INTEGRATING COVER CROPS IN ORGANIC VEGETABLE FARMING IN SOUTH TEXAS

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Objective: The main objective of this project is to analyze the potential of cover crops to provide habitat for beneficial and pest insects.

Cover Crops Species Used

sunn hemp (*Crotalaria juncea)*

buckwheat (*Fagopyrum esculentum*)

tillage radish (*Raphanus sativus*)

Lab lab *(lablab purpureus)*

Sudan Grass *(sorghum drummondii)*

Methods: Five different cover crops will be analyzed in this project: sunn hemp (*Crotalaria juncea*), buckwheat (*Fagopyrum esculentum*), tillage radish (*Raphanus sativus*), sudan grass *(sorghum drummondii)* and lablab *(lablab purpureus)*. Starting January 2017, 24 2m x 3.25m plots will be prepared in both the farms and the five cover crops will be planted with 4 replicates of each and 4 plots will be left fallow as control. After 4 weeks when the plants start flowering, insects in each of these plots will be collected with a sweep-net and identified to compare the diversity of insects in the different cover crop treatment plots and the control plot.

Research site: This research will be conducted in the Organic Garden at UTRGV and a certified organic farm, Terra Preta in Edinburg TX.

Beneficial Insects

Lady Bug *(Coccinellidae Coleoptera)*

Jumping Spider *(Salticidae Arachnidae)*

Assassin Bug *(Reduvidae Hemiptera)*

Minute Pirate Beetle *(Orius Tristicolor)*

Common Insects/Pests

Imported Cabbage Worm *(Pieris Rapae)*

Aphids *(Aphididae)*