

Dr. Hennen Cummings is a Professor of Aquaponics and Turfgrass Management and Director of the Hydrotron and Turfgrass Field Laboratory at Tarleton. The Hydrotron is a greenhouse that has an aquaponics system and several hydroponics systems. The aquaponics system has a 1750 gallon tank with Mozambique tilapia, a 350 gallon tank with Channel catfish, and a 50 gallon tank with tilapia brood and fingerlings. The fish water is recirculated under three 4 ft x 8 ft rafts and several towers where leafy plants use the nutrients in the fish water before the water is returned to the fish tanks. Solid waste filtered from the fish tanks is used to nourish freshwater Tiger prawns in a 950 gallon tank. Tomatoes, peppers, cucumbers, and strawberries are grown in coco fiber (without soil) in hydroponics systems. Strawberries are grown in vertical towers. Herbs in hanging baskets are fertilized with fish water. Outside the Hydrotron are several composters and media-based aquaponics systems built by students using IBC totes. The Turfgrass Field Laboratory has 12 species of irrigated cool and warm-season turfgrasses maintained at various mowing heights and levels of intensity. His doctoral work examined pesticide movement in row crop and turfgrass systems.