Farmers are creative, and continuously modifying and accumulating knowledge. Their recent experience improved their knowledge repertoire, learned from the individual experience, and the local history of crop farming. On the basis of the new understanding and belief, farmers will find the most promising and sustainable strategies in crop farming, e.g. planting and producing the more sustainable crop varieties. The farmers’ considerations include the strategies of not only obtaining high productivity, but also yield sustainability, in particular, after experiencing continuous pest and disease infestations during the Green Revolution era. After learning from the IPM program introduced to the farmers in some provinces in Indonesia in the early 1990s, their recent understanding of avoiding pest and disease improved.

The paper will describe the cases of farmers on the north coast of West Java and Central Lampung in managing crop biodiversity in paddy and soybean farming. On the north coast of West Java, the farmers were continuously practicing to plant new rice strands, with the results of diverse rice varieties planted in each season, despite the ‘recommended uniform’ strategy of rice farming by the government. In Central Lampung, after experiencing repetitive failures in planting soybean, in particular after the introduction of a ‘soybean crash program’ by the government a decade ago, the farmers were able to improve and develop the various strands of soybean varieties in order to produce the ‘free-pesticide-soybean’ crops in a sustainable manner. The examination will take into account: farmers’ learning experience in planting rice and soybean, and the ways they evaluate and improve knowledge and practices.