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## Japanese consumer valuation of agricultural working conditions 共生基盤学専攻 共生農業資源経済学講座 農業環境政策学 胡 林軒

Agriculture is one of the most hazardous industries, characterized by injuries involving machinery (e.g., Kumar et al., 2000; Douphrate et al., 2009; Akdur et al., 2010; Robert et al., 2015), animals (e.g., Fox et al., 2015; Weaver et al., 2017; Tosswill et al., 2018), pesticides (e.g., Loewenherz et al., 1997; Curl et al., 2002) and other chemicals (e.g., Jeyaratnam et al., 1987; Calvert et al., 2008; Zeljezic et al., 2015; Munoz-Quezada et al., 2018), weather, and others (McCurdy and Carroll, 2000). In addition to these health and safety problems, workers in agriculture are also suffering from human rights violations. Due to the large demand for cheap unskilled workers, the agriculture sector is a major destination for victims of human trafficking (Cavalieri, 2000; Buckland, 2008; Kumar, 2013; Lockwood, 2018).

Compared with the impact of agriculture on the natural environment, limited attention has been paid to the working conditions of agricultural workers. Consumers are willing to pay a premium on agricultural products to express their concerns and reduce the associated environmental impact. However, it remains to be seen whether consumers are prepared to do the same to improve the working conditions of agricultural workers.

In this study, we focus on consumer valuation of agricultural working conditions. We anticipate that consumers' valuation of agricultural working conditions, and how the valuation changes, can be answered by the following four research questions: (1) To what extent are consumers concerned about relative agricultural working conditions when purchasing foods?; (2) If consumers are given information about agricultural working conditions, how will the concerns of consumers change?; (3) Do consumers' concerns about domestic agricultural working conditions differ from their concerns about foreign agricultural working conditions?; and (4) What kinds of people tend to care about agricultural working conditions?

We investigate consumer valuation of agricultural working conditions using a best-worst scaling (BWS) analysis, plus a labeled discrete choice experiment (DCE). A total of 1032 respondents living in the Tokyo metropolitan area answered our questionnaires online. They were asked to answer the questions in the context of purchasing beef. Before the BWS analysis and DCE, half of the respondents were given information on agricultural working conditions, whereas the other half were not; this is referred to as information treatment.

The results revealed that (1) among the seven food attributes listed, consumers are least concerned about agricultural working conditions when making their purchasing decisions; (2) if consumers are informed about agricultural working conditions, their concerns increase, but are still the least important of the food attributes; (3) Japanese consumers are concerned more about domestic than about foreign agricultural working conditions; and (4) older people with higher education levels and greater altruism are more concerned about domestic agricultural working conditions, whereas younger people are more concerned about foreign agricultural working conditions.