

# A first for Timor-Leste and WorldVeg



**World Vegetable Center**

*Bred by the World Vegetable Center, 'Lakateu-AV' and 'Kiukae-AV' are the first mungbean varieties released in Timor-Leste—and also the first WorldVeg vegetable varieties in the country.*

As one of the world's newest countries, Timor-Leste (East Timor) has been working since its independence in 1999 to create institutional structures to foster national growth and development.

The Seeds of Life (SoL) program in the Ministry of Agriculture and Fisheries (MAF) was one such initiative. Funded by the Australian Government, SoL was established in 2000 to identify productive crop varieties suited to local conditions. It became the foundation for a national seed system to provide farmers across the country with access to improved seed.



***Dull but delicious: 'Lakateu-AV' is known as 'Merpati' in Indonesia, where it was released in 1991. Consumers prefer to use the dull-colored seed of 'Lakateu-AV' for porridge and other dishes.***

In 2016, SoL added seven new food crop varieties to the national seed portfolio, including 'Lakateu-AV' and 'Kiukae-AV'—the first mungbean varieties released in Timor-Leste, and also the first World Vegetable Center-bred vegetable varieties in the country.

Mungbean (*Vigna radiata*), a tropical legume with 23% protein content, is an important source of this vital nutrient in places where meat and dairy products are expensive or in short supply, such as in Timor-Leste. The country struggles with malnutrition; it has the third worst level of stunting in the world (WHO, 2013), and half of children under the age of 5 are below normal height (UNICEF, 2013).

To help address protein deficiencies among its people, MAF obtained eight mungbean varieties for evaluation from the WorldVeg genebank. The WorldVeg genebank holdings—the world's largest public collection of vegetable seed—include an extensive collection of mungbean (6,746 accessions). The Center has conducted research on mungbean since 1973.

Each of the eight varieties passed through a rigorous evaluation process. They were compared with other local and imported material in replicated trials conducted at research stations. The best candidates were then grown in farmers' fields following farmers' practices. Finally, consumers sampled the beans, grading for taste, color and other preferred qualities. The rigor ensured the released varieties were selected from the best material available worldwide.

'Lakateu-AV' and 'Kiukae-AV' are named after native birds in Timor-Leste.

The seed coat of 'Lakateu-AV' resembles the color of the feathers of *Lakateu*, a local turtledove. 'Lakateu-AV' was selected for its good performance and high yield. It is a short-duration (58 days) mungbean that matures evenly, so a crop can be harvested all at once. 'Lakateu-AV' has a dull seed coat—a prized characteristic for making mungbean porridge. Its parentage includes WorldVeg line VC1973A, one of the very first improved mungbean varieties developed.

*Kiukae* is the local name for a quail that lives on the ground and suddenly flies away when disturbed; it's an apt name for a short-duration mungbean variety quick to flower and mature. 'Kiukae-AV' was recommended for its excellent adaptation to the climate, consistent performance during trials, and farmer preference. The seed coat is bright green.

Both 'Lakateu-AV' and 'Kiukae-AV' are open-pollinated varieties, which means farmers can save their own seed to plant in successive seasons.

Although the Seeds of Life program ended in June 2016, it contributed to a greatly expanded seed system in the country. Through SoL's efforts, sufficient high quality seed is now available for multiplication on a commercial scale, and mungbean from the World Vegetable Center is helping to alleviate hunger, food insecurity, and poverty in Timor-Leste.