

PRISMA



Australian Government



Breakthrough  
outcomes

Kisah PRISMA  
tentang perubahan  
sistemik

# Dari nol, menjadi pahlawan

Pembentukan sektor kacang hijau komersial di Indonesia

11 Februari 2022

*Dalam lima tahun PRISMA telah mendirikan pasar komersial baru kacang hijau, yang meningkatkan pendapatan petani.*

Kacang hijau memainkan peran penting bagi keluarga petani kecil di Indonesia meskipun dianggap sebagai tanaman sekunder dibandingkan dengan padi dan jagung. Tanaman ini juga menghasilkan manfaat tiga kali lipat pendapatan tambahan bagi rumah tangga miskin, menjadi makanan kaya nutrisi yang terjangkau, dan meningkatkan kesuburan tanah.

Sebagian besar rumah tangga petani yang menanam kacang hijau tergolong miskin, dengan sekitar 39 persen berada di bawah garis kemiskinan \$2,5 per hari (PPP) dan 58% di bawah \$5,5 PPP. Konsumsi kacang hijau dalam negeri meningkat 3,5 persen per tahun. Namun, masih ada kesenjangan produksi sebesar 22 persen antara penawaran dan permintaan karena hasil panen yang buruk.

## Produktivitas dan pendapatan rendah karena kurangnya benih berkualitas

Ketika PRISMA mulai di sektor kacang hijau pada tahun 2016, petani menggunakan benih simpanan atau benih dari panen sebelumnya, untuk menanam tanaman selanjutnya. Namun, hal tersebut mengurangi produktivitas secara signifikan dari potensi 2,5 ton per hektar menjadi 0,8 ton per hektar.

Lembaga penelitian milik pemerintah, Balitkabi, telah merilis varietas kacang hijau unggul baru (seri VIMA) pada tahun 2013. Meskipun varietas ini milik publik, produsen benih tidak menyadarinya atau tidak yakin akan potensinya, sehingga varietas tersebut tidak dikembangkan untuk produksi. Karena benih tanaman ini tidak tersedia untuk petani secara komersial, PRISMA melihat peluang untuk mengubah sektor ini menjadi lebih baik.

## Strategi perubahan sistemik PRISMA

Melalui perhitungan dan analisis bisnis yang terperinci, jelas bahwa kegagalan pasar ada di sisi penawaran. Elemen kunci dari strategi untuk mengatasi situasi ini adalah sebagai berikut. Pertama, PRISMA perlu meyakinkan perusahaan benih bahwa ada pasar yang layak untuk benih kacang hijau. Kedua, perlu memengaruhi Balitkabi

untuk menciptakan varietas benih yang sesuai dan membuatnya tersedia secara komersial bagi perusahaan benih yang berminat. Terakhir, PRISMA perlu membujuk perusahaan benih untuk memasarkan benih ini kepada petani kacang hijau dengan tambahan layanan praktik pertanian yang baik untuk memastikan peningkatan produktivitas.



# Systemic changes so far

Starting from a zero position in five years, ten percent of the mung bean market is now using certified seed instead of retained seed. This is highly significant when we are talking about making a permanent change to a market system. According to innovation diffusion theory (see figure 3), this means that the sector is well on the way to capturing the 'early majority' of farmers with certified seed. If more seed producers continue to enter the market, then the sector is expected to achieve scale.

Innovation diffusion describes a process by which the state of a group or society moves from one equilibrium to another. Over the decades it has been used in agriculture to measure the degree to which a change (either behaviour or technological) is likely to become permanent. There is a lot of debate on diffusionism, but it is a useful indicator that can be used by sector teams to benchmark progress towards a permanent state of change.

Another significant sign is that large companies in food production such as Nestle and PT Terasindo, have

started to source local mung bean grown using certified seed instead of importing. Both companies state that the quality of the mung bean from certified seed meets their requirement in terms of quality and uniformity. Two export companies<sup>5</sup> have also expressed an interest in exporting mung bean grown by farmers using certified seed. The significance of these changes is that both the supply and demand sides of the market are responding positively. It means farmers who grow mung bean using certified seed have a market to sell to.

In terms of the impact of these changes on smallholder farmers, the use of certified seed has increased 24,211 farming households' mung bean productivity by 0.3 tonnes per hectare. While this doesn't sound like much, for an intermittently planted crop this is significant. The important point is that farmers are now planting mung bean for commercial purposes, rather than family consumption. This increased productivity has resulted in an average income increase of 47 percent for these poor farming households.

## Next steps

To increase scale, PRISMA will broker some more partnerships, and these are already in the pipeline. Improving the sector's resilience will require a greater number of parent seed varieties available and from a range of sources. EWINDO and CV Semi have already started to do this, and a further five partnerships are in the pipeline. PRISMA is also exploring strengthening the regulatory system with the Regional Seed Agency to facilitate easier parent seed propagation. This is particularly important with the planned restructuring of Balitkabi and other Research and Development units under the MOA. However, a major constraint in achieving this is time. The mung bean team are exploring the likelihood of progress in this area within the next two years.

<sup>5</sup> PT Andaru and PT Agrotani Sukses Sejahtera

### About PRISMA

PRISMA is an innovative partnership between the Government of Indonesia and the Government of Australia to grow agricultural markets in rural Indonesia. Our strategic aim is to address food security and poverty by making rural markets more inclusive. We do this by partnering with businesses, government and investors to remove market barriers and introduce product and production innovations.

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Find out more: [www.aip-prisma.or.id](http://www.aip-prisma.or.id) // [info@aip-prisma.or.id](mailto:info@aip-prisma.or.id)