

Table S1. Summary of RNA-Seq read filtering and mapping. Values represent each of the five biological replicates for each treatment. Samples 1 – 10 were mapped with the *Metarhizium anisopliae* reference genome: GCA_013305495.1. Samples 11 – 20 were mapped with the *Metarhizium rileyi* reference genome: GCA_007866325.1.

Sample	Treatment	Number of Input Reads	Uniquely mapped Reads (%)	Reads mapped to too many loci (%)	Unmapped reads (%)
1	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	17582304	0.14%	0,36%	99,03%
2	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	15741262	0.15%	0,30%	99,07%
3	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	14721168	0.10%	0,24%	99,26%
4	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	17926588	0.15%	0,28%	99,11%
5	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	13467826	0.14%	0,35%	98,91%
6	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	15694999	0.57%	0,32%	98,66%
7	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	15941969	0.63%	0,55%	98,09%
8	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	16652007	0.36%	0,30%	98,89%
9	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	16245901	0.55%	0,91%	97,35%
10	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	16604615	0.36%	0,65%	98,12%
11	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	17243904	0.32%	0,00%	99,67%
12	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	15728103	0.19%	0,00%	99,80%
13	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	16375249	0.23%	0,00%	99,75%
14	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	15457153	0.24%	0,00%	99,75%
15	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	17595338	0.20%	0,00%	99,79%
16	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	17249224	0.49%	0,00%	99,49%
17	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	15896404	0.40%	0,00%	99,59%
18	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	17481701	0.95%	0,00%	99,04%
19	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	14985625	1.12%	0,00%	98,85%
20	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	14836469	0.25%	0,00%	99,74%

Blastospores from *Metarhizium anisopliae* and *Metarhizium rileyi* are not always as virulent as conidia towards *Spodoptera frugiperda* caterpillars and use different infection mechanisms. Isabella Alice Gotti, Camila Costa Moreira, Italo Delalibera Junior, and Henrik H. De Fine Licht