CLAIMS

1. Use of nanoparticulate compound of titanium dioxide functionalized with functional organic groups, inorganic radicals and fruit and/or herbal extracts adsorbed on its surface and pores, wherein said nanoparticulate compound is mixed with water and with at least another material to produce liquid aqueous compositions with a wide microbial application having different uses and purposes, wherein said compound is used as bio-pesticide and post-harvest for eliminating the source of contamination or sterilizing/disinfecting seeds.

2. The use of the nanoparticulate compound of titanium dioxide functionalized according to claim 1, wherein said nanoparticulate compound is used in plantations and crops, wherein through foliar and systemic application incidences of fungi, bacteria and/or viruses are reduced in the crops; preferably wherein said nanoparticulate compound is used in fruits, green vegetables, perennial pastures, forests, leguminous plants crops and in fruticulture such as papaya, cacao, apple, mango, onion, vanilla, avocado, citrus fruits, chili pepper, corn, coffee, sorghum, alfalfa, pumpkin, potato, exotic woods, walnut trees, cedars, bean, chickpea and crops of roses, orchids, tulips and carnations, among others.

3. The use of the nanoparticulate compound of titanium dioxide functionalized according to any of claims 1 or 2, wherein said nanoparticulate compound is used directly or dosed in emulsions or solutions in an effective quantity going from 0.8 wt% to 30 wt%; additionally, the use comprises of adding an ionic surface-active agent in a quantity of up to 4 wt% and an organic or inorganic foliar adherent in a quantity of up to 6 wt%, which allows the nanoparticulate compound of titanium dioxide functionalized to remain adhered to the plants leaves and to extend its effect; preferably wherein the nanoparticulate compound is present in an effective quantity from 0.8 wt% to 15 wt%.

4. The use of the nanoparticulate compound of titanium dioxide functionalized according to claims 1 or 2, wherein the nanoparticulate compound is present in an oily formulation in an effective quantity going from 70 wt% to 90 wt%.

5. The use of the nanoparticulate compound of titanium dioxide functionalized according to claim 3, wherein the organic foliar adherent is a resin or a polymer.

6. The use of the nanoparticulate compound of titanium dioxide functionalized according to claim 3, wherein the inorganic foliar adherent is an acrylate.