ 1.4
Makueni	MAK017-D	3.6 $\pm$ 1.3
Kitui	IKA009-G	3.8 $\pm$ 1.3
Machakos	MTH022-A	4.1 $\pm$ 1.1

**Supplementary Table S3.** Comparison between *Colletotrichum sublineola* and *Colletotrichum eremochloae*. Source; Crouch and Tomaso (2021).

<i>Colletotrichum sublineola</i> (Strain MB529591)	<i>Colletotrichum eremochloae</i> (Strain CBS129661)
<p><b>Colony color:</b> Ranges from white to pink and dark gray to clear-gray</p> <p><b>Conidia:</b> Falcate, oval to fusiform, hyaline, unicellular, non-septate with rounded ends.</p> <p><b>Hyphal appressoria:</b> abundant in culture Single-celled, dark to hyaline, globose to sub-globose shaped</p> <p><b>Nucleotide sequences;</b> Has a fixed nucleotide differences at nuclear internal transcribed spacer region Apn2, Apn2/Mat1 and Sod2 when amplified and sequenced with PCR primers ITS4/ITS5, Mat1M72F/ Mat1M72R, Apn1W1F/Apn1W1R and SOD625F/SOD625R.</p>	<p><b>Colony color:</b> light to dark grey without visible conidial masses with a bright yellow perimeter surrounding the colony</p> <p><b>Conidia:</b> one-celled, Falcate sometimes fusiform, Smooth, hyaline, Setae &amp; Sclerotia absent</p> <p><b>Hyphal appressoria:</b> abundant in culture, medium to dark brown, globose, ovoid, Clavate, lobate or multilobate, and obtuse. apices</p> <p><b>Nucleotide sequences;</b> Has a fixed nucleotide differences at nuclear internal transcribed spacer region Apn2, Apn2/Mat1 and Sod2 when amplified and sequenced with PCR primers ITS4/ITS5, Mat1M72F/ Mat1M72R, Apn1W1F/Apn1W1R and SOD625F/SOD625R.</p>

**Supplementary Table S4.** Basic information of the fungal strains used to construct the phylogenetic tree.

ID	Accession number	Species	Country	year	Host
IKA009-G*		<i>C. sublineola</i>	Kenya		Sorghum sp.
KAT015-A*		<i>C. sublineola</i>	Kenya		Sorghum sp.
KT001-A*		<i>C. sublineola</i>	Kenya		Sorghum sp.
MAK017-D*		<i>C. sublineola</i>	Kenya		Sorghum sp.

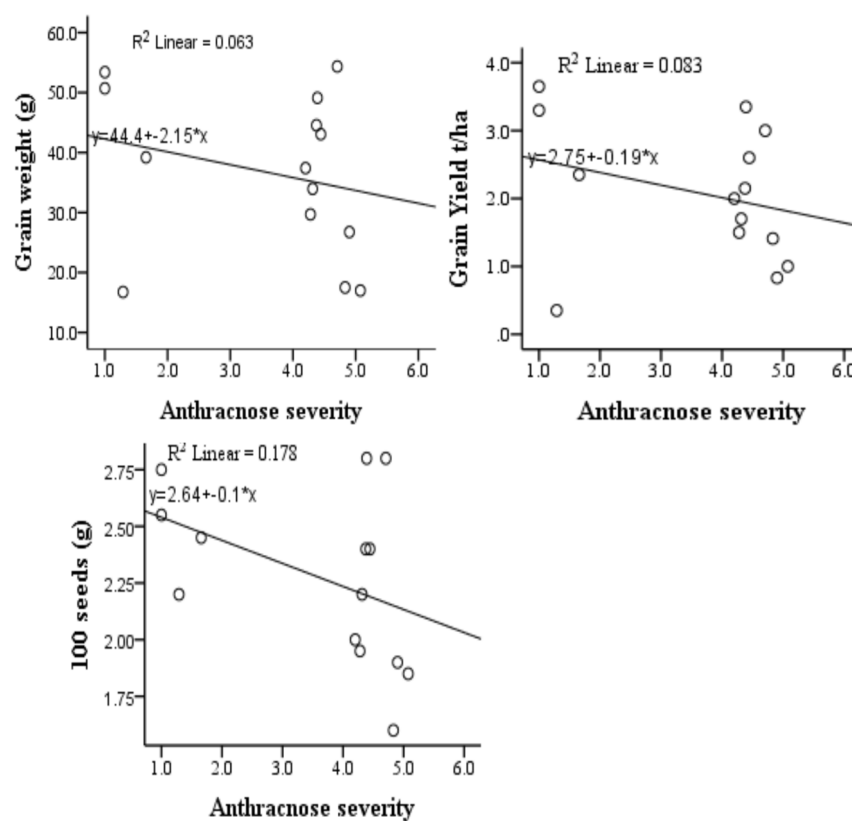
MTH022-A*		<i>C. sublineola</i>	Kenya		Sorghum sp.
MUT006-B*		<i>C. sublineola</i>	Kenya		Sorghum sp.
W008-L*		<i>C. sublineola</i>	Kenya		Sorghum sp.
IR-06	AB242422	<i>C. falcatum</i>	India	N/A	Sorghum sp.
MAFF 511474	AB439813	<i>C. sublineola</i>	Japan	2000	Sorghum bicolor
MAFF 243051	AB738855	<i>C. hsienjenchang</i>	Japan	2011	Phyllostachys bambusoides
S26	EF016297	<i>C. truncatum</i>	China	2006	Tobacco
S35	EF016299	<i>C. truncatum</i>	China	2006	Tobacco
DAOM116226	EU400155	<i>C. brassicae</i>	Canada	2008	N/A
1818	FJ236462	<i>C. dematium</i>	Bulgaria	N/A	Statice
CY125	HQ607974	<i>C. caudatum</i>	USA	2006	Cyphomyrmex wheeleri nest
Cf-17	HQ833662	<i>C. falcatum</i>	N/A	N/A	N/A
CBS 129663	JQ005774	<i>C. cereale</i>	N/A	N/A	N/A
CDLG3	JQ400004	<i>C. liriopes</i>	China	N/A	Hemerocallis fulva
Co-38-Zac	JQ658887	<i>C. sublineola</i>	Mexico	N/A	Sorghum halepense
CDRJ01	JQ677042	<i>C. dematium</i>	South Korea	N/A	Rohdea japonica Roth
I137	KC598120	<i>C. spaethianum</i>	Brazil	N/A	Hemerocallis lilioasphodelus
MAFF305403	KC790948	<i>C. paspali</i>	India	N/A	N/A
MAFF305404	KC790949	<i>C. hanaui</i>	India	N/A	N/A
MAFF511115	KC790951	<i>C. nicholsonii</i>	India	N/A	N/A
MAFF511155	KC790952	<i>C. eleusines</i>	India	N/A	N/A
MTCC10326	KC790960	<i>C. navitas</i>	India	N/A	N/A
SimpsonStem1	KU171107	<i>C. sublineola</i>	USA	N/A	Sorghum bicolor
CSB_F052	KU574683	<i>C. echinocloae</i>	Kenya	N/A	Brachiaria sp.
VIC32T	KU821158	<i>C. coccodes</i>	Australia	N/A	potato
USANY	KU821176	<i>C. nigrum</i>	USA	N/A	potato
BRIP 63314c	KX069822	<i>C. tofieldiae</i>	Australia	N/A	Grevillea crithmifolia
RJ6	MH005034	<i>C. liriopes</i>	USA	N/A	Rohdea japonica
I-3	MN636355	<i>C. falcatum</i>	Bangladesh	N/A	Sugarcane
CZPMP-17	MN889462	<i>C. sublineola</i>	India	2019	Pennisetum
SI24	MT077154	<i>C. duyunense</i>	China	N/A	Sinoseneciooldhamianus
CNUCC 303221	MT199610	<i>C. bambusicola</i>	China	N/A	Phyllostachys aureosulcata
CNUCC 307304	MT199631	<i>C. guangxiense</i>	China	N/A	Phyllostachys edulis
MV101	MW054252	<i>C. graminicola</i>	N/A	N/A	N/A
YMF 1.06700	MW722955.1	<i>C. garzense</i>	China	N/A	N/A
IMI 279189	NR_171193.1	<i>C. axonopodis</i>	Australia	N/A	Axonopus fissifolius
CBS 129664	MH865530.1	<i>C. eremochloae</i>	N/A	N/A	N/A
CBS 129661	MH865527.1	<i>C. eremochloae</i>	N/A	N/A	N/A

\* Represents strains from the current study.

**Supplementary Table S5.** Regression analysis between sorghum anthracnose and yield components. \*Dependent Variable: Anthracnose .

Coefficients*					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.207	13.729		.452	.665
Grain weight	.139	.139	1.185	1.001	.350
Grain Yield t/ha	-3.396	4.653	-2.182	-.730	.489
100seeds (g)	-7.249	3.280	-1.745	-2.210	.063

## Supplementary Figures



Supplementary Figure S1. Regression analysis on the effect of sorghum anthracnose on yield of local and improved genotypes obtained from lower eastern Kenya.

## References

1. Crouch, J.A.; Tomaso, P.M. Anthracnose disease of centipegrass turf caused by *Colletotrichum eremochloae*, a fungal species closely related to *Colletotrichum sublineola*. *Mycologia* **2021**, *104*, 1085–1096.