

Figure S1. PCR amplification products of DNA isolated from control and smut inoculated sugarcane plantlets after 30 days, and *S. scitamineum* bE mating-type gene fragment is amplified at 459 bp. M, Molecular size marker (100 bp-5000 bp); P, positive control (*S. scitamineum*); N, negative control (Sterile water); F134; F(T) treatment and F(C) control; NCo310; N(T) treatment and N(C) control.

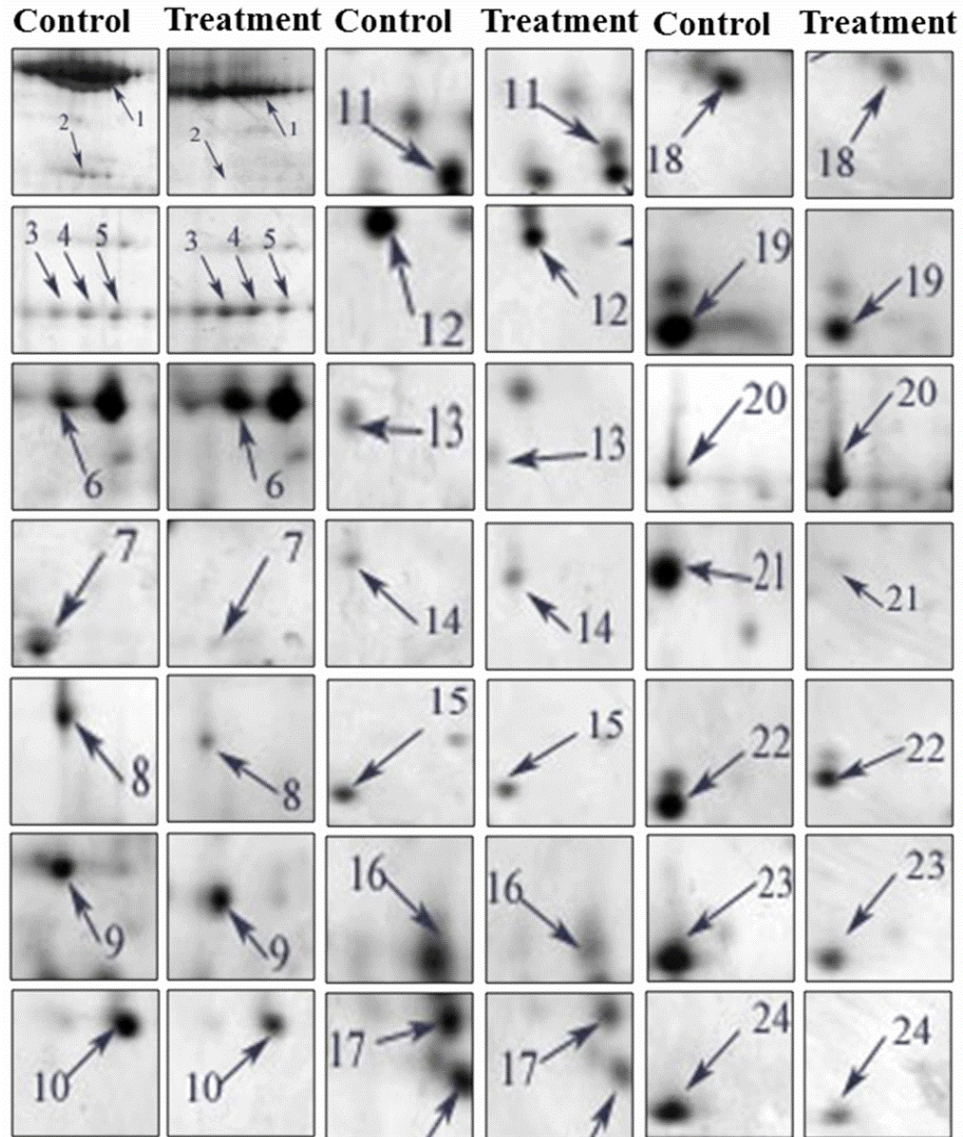


Figure S2. Comparative image (control and treatment) of differentially expressed proteins obtained from 2-DE gel in sugarcane variety F134 after *Sporisorium scitamineum* inoculation after 60 days.

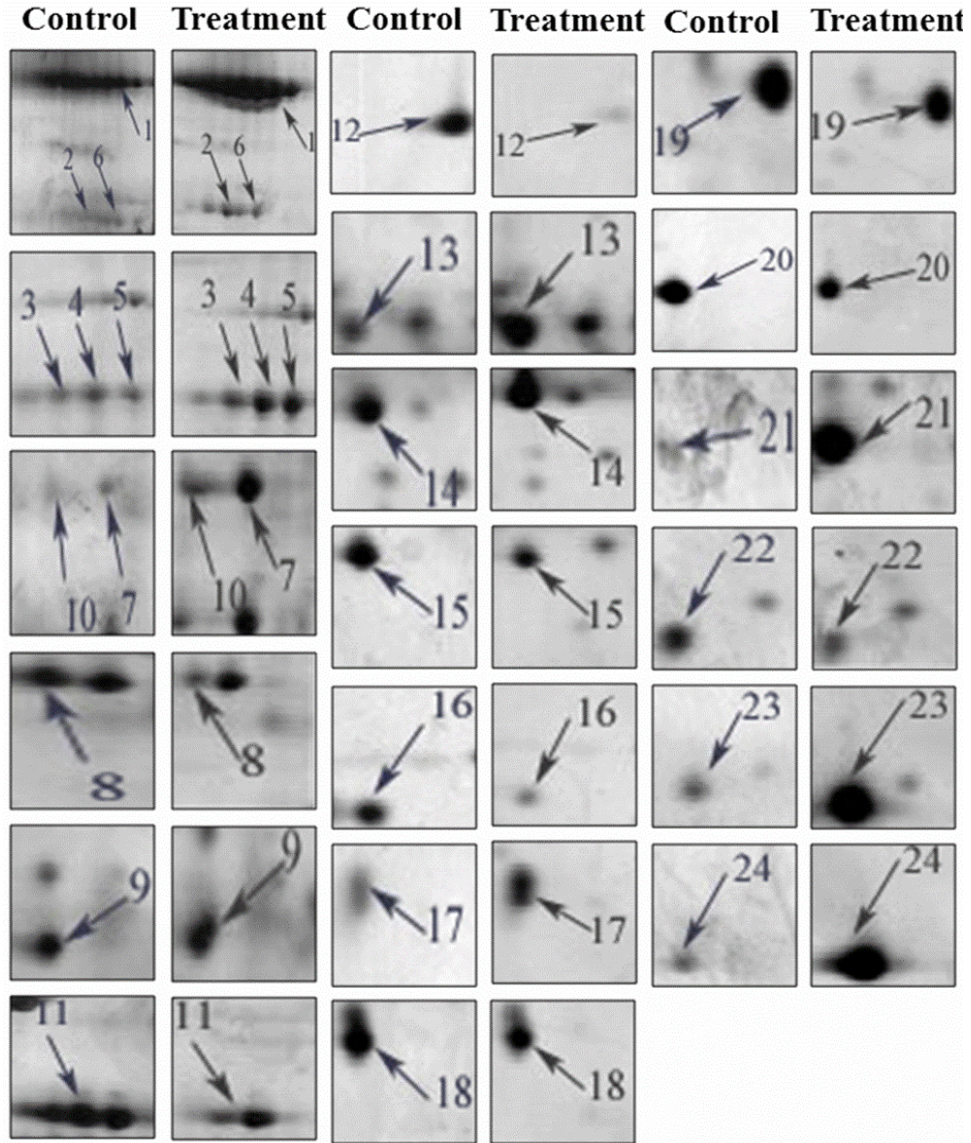


Figure S3. Comparative image (control and treatment) of differentially expressed proteins obtained from 2-DE gel in sugarcane variety NCo310 after *Sporisorium scitamineum* inoculation after 60 days.

Table S1. Functional characterization and classification of identified protein spots in both sugarcane varieties.

S. No.	Molecular Function	Sugarcane Varieties	
		NCo310	F134
1.	ATP Binding	4	4
2.	Kinase Activity	1	1
3.	Metalion Binding	1	2
4.	Pyruvate, Phosphate Dikinase Activity	1	1
5.	Transketolase Activity	2	2
6.	Calciumion Binding	1	1
7.	Cobaltion Binding	1	1
8.	Manganese Ion Binding	2	1
9.	Phosphoglycerate Kinase Activity		1
10.	Gtpase Activity	1	1
11.	GTP Binding	1	1
12.	Translation Elongation Factor Activity	1	1
13.	Phosphoglycerate Kinase Activity		1
14.	Nucleic Acid Binding	1	1
15.	Nucleotide Binding	1	1
16.	Peroxidase Activity		1
17.	DNA Binding		1
18.	Hydrogen Ion Transmembrane Transporter Activity		1
19.	Superoxide Dismutase Activity		1
20.	Monoxygenase Activity	1	1
21.	Ribulose-Bisphosphate Carboxylase Activity	1	1
22.	Nutrient Reservoir Activity	1	
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S. No.	Biological Process		
1.	Pyruvate Metabolic Process	1	1
2.	Metabolic Process	1	1
3.	Reductive Pentose-Phosphate Cycle	1	1

4.	Glycolytic Process		2
5.	Response to Glucose		1
6.	Response to Heat		1
7.	Response to Light Stimulus		1
8.	Response to Molecule of Bacterial Origin		1
9.	ATP Synthesis Coupled Proton Transport		1
10.	Defense Response to Bacterium		1
11.	Response to Cytokinin		1
12.	Photorespiration	1	1
13.	Reductive Pentose-Phosphate Cycle	1	1
14.	Protein Refolding	1	
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S. No.	Cellular Component		
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1.	Chloroplast Thylakoid Membrane	1	2
2.	Intracellular	1	1
3.	Apoplast		1
4.	Chloroplast Stroma		1
5.	Cytosol		1
6.	Nucleus		1
7.	Plasma Membrane		1
8.	Plasmodesma		1
9.	Vacuolar Membrane		1
10.	Intracellular Ribonucleoprotein Complex	1	1
11.	Viral Nucleocapsid	1	1
12.	Chloroplast Envelope		1
13.	Integral Component of Membrane		1
14.	Proton-Transporting ATP Synthase Complex, Coupling Factor F (O)		1
15.	Chloroplast	1	2
16.	Cytoplasm	1	
17.	Extracellular Region	1	
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