Abiotic: soil properties (soil components, pH, physicochemical and biological properties), and climatic stresses (drought, cold, flood, heat stress, etc.)

Biotic: beneficial organisms (pollinators, decomposers, and natural enemies), pests (arthropods, pathogens, weeds, vertebrate pests) and anthropogenic evolution.

Humidity, rainfall: Moisture or drought stress accounts for about 30–70% loss of productivity of field crops during crop growth period

<http://arccarticles.s3.amazonaws.com/arcc/final-pdf-attachemnt-QJEF9Kah.pdf>

temperatures: Heat stress contributed about 40% to overall yield loss of wheat [22], 1.0–1.7% yield loss per day in maize for every raise in temperature above 30°C [23]

soil property: micronutrients (Fe, B, Cl, Mn, Zn, Cu, Mo, Ni) and macronutrients (N, P, K, Ca, S, Mg, C, O, H) that are needed for plant growth. The lack of these nutrients in the soil causes deficiencies in plants, and their excess leads to toxicities, which have negative impacts on crop yields.

<https://www.researchgate.net/publication/271005299_Soil_fertility_and_its_significance_to_crop_productivity_and_sustainability_in_typical_agroecosystem_A_summary_of_long-term_fertilizer_experiments_in_China>

This paper didn’t list how each factor exactly affect the crops. But gave a bunch of experiment data that allows us to calculate the fertility quality.

Ph: Low soil pH increases as a result of release of acidifying aluminum, iron and manganese ions, leaching of base ions such as calcium, magnesium, potassium and sodium, decomposition of soil organic matter and regeneration of organic acids, nitrification of ammonia-based fertilizers as well as land management prac-tices. Low soil pH significantly affects crop growth and therefore decreases yield. In maize for instance, soil acidity causes yield loss of up to 69%.

Tandzi NL, Mutengwa CS, Ngonkeu ELM, Gracen V.Breeding maize for tolerance to acidic soils: A review. Agronomy. 2018;(84):2-21. DOI: 10.3390/agronomy8060084

After reading the paper and it’s relevant reference paper. Overall, I think those papers doesn’t provide us too much accurate information on the percent level.