



# Essential elements of product market combinations: continuous product supply

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### Product market combinations

**A product market combination (PMC) is a pilot implemented with partners in the supply chain, including small farmers (with holdings of less than two hectares), who produce vegetables in a coordinated way and according to specific market demands. PMCs contain improvements and innovations in terms of aspects such as varieties, marketing concept, packaging materials, branding and supply chain configuration. Supply chain partners make arrangements to improve existing market connections or create new market opportunities. PMCs are considered as a 'proof of concept' which shows that innovations and cooperation in market-oriented supply chains can potentially benefit all supply chain partners and small farmers in particular.**

Indonesian farmers usually decide on what and when to grow a vegetable crop based on the advice of relatives and neighbours, weather and market prices. Once they make a decision, they normally cultivate their entire plot with this crop. When the product is ready to be harvested, they start thinking about where and to whom to market their products. This traditional system results in periods of over and undersupply of vegetables and heavily fluctuating farm gate prices.

The retail sector in Indonesia is rapidly changing and modernising. Indonesians increasingly no longer buy their daily vegetables at traditional wet markets, but prefer supermarkets to buy their daily vegetables, especially in cities. This offers new opportunities as well as challenges for small, local farmers.

Demands from supermarkets are different from those of traditional retail channels. Modern supermarkets require a continuous supply of high quality and uniform vegetables because they want to offer their customers a stable choice. In order to provide such a continuous supply, producers need to work with planting schedules.



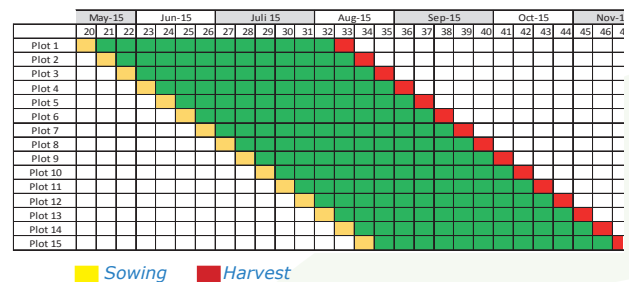
"Small Indonesian farmers with limited land and finances need to work together to be able to establish continuous supply."

### Anticipated vegetable production and supply

There is no guarantee that a planting schedule will automatically result in continuous supply. Vegetable production is affected by factors such as weather and pests and diseases. These factors influence the product quality and the first harvest date, but also the harvest frequency and yield distribution of crops such as tomato that are harvested multiple times during one planting round. To prevent problems in the supply chain, producers need to regularly generate updated supply predictions for the period ahead. Transparent and effective communication among supply chain actors is key for the creation of sustainable supply chain relations.

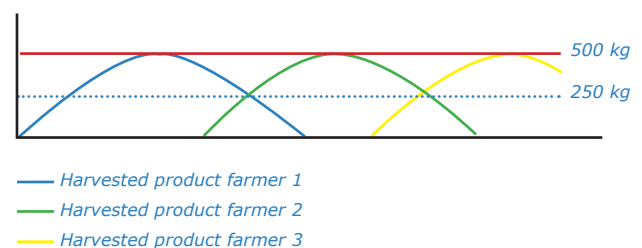
### Planting schedule for single-harvest vegetables

In an effective planting schedule for single-harvest vegetables such as broccoli and shallots, production starts on a regular (weekly) basis and planting is conducted in a staggered schedule. In this way products can also be harvested on a weekly basis.



### Planting schedule for multiple-harvest vegetables

With vegetable crops that are harvested multiple times from a single planting, yield increases over time until a peak is reached, after which yields gradually decrease. To achieve a continuous, regular supply, plantings need to be scheduled so that the first harvest of the most recent planting coincides with the peak harvest of the previous planting. In theory, the increasing yield of the last vegetables planting should compensate for the decreasing yields of the earlier plantings.



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Improved vegetable production and marketing for small farmers to increase food security and to promote private sector development in Indonesia | [www.vegimpact.com](http://www.vegimpact.com)  
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