

**Table S2.** Summary of RNA-Seq read filtering and mapping with *Spodoptera frugiperda* reference genome. Values represent each of the five biological replicates for each treatment. All the samples were mapped with the *S. frugiperda* reference genome: GCA\_019297735.1

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	17546491	68,42%	0,06%	23,59%
2	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	15707692	66,08%	0,15%	25,91%
3	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	14700702	66,56%	0,11%	26,32%
4	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	17887751	66,43%	0,11%	25,96%
5	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> blastospores	13441206	67,80%	0,13%	23,98%
6	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	15590528	67,48%	0,05%	25,75%
7	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	15827454	64,15%	0,06%	28,21%
8	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	16581026	62,82%	0,06%	30,52%
9	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	16126915	67,18%	0,06%	21,76%
10	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium anisopliae</i> conidia	16526741	66,13%	0,08%	22,96%
11	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	17187484	68,97%	0,12%	21,31%
12	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	15696812	71,16%	0,15%	21,56%
13	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	16335133	75,19%	0,09%	17,07%
14	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	15418547	72,16%	0,09%	20,43%
15	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> blastospores	17557909	70,08%	0,15%	20,43%
16	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	17161999	68,81%	0,09%	24,35%
17	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	15831745	70,15%	0,13%	20,28%
18	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	17313507	66,22%	0,10%	23,39%
19	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	14814037	68,07%	0,12%	21,03%
20	<i>Spodoptera frugiperda</i> cuticle + <i>Metarhizium rileyi</i> conidia	14797306	72,48%	0,13%	21,25%

**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