Height matters: The importance of topography for farming



Landscape is a crucial factor in the development of agriculture. It provides opportunities and constraints, shapes farming systems, and drives management practices. Yet landscape is also an immensely complex concept consisting of tightly interwoven physical, biological and sociological dimensions. Nevertheless, the relationship between farming and landscape can be well observed when broken down to single components. In this month's map we show the relationship between topography (visualised using 3D mapping and hillshades) and stocking density as a proxy for farming intensity. The map highlights the effect of elevation on stocking density with mountainous areas showing the lowest densities throughout the country. Of course, stocking density is influenced by other factors as well; the low density around Dublin for example represents the urban fabric, while areas in the east and south east have a higher prevalence of arable farming, also influencing stocking density.

Projection: Irish National Grid

Datasets used:

Green, S., Cawkwell, F. and Dwyer, E., 2016. Cattle stocking rates estimated in temperate intensive grasslands with a spring growth model derived from MODIS NDVI time-series. International Journal of Applied Earth Observation and Geoinformation, 52, pp.166-174. NASA Shuttle Radar Topography Mission EPA Waterbodies data

Jesko Zimmermann Agri-Food Business and Spatial Analysis