

# AGRICULTURAL PRODUCTION AND WATER RESOURCES QUANTITY AND QUALITY IN THE FLORIDA SPRINGS REGION

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The Floridan Aquifer System (FAS) provides water to more than 1,000 artesian springs in Florida (FDEP, 2018; FSI, 2018), enabling the largest concentration of freshwater (FDEP, 2018) and first magnitude springs in the world (FSI, 2018). These springs conform the Florida Springs Region (FSR), which comprises 42,000 square miles and includes 56 counties (FSI, 2018).

Springs provide a broad spectrum of environmental services. They source 90% of drinking water in the state (Borisova, Olexa, & Davis, 2017; Donaldson, 2018; FDEP, 2019); they offer critical habitats for plants and animals; and they provide recreational opportunities valuable for the tourism sector (Borisova et al., 2017; FDEP, 2019). In addition, the FSR supports agricultural production. In 2017, crop production sales in Florida were estimated at 5,704 million USD; out of which 3,166 million USD corresponded to sales in the FSR's counties (USDA & NASS, 2017).

Among some of the main concerns in relation to the springs include decreasing spring flows; and excessive nutrients that can lead to algal growth and habitat degradation (Borisova et al., 2017; FDEP, 2019). Both occur as a result of agricultural and urban landscape practices, leaking septic systems; and inadequate stormwater management, among others (Borisova et al., 2017).

Within this perspective, this poster proposal aims to quantify agricultural production (crop sales and crops imports and exports) in the Florida Springs Region, as well as its relationship with nitrogen application and groundwater withdrawals. The main axis of the report is the importance of water resources conservation for maintaining the springs' ecosystem services, while acknowledging the importance of agriculture production. The study corresponds to an intermediate assessment of different official databases and the development of maps. The main results are expected to support current efforts to adopt Best Management Practices (BMPs) related to the development and implementation of Basin Management Action Plans (BMAPs).

**PRESENTER BIO:** Jessica Mostacedo is a Master of Sustainable Development Practice graduate student at UF. She has a BSc. in Socioeconomic Development and the Environment. She has ten years of experience working for the UN-ECLAC, and as consultant in agricultural value chains, and mitigation and adaptation to climate change in Latin America.