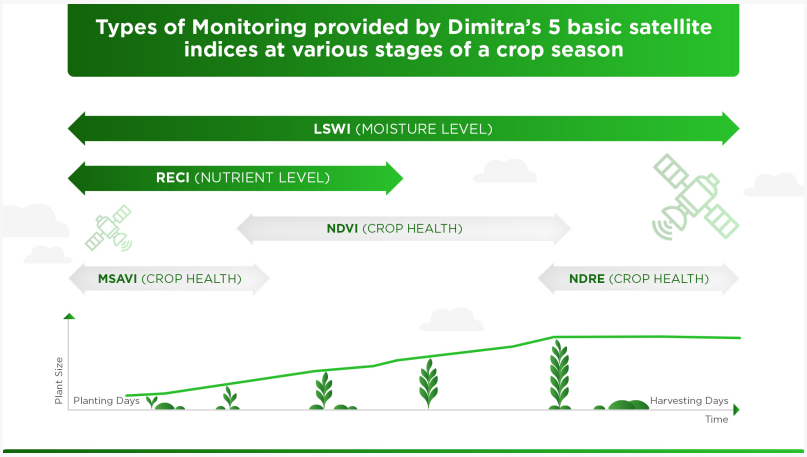
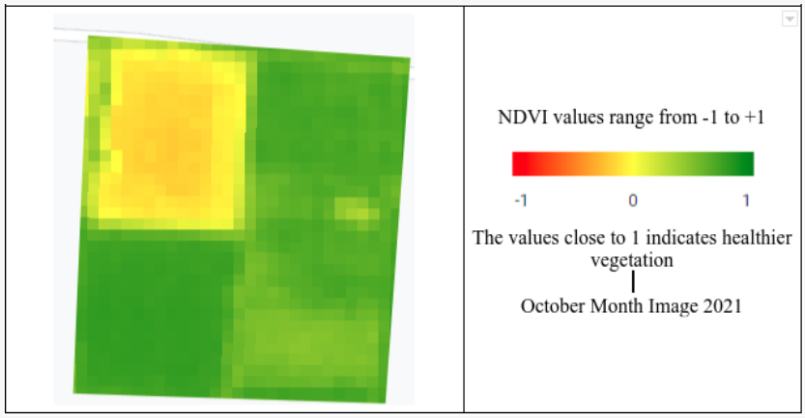
Dimitra releases new satellite reports to improve farming performance

Satellite imagery advances small farm productivity



Satellite reports provide value at different stages of crop growth cycle



NDVI satellite image, helps identify overall health of crops

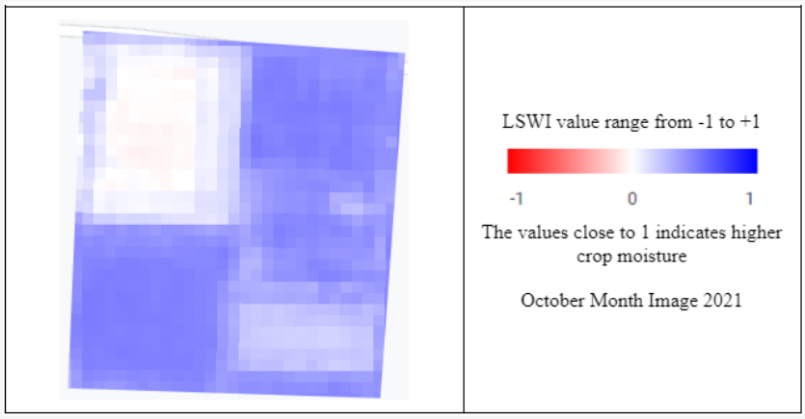
BELIZE CITY, BELIZE, August 25, 2022 /EINPresswire.com/ -- Dimitra Incorporated, a global Agtech company on a mission to make its technology available to small farmers globally, has developed and released five satellite reports that are included within the basic Connected Farmer platform. Each report plays a pivotal role in providing farmers with actionable data to increase yield, reduce expenses and mitigate risk.

Dimitra has been developing its technology aimed at helping farmers make better decisions to improve productivity, reduce environmental impact, store more carbon, and reduce fresh water usage while significantly increasing output.

One technology that Dimitra is using is satellite to allow for analysis and year-over-year comparisons. In the past year, we have established over 20 different reports that we provide to farmers. When a Dimitra farmer registers for the Connected Farmer app, they receive a core set of five satellite reports to get them started on using satellite for performance analysis.

Dimitra uses current and past data from some of the most advanced and reliable satellites, mainly Sentinel 1 and 2 from the European Space Agency, to perform various types of analyses on farms, forests, soils, and vegetation in general.

Dimitra's five basic satellite reports, described below, help farmers (farming anywhere in the world) detect the precise regions of their farms where they need to take action, such as applying fertilizers, performing irrigation at key stages of the season, spraying pesticides and herbicides and others depending on the results of the analyses. This helps farmers minimize their costs in labor and inputs as they only need to act on the precise regions where these actions are necessary.



Land Surface Water Index - indicates moisture levels in vegetation

Crop Health Index (NDVI - Normalized Difference Vegetation Index) - describes the difference between visible and near-infrared reflectance of vegetation cover. This report estimates the density of green on an area of land, which is proportional to the biomass and chlorophyll content, representing the crops' health.

Early Crop Health Index (MSAVI - Modified Soil Adjusted Vegetation Index) - is designed to mitigate soil effects on crop monitoring results. Since MSAVI is adjusted to soil effects and is sensitive to early vegetation in the field, it works even when the earth is hardly covered with crops.

Mature Crop Health Index (NDRE - Normalized difference red edge index) - measures the amount of chlorophyll in the plants. The NDRE is a mid-to-late growing season report we run when the plants are mature and ready to be harvested. At this point, other indices would be less effective to use. NDRE should be used to monitor crops that have reached the maturity stage.

Crop Moisture Index (LSWI - Land Surface Water Index) - detects moisture levels in vegetation using a combination of near-infrared (NIR) and short-wave infrared (SWIR) spectral bands. The LSWI is a reliable indicator of water stress in crops.

Crop Nutrient Index (RECI - Red-Edge Chlorophyll Index) - is responsive to chlorophyll content in leaves that is nourished by nitrogen and shows the photosynthetic activity of the canopy cover. RECI shows the photosynthetic activity of the canopy cover. Because chlorophyll content directly depends on nitrogen level in plants, responsible for their "greenness," this vegetation index in remote sensing helps detect areas with yellow or shed foliage.

If you'd like to know more about these reports and other machine learning and artificial intelligence opportunities at Dimitra, contact us at info@dimitra.io.

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