

Automated In-Season Crop-Type Data Layer Mapping Without Ground Truth for the Conterminous United States Based on Multisource Satellite Imagery

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Abstract—Mapping nationwide in-season crop-type data is a significant and challenging task in agriculture remote sensing. The existing data product for U.S. crop-type planting, such as the Cropland Data Layer (CDL), falls short in facilitating near-real-time applications. This article designed a workflow aimed at automating the generation of in-season CDL-like products for USA. We methodically extracted trusted pixels as land

source of raw materials for various industries [1]. Consequently, the cultivation and yield of crops in USA significantly influence global food and energy security. Recognizing this, an in-season map detailing crop types across the entire country becomes essential, providing crucial insights into the location and extent of crops planted during the growing season. Simul-