

Scientists develops environmental indicators for agroecological production in Goiás

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Researchers from Embrapa and the Goiana Agency for Technical Assistance, Rural Extension and Agricultural Research (Emater Goiás) developed a method to measure the impacts of family farm activities on the environment. The work proposes indicators to verify the dynamics, changes and balance of the agroecological-based production system, with the aim of generating better results for agriculture and the ecosystem.

The work was conducted in partnership with family farmers linked to the Association of Agroecological Producers of Anápolis and Region (Aproar), located in the municipality of Anápolis (GO). All participants carry out activities following agroecological precepts, production linked to the conservation and regeneration of the diversity of plant, insect and animal species and natural resources (water and soil).

The work is based on ten environmental indicators aimed at measuring soil quality and another ten to measure crop health. These indicators consist of attributes, characteristics that can be observed, which consider the entire extent of each rural unit and not just the productive activity.

For each indicator, there was an evaluation with scores on a scale of zero to ten. For example, in relation to soil quality, notes were applied to measure its compaction, its microbiological activity, the presence of erosion and invertebrate organisms (insects, spiders, earthworms, etc.). In the case of crop health, the issues considered involved the natural vegetation

surrounding the crops, the abundance and diversity of natural enemies of pests, the incidence of diseases, among others.

According to one of the work coordinators, Embrapa Arroz e Feijão (GO) researcher Agostinho Didonet, the environmental indicators were established considering the farmer's management practices and coexistence with local resources, always bearing in mind the already existing agroecological principles. incorporated by rural properties. Also according to Didonet, the proposition of indicators that express and quantify environmental sustainability was determined, through a participatory methodology that combined technical knowledge with that of farmers, based on the leveling of concepts and in order to measure the management practices that most influence on the quality of crops.

The objective was to help farmers recognize the types of management that most influence the quality of their crops and identify the agroecological practices most appropriate to the conditions of the agroecosystem, which can bring improvements in environmental sustainability and production.