

Table S1. Territorial variables description.**Altitude PG plots (masl)**

Average altitude (masl= meters above sea level) of all PG (permanent grassland) plots of the farms.

Altitude PG plots at ≤ 1 km (masl)

Average altitude (masl= meters above sea level) of all PG (permanent grassland) plots, within 1 km radius of the farm.

Altitude AL plots (masl)

Average altitude (masl= meters above sea level) of all AL (arable land) plots of the farms.

(A) Altitude AL plots at ≤ 1 km (masl)

Average altitude (masl= meters above sea level) of all AL (arable land) plots, within 1 km radius of the farm.

(A) Number of PG plots

Average number of PG (permanent grassland) plots on farms.

(A) Total PG area (ha)

Average total area of PG (permanent grassland) plots on farms.

(A)(B) PG area with slope $< 20\%$

Percentage of the PG (permanent grassland) with a slope of less than 20%. The higher this percentage, the smaller the area with a slope $> 20\%$ and, consequently, the more easily machinable this land will be.

(A) Distance from the PG plots to the farm (m)

Average distance of the PG (permanent grassland) plots from the farm.

(A) Number of PG patches

Average number of PG (permanent grassland) patches on the farm. A patch is a continuous GIS enclosure (continuous plots), so it is possible that there are several plots.

PG area on the total area (PG+AL) (%)

Percentage of PG (permanent grassland) area with respect total area (PG+AL) of the farm.

(A) Density of discontinuous patches

Division the number of PG (permanent grassland) patches (continuous GIS enclosure) by the total area (PG+AL) of the farm.

(A) Edge length of PG patches (m)

Average edge length (perimeter, in meters) of PG (permanent grassland) patches

(A)(B) Edge density (ED)

Result of the division of the average edge length (perimeter, in m) of the PG patches by the total area (PG+AL) of the farm.

(A) Landscape forms index

Relationship between average edge length (perimeter, in m) of the PG patches, divided by the length of a square with the same area. Values greater than 1 indicate bigger disintegration of patches and edge. In contrast, values near to 1 indicate patches with better geometric shape (square).

Largest PG patches index (%)

Percentage representing the largest of the PG patch in relation to the total area (PG+AL) of the farm.

(A) Average area of PG patches (ha)

Average area of the PG patches (ha)

(A)(B) Average value of the perimeter/area ratio for PG patches

Relationship between the perimeter and the area of PG patches. Smaller values are related with bigger plots.

Shape index mean value

Average value resulting from the normalised relationship perimeter/area of one PG patch, where the complexity of the shape is compared with the standard shape (square) of the same size. How much closer to 1 this ratio is, the plot will have a better geometrical shape.

(A)(B) Average value of the fractal dimension index

Average value that measure the complexity degree of a PG patch (1: little complex; 2: very complex).

Central core surface of PG patches over total area (PG + AL) (%)

Percentage ratio between the core area of PG patches with respect total area (PG+AL) of the farm.

(A) Aggregation index (AI)

Relationship, expressed in percentage, between the number of adjacencies of PG cells and the maximum possible number.

Landscape division index (%)

Percentage probability that two landscape places, chosen at random, do not correspond to the same PG patch. This index is better the lower it is.

(A) Number of PG plots, at ≤ 1 km, over total PG (%)

Percentage of PG plots number, within 1 km radius of the farm, with respect to the total number of PG plots on the farm. Higher values indicate that patches are close to the farm.

(A) PG area, at ≤ 1 km, over total PG (%)

Percentage of PG plots area, within 1 km radius of the farm, with respect to the total area of PG plots on the farm. Higher values indicate a greater PG area close to farm.

(A)(B) DSM variation (degree of surface mechanization)

Variation in the percentage of PG area, with a slope $< 20\%$ within a radius of 1 km of the farm, minus the percentage of PG total area of the farm, with a slope $< 20\%$. If the DSM is positive, it means that patches close to the farm have less slope, and for example, a better ability to mechanize them.

(A)(B) Variation of PG area over total area (PG + AL) (%)

Variation in the percentage of PG area over total area (PG+AL), within a radius of 1 km of the farm, minus the percentage of PG area over total area (PG+AL) of the farm. If the value is negative, it means that the closest plots are being worked.

(A)(B) PG area over total area (PG+AL) at ≤ 1 km (declared and not declared) (%)

Percentage of PG area over total area (PG+AL), within a radius of 1 km of the farm, in relation with total area (declared by the farm and not declared).

(A)(B) Area of PG patch (declared and not declared) at ≤ 1 km (ha)

Average area of PG patches (declared and not declared), within a radius of 1 km of the farm.

(A)(B) PG area (declared and not declared) over the total area at ≤ 1 km (%)

Percentage of PG area (declared and not declared) over total area (PG+AL), within a radius of 1 km of the farm.

(A)(B) PG area, declared milk at ≤ 1 km from de farm, over PG total area (declared and not declared) (%)

Percentage of PG area declared over PG area (declared and not declared), within a radius of 1 km of the farm. If the percentage increases, it means that dairy farms have a greater amount of area, and for example, they have more pressure on the land.

(A) PG area, declared milk at ≤ 1 km from de farm, over the total area (PG+AL) (%)

Percentage of average PG patches area declared by dairy farms, within a radius of 1 km of the farm, over total area of the farm (PG+AL).

(A)(B) Area of PG patch declared milk, at ≤ 1 km (ha)

Average area of PG patch declared by dairy farms, within a radius of 1 km of the farm.

(A)(B) PG area declared as milk over total area (PG + AL), at ≤ 1 km (%)

Percentage of PG area declared by dairy farms, over total area (PG+AL), within a radius of 1 km of the farm.

(B) PG area with category A soil (%)

Percentage of PG area included in category A (best soil quality). A higher value indicates better quality.

(A)(B) PG area with category E soil (%)

Percentage of PG area included in category E (worse soil quality). A higher value indicates worst quality.

(A)(B) Number of dairy farms at ≤ 1 km

Number of dairy farms located within a radius of 1 km of the farm.

(A)(B) Number of non-dairy farms at ≤ 1 km

Number of non-dairy farms located within a radius of 1 km of the farm

(A)(B) Number of non-livestock at ≤ 1 km

Number of non-livestock located within a radius of 1 km of the farm

(A)(B) AL area, not declared, at ≤ 1 km (ha)

Area AL, not declared, available within a radius of 1 km of the farm. It measures de real availability of land within a radius of 1 km of the farm.

(A)(B) PG area, not declared, at ≤ 1 km (ha)

Area PG, not declared, available within a radius of 1 km of the farm. It measures de real availability of permanent grasslands within a radius of 1 km of the farm.

AL area, declared milk, at ≤ 1 km (ha)

Area AL, declared milk, available within a radius of 1 km of the farm.

(A): statistically non-significant variables in Table 2. (B): statistically non-significant variables in Table 6