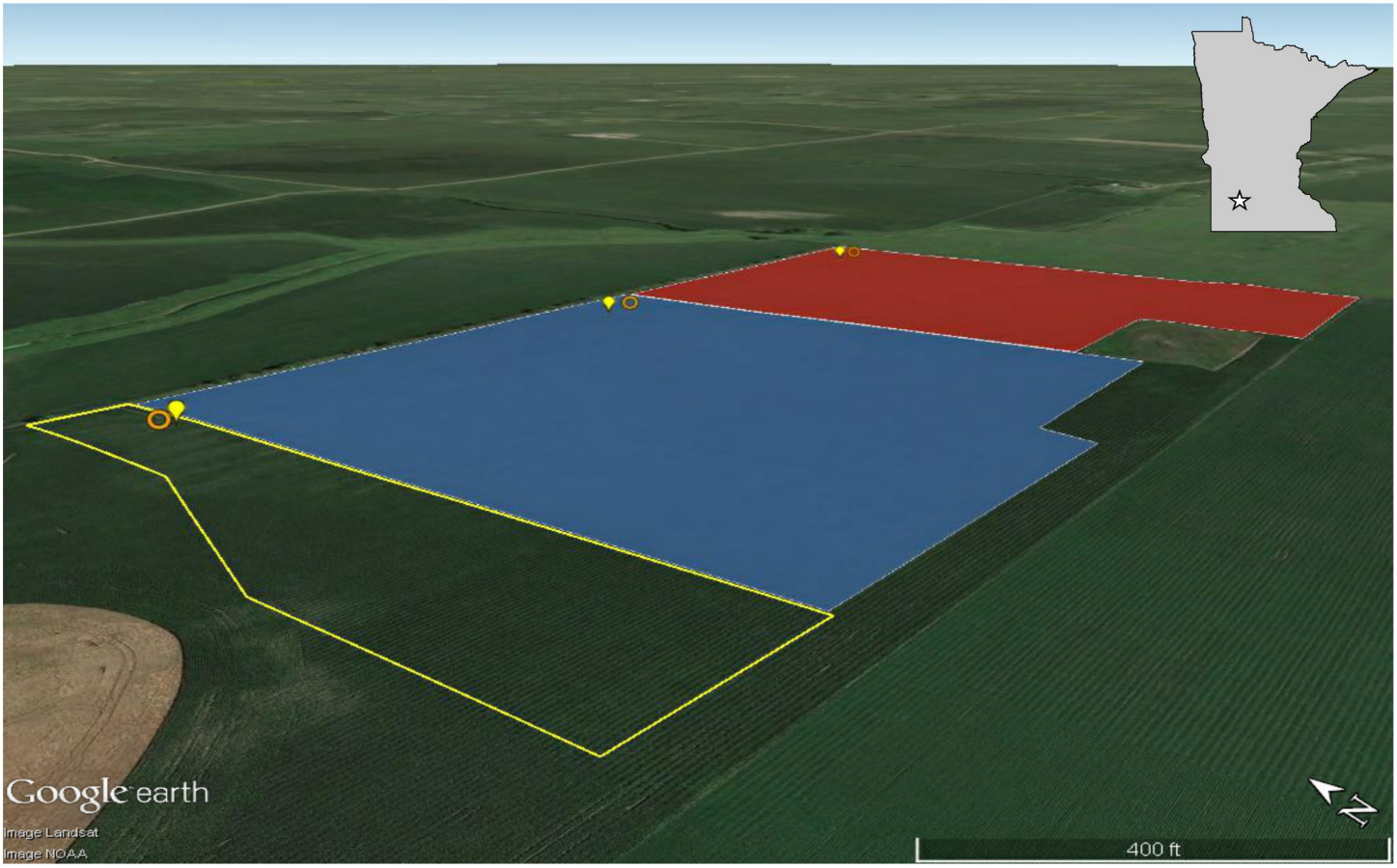
University of Minnesota

Site Name: Hicks Farm
Site ID: HICKS_B
Practice: Controlled Drainage



Non-drained | Conventional Drainage | Controlled Drainage | Soil Moisture Sensor | Greenhouse Gas Emission Sensor

Research Site Leader: Jeff Strock, University of Minnesota

SITE CHARACTERISTICS
- Drainage system installed in 2006
- Soil: Havelock clay loam
- Rotation: Continuous Corn

WATER MANAGEMENT PRACTICES
- Non-drained
- Conventional Drainage (depth 4')
- Controlled Drainage (depth 4')

SITE MEASUREMENTS (2006-2015; n= # of years)
- Tile Flow (n = 10)
- Tile Water Quality: Nitrate-N (n = 10)
- Water Table Depth (n = 1)
- Soil Texture (n = 1)
- Soil Bulk Density (n = 3)
- Soil Water Retention: 0, 0.05, 0.1, 0.33, 15 bar (n = 3)
- Soil Moisture and Temperature (n = 4)
- Soil Fertility: pH, Cation Exchange Capacity, Soil Organic Carbon, Total N (n = 3)
- Soil Nitrate (n = 4)
- Greenhouse Gas Emission: CO_2, CH_4, N_2O (n = 4)
- Crop Yield (n = 5)
- Final Plant Population (n = 5)
- Biomass: Vegetative, Grain, Cob (n = 5)
- Total N: Vegetative, Grain, Cob (n = 5)
- Total C: Vegetative, Grain, Cob (n = 5)
- Leaf Area Index (n = 1)
- On-Site Weather Station: Precipitation, Air Temperature, Relative Humidity, Solar Radiation, Wind Speed and Direction (n = 4)

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