

# MY COMMUNITY, OUR EARTH

## MIAMI

## Extensive versus Intensive Land-Usage

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**Problem Statement:** As it relates to agriculture, what type of land-usage is best suited to provide crops to the local populations of the Redlands and Homestead region?

During the investigation of the Homestead Fruit & Spice Park and its adjacent farmsteads, an observation of the local land-usage was recorded and analyzed. Hoping to draw further connections between the crops grown in the region and what impact they make on local organic gardens, two different types of farming were identified: extensive and intensively grown vegetables and fruits. “Agricultural practices determine the level of food production and, to a great extent, the state of the global environment” (Nature, 2008, 672).

Extensive agriculture is a crop system characterized by low inputs of labor by farmers on vast areas of land. Leafy greens and smaller fruiting plants, provided with little more than adequate soil and proper irrigation, were created in large numbers. Hybrid tomatoes, green bean crops, and avocado groves, numerous throughout the region, demonstrated this practice. While labor on each individual plant was relatively nonexistent, necessary soil composition, irrigation, and sunlight was always provided.



Avocado groves are shown



View of  
green bean crop field



Close-up picture of  
green bean



Specialized irrigation system  
used on extensive farmland

The intensive method of land-usage requires much more labor per individual acre of land in order to increase productivity. These crops, which normally require more attention and care, tend to cost both producers and consumers more in the long-term. This includes the use of these crops as animal nutrients; another process which took place throughout the area. This demand for more complex fruits, vegetables, and other products, is able to fetch a more favorable price from consumers. One plant observed was the foreign purple yam. Local farmers described the process of yam production as both consuming and rewarding as some markets purchased the fruits for nearly three dollars a pound.

### Conclusion

While each type of farming and land utilization proved successful, neither demonstrated their overall importance over the other. Depending on the individual crops the market might demand, farmers will adapt their crop selection process in order to meet the consumer needs. If the agriculture process is executed correctly, a balanced and broad selection of fruits and vegetables can be created with success. It is important to note that, in the search for food security, extensive farming practices required less input by the planter.



Top Left: Red bananas that are mixed with other herbs to produce feed for the animals.

Top Right: Purple yams being prepared to be sold at the market.

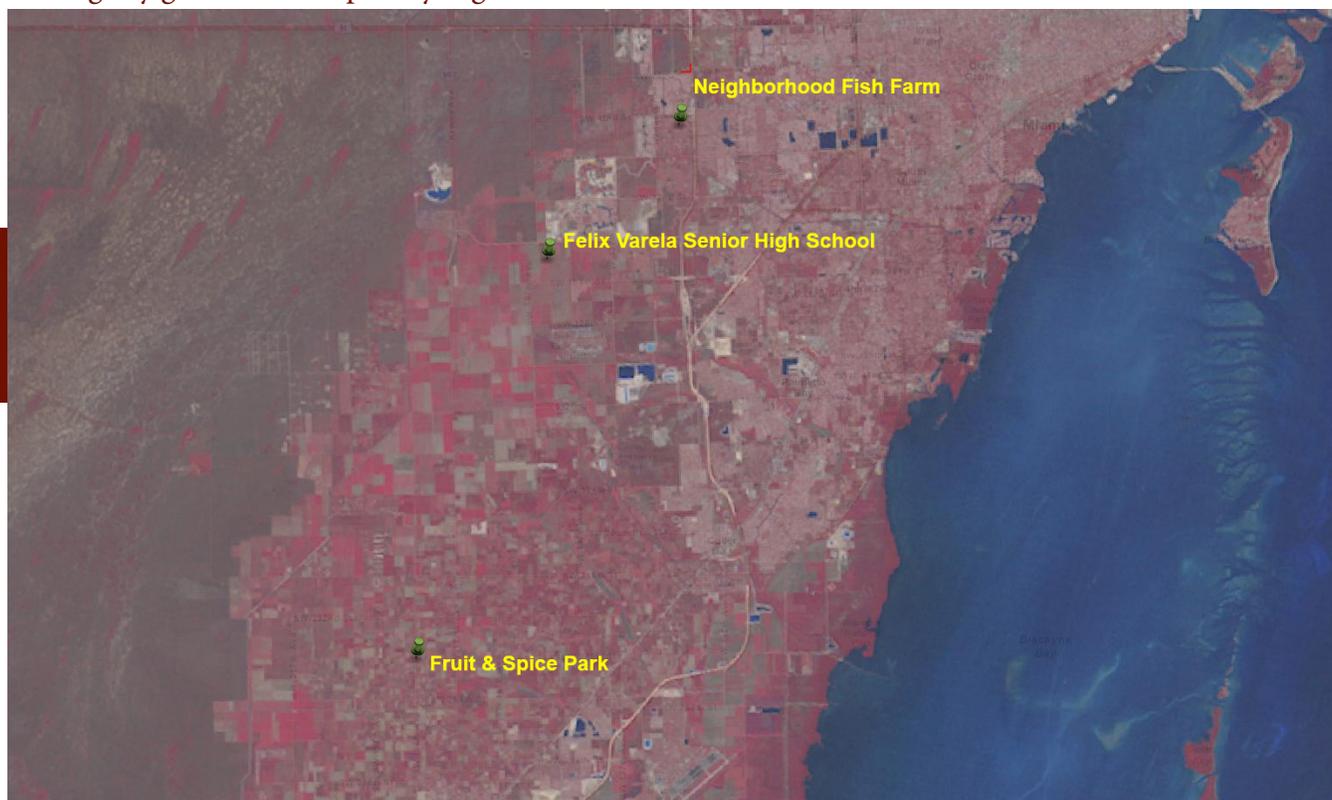
Bottom Left: Turmeric Indian spice.

Bottom Right: Farm raised livestock.

## Resources

Tillman, D., & Cassman, K. (2002). Agricultural sustainability and intensive production practices. *Nature*, 418, 671-677. doi: 10.1038/nature01014

In this image service, vegetation appears in shades of red, urban areas are cyan blue, and soils vary from dark to light browns. Ice, snow, and clouds are white or light cyan. Coniferous trees will appear darker red than hardwoods. Generally, deep red hues indicate broad leaf and/or healthier vegetation while lighter reds signify grasslands or sparsely vegetated areas.



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swissstopo and the GIS User Community

