

This Figure is added as Supplementary Material to clarify the essential stages of this work.

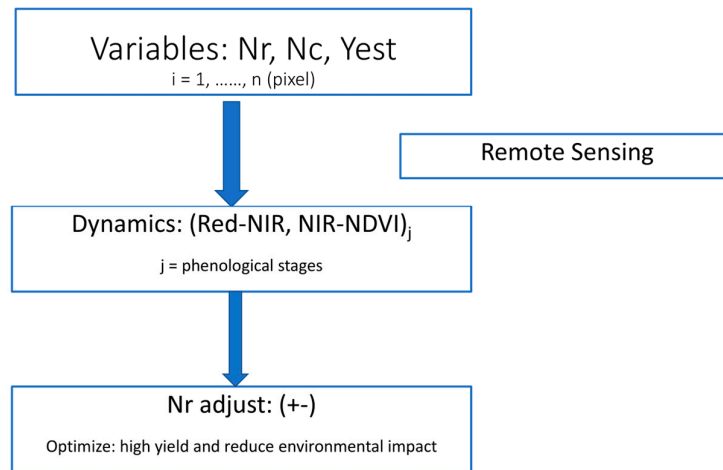


Figure S1. Analyzing the variability generated in each 10 x 10 m pixel with different nitrogen doses, plant nitrogen content, and yield estimates obtained through remote sensing makes it possible to identify behavioral dynamics between red-NIR and NIR-NDVI. These dynamics allow for monitoring rice crops at various phenological stages, enabling nitrogen dose adjustments to maximize yield and minimize environmental impact.

This Figure is added as Supplementary Material to clarify the location indicated in section 2 (Materials and Methods)

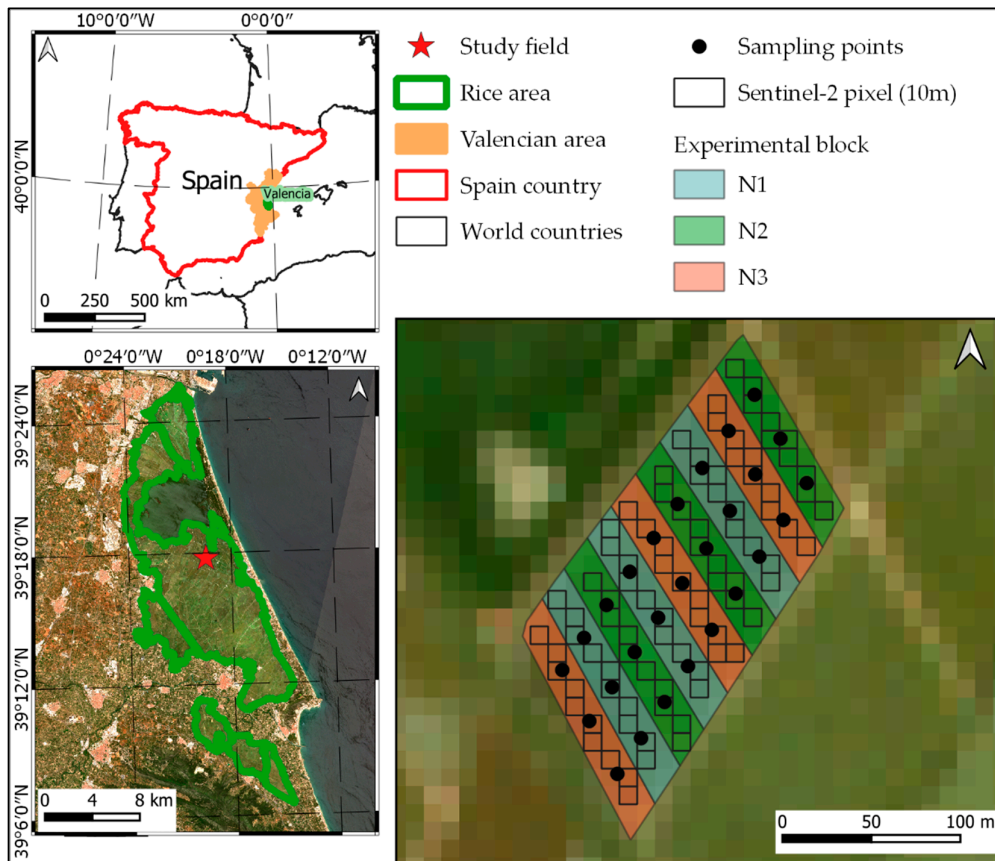


Figure S2. The study field is located in Albufera Natural Park wetland, N39°16'59.99"; W0°22'0.01", in the coastal region of Valencia (Spain). Rice area: The JSendra cultivar was used in this experiment. Three N doses were tested: 120 kg N·ha⁻¹ (N1), 170 kg N·ha⁻¹ (N2), and 220 kg N·ha⁻¹ (N3). The experimental plot is large enough to study remote sensing indicators while keeping soil conditions, climatic variables, and management of irrigation water requirements, as well as other agronomic management variables, under control. Only the N dosage has been modified. The type of experimental design defines the blocks and replications. The control points of the agronomic and remote sensing indicators are conditioned to the experiment's randomness to avoid influence from uncontrolled conditions.

This Table is added as Supplementary Material to clarify the Study of linear correlation between the spectral bands used in the paper and between the bands and NDVI.

Table S1. Study of linear correlation between the spectral bands used in the paper and between the bands and NDVI.

DAS	Coefficient of correlation (r)					
	REDvsNIR	REDvsGREEN	NIRvsGREEN	REDvsNDVI	NIRvsNDVI	GREENvsNDVI
Year 1 (2021)						
20	-0.28	0.80	0.10	-0.74	0.85	-0.37
45	-0.85	0.89	-0.80	-0.98	0.92	-0.89
55	-0.82	0.77	-0.82	-0.97	0.91	-0.83
85	-0.79	0.86	-0.77	-0.96	0.92	-0.86
110	-0.94	0.29	-0.11	-0.98	0.98	-0.18
125	-0.67	-0.08	0.70	-0.85	0.96	0.52
Year 2 (2022)						
20	0.81	0.96	0.89	-0.31	0.29	-0.12
45	-0.70	0.90	-0.64	-0.92	0.90	-0.83
55	-0.64	0.85	-0.56	-0.90	0.86	-0.77
85	0.07	0.69	0.42	-0.76	0.55	-0.28
110	0.26	0.94	0.35	-0.89	0.18	-0.78
125	0.08	0.91	0.17	-0.92	0.29	-0.80