

## **Health assessment of wheat agroecosystems**

Hossein Kazemi<sup>1</sup>, Maral Neyazmoradi<sup>1</sup>, Javid Gherekhloo<sup>1</sup>, Afshin Soltani<sup>1</sup> and Behnam Kamkar<sup>2</sup>

<sup>1</sup>University of Agricultural Sciences and Natural Resources, Iran

<sup>2</sup>Ferdowsi University of Mashhad, Iran

This research was conducted in order to health assessment of wheat agroecosystems in Bandar-e-Torkeman county, north of Iran, during 2018-2019. In this study, we used some parameters such as weed biodiversity index, Environmental Impact Quotient of Pesticide (EIQ), soil microbial respiration, soil organic carbon, soil organic matter, abundance of earthworms, soil pH and EC, and grain yield. Data were collected through field measurements from 59 wheat fields, and preparation of questionnaires. Then, this information was moved to geographic information system (GIS) software and thematic layers were overlaid and final map was prepared in two classes, healthy and unhealthy. The results showed that unhealthy fields were distributed and mostly located in the central parts of the county. The characteristics of this class included the use of high amounts of pesticides and the consumption of dangerous poisons, high diversity of weeds species, low grain yield, unsuitable values of soil pH and EC, low percentage of organic carbon and organic matter, and absence of earthworms.

### **Biography**

I am Hossein Kazemi, PhD in agroecology, from Iran. I am working as an associate professor in department of agronomy, Gorgan University of Agricultural Sciences and Natural Resources (GUASNR), in Gorgan city, Iran. I have been supervising projects on assessment of agroecosystems by GIS and RS techniques, ecosystem services assessment and sustainable agriculture systems. I have around 11 years' experience of teaching and research in different universities of Iran and cooperation with different national/ international journals as editor, reviewer and author.

---

**Received:** July 06, 2022; **Accepted:** July 09, 2022; **Published:** August 08, 2022

---