

Figure S1. Fittings between measured and estimated production: a) Y(F) – applied fertilizers; b) Y(NPK-fd) – foliar diagnoses; c) Y(Chl) – physiological indices (Chl); d) Y(RGB) – color parameter RGB system; e) Y(HSB) – color parameter HSB system; f) Y(HSL) – color parameter HSL system; g) Y(Lab) – color parameter CIELab system; h) Y(CMK) – color parameter CMIK system; i) Y(rgb) – normalized values RGB system; j) Y(NDI) – normalized difference index; k) Y(INT) – intensity; l) Y(DGCI) – dark green color index.

1
2
3
4
5
6

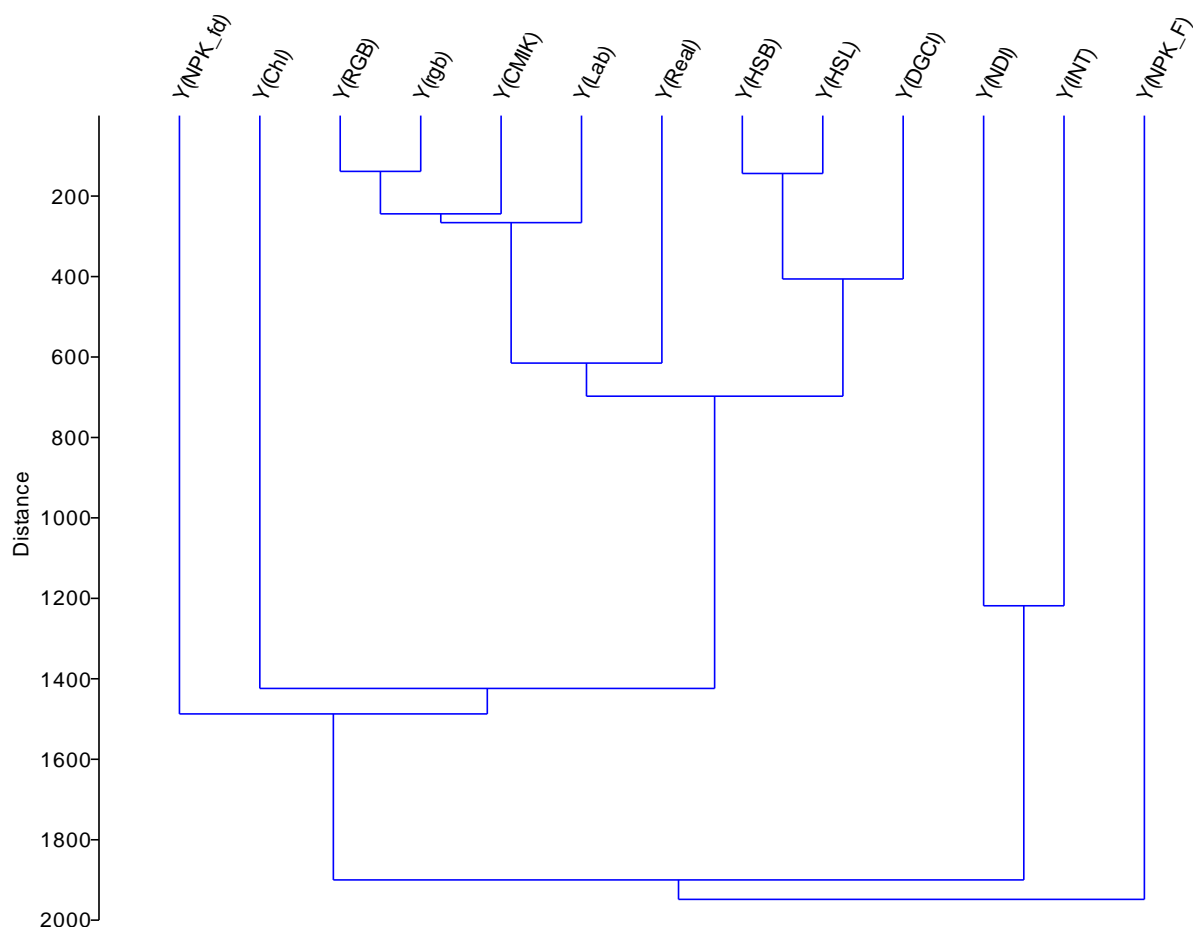


Figure S2. Dendrogram of the wheat production estimation models association, based on similarity according to the production values estimated on the experimental variants, and real production.

Table S1. Similarity and distance indices values to quantify the similarity level between the real production and the productions estimated by different models.

	Y (Re- al)	Y (NPK_F)	Y (NPK_fd)	Y (Chl)	Y (RGB)	Y (HSB)	Y (HSL)	Y (Lab)	Y (CMIK)	Y (rgb)	Y (NDI)	Y (INT)	Y (DGCI)
Y(Real)	0	1886	1269.3	1408	617.99	903.45	940.59	649.29	606.51	587.46	1772.6	2155.1	1017.4
Y(NPK_F)	1886	0	1500.5	2056.7	2063.6	1802.2	1786.6	2036	1999.8	2073.5	2434.6	1905.5	1832.2
Y(NPK_fd)	1269.3	1500.5	0	1644.3	1455.1	1476.1	1551.5	1471.1	1383	1433.2	1595.9	1711.5	1701.8
Y(Chl)	1408	2056.7	1644.3	0	1350.7	1431.9	1512.1	1248.5	1349.3	1442.7	1631.9	1754.6	1646.8
Y(RGB)	617.99	2063.6	1455.1	1350.7	0	539.98	602.89	195.9	224.53	138.47	1684.6	2065.6	748.11
Y(HSB)	903.45	1802.2	1476.1	1431.9	539.98	0	143.69	565.15	505.37	564.54	1855.9	1960.8	467.81
Y(HSL)	940.59	1786.6	1551.5	1512.1	602.89	143.69	0	626.01	575.7	625.01	1968	2044.2	343.86
Y(Lab)	649.29	2036	1471.1	1248.5	195.9	565.15	626.01	0	303.87	298.45	1691.8	2030.5	764.42
Y(CMIK)	606.51	1999.8	1383	1349.3	224.53	505.37	575.7	303.87	0	264.04	1733.5	2073.2	708.38
Y(rgb)	587.46	2073.5	1433.2	1442.7	138.47	564.54	625.01	298.45	264.04	0	1668	2078.1	775.93
Y(NDI)	1772.6	2434.6	1595.9	1631.9	1684.6	1855.9	1968	1691.8	1733.5	1668	0	1218.3	2226
Y-INT	2155.1	1905.5	1711.5	1754.6	2065.6	1960.8	2044.2	2030.5	2073.2	2078.1	1218.3	0	2297.8
Y-DGCI	1017.4	1832.2	1701.8	1646.8	748.11	467.81	343.86	764.42	708.38	775.93	2226	2297.8	0

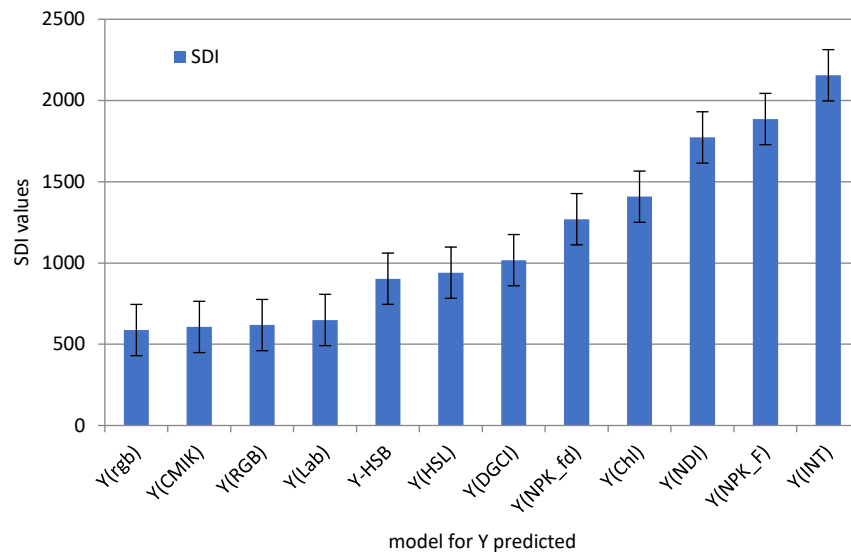


Figure S3. Graphic distribution of the SDI values, in relation to the production estimation models and real production (the lower DSI value is better).