

1. Record Nr.	UNINA9910350338203321
Titolo	Agricultural Implications of the Fukushima Nuclear Accident (III) [[electronic resource]] : After 7 Years // edited by Tomoko M. Nakanishi, Martin O`Brien, Keitaro Tanoi
Pubbl/distr/stampa	Singapore, : Springer Nature, 2019 Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-3218-5
Edizione	[First edition 2019.]
Descrizione fisica	1 online resource (XI, 248 pages 133 illustrations, 79 illustrations in color.)
Disciplina	363.7
Soggetti	Radiation protection Radiation - Safety measures Pollution Agriculture Forestry Animal physiology Environmental monitoring Effects of Radiation/Radiation Protection Pollution, general Animal Physiology Monitoring/Environmental Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	An Overview of Our Research -- Transfer of Radiocesium to Rice in Contaminated Paddy Fields -- Cesium Translocation in Rice -- Absorption of radioceasium in soybean -- An observational study of pigs exposed to radiation -- A Composting System to Decompose Radiocesium Contaminated Baled Grass Silage -- Weathered Biotite: A Key Material of Radioactive Contamination in Fukushima -- Radiocesium accumulation in koshiabura (Eleutherococcus sciadophylloides) and other wild vegetables and in Fukushima Prefecture -- The Transition of Radiocesium in Peach Trees After the

Fukushima Nuclear Accident -- Application of the Artificial Annual Environmental Cycle and Dormancy-induced Suppression of Cesium Uptake in Poplar -- Radiocesium Contamination in Forests and the Current Situation of Growing Oak Trees for Mushroom Logs -- Radiocesium Dynamics in Wild Mushrooms During the First Five Years After the Fukushima Accident -- The Spatial Distribution of Radiocesium Over a Four-year Period in a Forest Ecosystem in North Fukushima After the Nuclear Power Station Accident -- Parallel Measurement of Ambient and Individual External Radiation in Iitate Village, Fukushima -- Mobility of Fallout Radiocesium Depending on the Land Use in Kasumigaura Basin -- Challenges of Agricultural Land Remediation and Renewal of Agriculture in Iitate Village by a Collaboration Between Researchers and a Non-profit Organization -- Radiocesium Contamination on a University Campus and in Forests in Kashiwa City, Chiba Prefecture, a Suburb of Metropolitan Tokyo -- The State of Fisheries and Marine Species in Fukushima: Six Years After the 2011 Disaster -- Visualization of Ion Transport in Plants -- ^{90}Sr analysis using inductively coupled plasma mass spectrometry with split-flow injection and online solid-phase extraction for multiple concentration and separation steps.

Sommario/riassunto

This open access book presents the findings from on-site research into radioactive cesium contamination in various agricultural systems affected by the Fukushima Daiichi Nuclear Power Plant accident in March 2011. This third volume in the series reports on studies undertaken at contaminated sites such as farmland, forests, and marine and freshwater environments, with a particular focus on livestock, wild plants and mushrooms, crops, and marine products in those environments. It also provides additional data collected in the subsequent years to show how the radioactivity levels in agricultural products and their growing environments have changed with time and the route by which radioactive materials entered agricultural products as well as their movement between different components (e.g., soil, water, and trees) within an environmental system (e.g., forests). The book covers various topics, including radioactivity testing of food products; decontamination trials for rice and livestock production; the state of contamination in trees, mushrooms, and timber; the dynamics of radioactivity distribution in paddy fields and upland forests; damage incurred by the forestry and fishery industries; and the change in consumers' attitudes. Chapter 19 introduces a real-time radioisotope imaging system, a pioneering technique to visualize the movement of cesium in soil and in plants. This is the only book to provide systematic data on the actual change of radioactivity, and as such is of great value to all researchers who wish to understand the effect of radioactive fallout on agriculture. In addition, it helps the general public to better understand the issues of radio-contamination in the environment. The project is ongoing; the research groups from the Graduate School of Agricultural and Life Sciences of The University of Tokyo continue their work in the field to further evaluate the long-term effects of the Fukushima accident.
