



## **Hazard map of agricultural products due to typhoons-an example of Bok-choy**

Yong-Jun Lin (1), Kuo-Chen Ma (1), Jih-Sung Lai (1,2,3), Tsang-Jung Chang (1,2,3), Yih-Chi Tan (1,2,3)

(1) Center for Weather Climate and Disaster Research, National Taiwan University, Taipei, Taiwan (vovman@gmail.com), (2) Department of Bioenvironmental Systems Engineering, National Taiwan University, Taipei, Taiwan, (3) Hydro-tech Institute, National Taiwan University, Taipei, Taiwan

The torrential rain and strong wind brought by typhoons usually cause huge damages to agricultural products. This study aims at hazard map of agricultural products due to typhoons. The factors affecting the hazard of agricultural products due to typhoons include the duration of flooding, flooding depth, wind speed, and rainfall intensity. High rainfall intensity and high wind speed may knock down the leaves or fruits of the plants. The long-duration of flooding or high flooding depth may chock the plant or rotten the roots.

In order to get the information needed for making hazard map due to assumed scenarios, an overland flow simulations is performed for getting the duration of flooding and maximum flooding in the study area. The data of wind speed is obtained from metrological stations. Four levels of hazard are defined due to the characteristic of the chosen agricultural products- Bok-choy (such average height of mature Bok-choy). The final goal of this study is to establish a real-time hazard evaluation system for the specific agricultural products.