Our aim for the raspberry pi project is to create a prototype farming rover that will help farmers and 3rd world countries (that are less fortunate and wealthy) find areas of fertile land that is good for crop growing and general farming. The rover will measure an array of different factors to determine the optima land to sew the seed. Our rover will be able to drive to a designated area of land, be able to measure key determining factors for crop growth and have the capacity to measure using a moisture senser (controlled by a servo), light sensor whilst be tracked using GPS (Global Positioning System).   
  
The wider purpose of our project is to help reduce the quantity of food imported from foreign countries abroad. This is because thousands of tons of food and foreign produce is imported via ships that use vast quantities of fuel oil to travel across large oceans to reach their destination. Our rover will help reduce fossil fuel usage (simultaneously reducing carbon dioxide waste emissions) by producing local food, that will not need to be shipped or delivered many miles across large distances. This local produce will help prevent and slow global warming and lower the annual carbon footprint, by reducing carbon emission levels into the atmosphere.  
  
We will make our rover prototype with a black gladiator tracked robot chassis, which is a tracked rover (enabling it to move on various terrains) from pi hut. On the front, we will attach our GPS antenna which observes the current location of the vehicle – so we will never lose the rover down a hole or amongst undergrowth. On the back of the rover, the servo (if we had more budget, we would have used a linear actuator because it is more reliable at getting the moisture sensor in the ground however they are very expensive – so out of are budget) will make the moisture senser eject into the ground – to measure moisture content. In addition, the moisture sensor can also act as a thermometer to measure temperature. We are going to use a raspberry pi to control the movement of the motors, so it will be able to move, and the sensor will work. The motors will be able to run at different speeds, drive: forwards backwards, left and right (by initiating one or both motors) We will use python to control our raspberry pi. Overall, this robotic rover will be able measure these factors, resulting, in the discovery of the most fertile and farm friendly land.