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Youth and Agriculture in Indonesia

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General Background

This chapter reflects on the changing place of young men and women in Indonesian agriculture, based on available secondary sources and some preliminary local-level studies. Agriculture is important in Indonesia, not only to provide food for its 272 million population, but also as the country's single largest source of employment. Around 28 per cent of the total labour force (34.6 million people), and 48 per cent of the rural labour force, report their primary occupation as agriculture (BPS 2019). Despite widespread rural diversification and multiple-sector livelihoods, agriculture, and particularly the food crops sector, is still the main livelihood

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activity of rural Indonesia. Contrary to general perceptions or expectations about youth, agriculture still employs a much higher proportion of young people than industry or any other sector,¹ and this proportion has been relatively stable in recent years.

To date there has been very little research on young people and agriculture, and most of this research has not gone much further than discovering that young rural men and women aspire to non-agricultural futures. To understand the position of rural youth and their (possible) futures in agriculture, more comprehensive research is needed.

In this chapter we first provide a general picture of agrarian structures in Indonesia. The next section then summarizes what we know about the changing position of young men and women within these structures, including: the age and gender of farmers, modes of intergenerational transfer of farm land and property, young people's apparent turn away from agriculture, patterns of rural youth labour mobility, agricultural education, and institutions representing rural youth interests. The main part of this chapter concludes with some reflections on policy. In the final part, we explain the selection of locations and the basic shared methodology for the three local case-study chapters that follow.

Agrarian Structure

Who Owns What?

Historically, post-colonial Indonesia did not inherit a class of large landlords who also dominated regional and/or national politics (in contrast, for example, with parts of the Philippines or India). It does, however, have a historical legacy of large-scale corporate plantations in such crops as rubber, tobacco, sugarcane, tea, coffee, and, more recently, oil palm. These are owned either by the state (many former Dutch and Belgian plantations nationalized under the Sukarno regime in the late 1950s) or by domestic conglomerates and domestic-foreign joint ventures. As seen

¹ The next largest sectors of rural employment for youth are trade (13.8 per cent) and manufacturing industry/handicrafts (11.3 per cent) (BPS 2019).

Table 11.1 Land area in major large-scale plantation crops, 2000–2020 ('000 ha)

Year	Rubber	Oil palm	Cocoa	Coffee	Tea	Sugarcane	Tobacco	Total
2000	549	2991	158	63	90	388	5	4246
2010	497	5162	92	48	66	437	3	6307
2015	545	6725	42	47	61	217	0.6	7368
2020	407	8560	18	24	60	174	0.3	9243

Source: BPS (2022a)

in Table 11.1, most large-scale plantation crops have remained stable or contracted in the last 20 years, but all are dwarfed by the rapid expansion and huge area of oil palm plantations.

There are also large areas of export and cash crops grown by smallholders, whether independently or on contract to agribusiness (Table 11.2). Here again we can see the rapid expansion of oil palm; the total area planted to plantation and smallholder-based oil palm will soon overtake the area planted to Indonesia's main staple food crop, rice.

Smallholder agriculture dominates staple food production and horticulture, with no significant plantation sector. Table 11.3 shows the area planted to the major food crops and their growth/decline over the previous four years. The area devoted to rice, maize, and soya has been expanding in recent years, while for cassava, groundnuts, mung beans, and sweet potato, it has been declining.

Indonesia's last (2013) Agricultural Census recorded 26 million smallholder farm households cultivating a total of about 22 million hectares (ha) of land (BPS 2013). Farm sizes in the smallholder sector tend to be very small: in 2013 three-quarters of all smallholder farms were under 1.0 ha and almost half were under 0.5 ha (Table 11.4).

AKATIGA's study of 20 rice-producing villages in Java, South Sulawesi, and Lampung found varying degrees of land concentration and landlessness. Large land ownership (in this type of village) does not lead to large farm sizes, but to increasing rates of tenancy (particularly share tenancy) as the larger owners parcel out their land to sharecroppers (Ambarwati et al. 2016). This appears to have been the pattern since the late colonial period, at least for Java (White 2018). Reviewing more than 30 local studies and reports on land distribution from different parts of Java in the 1930s, Ploegsma was adamant that where land concentration was found,

Table 11.2 Area planted to major smallholder cash and export crops, 2000–2020 ('000 ha)

Year	Oil								
	Rubber	palm	Cocoa	Coffee	Tea	Sugarcane	Tobacco	Coconut	Cloves
2000	3046	1190	641	1322	67	n.a.	163	3602	n.a.
2010	2948	3387	1558	1163	57	278	213	3697	462
2020	3305	6004	1509	1221	51	229	230	3365	566

Source: BPS (2022b)

Table 11.3 Area planted to major food crops and recent trends

Crop	Area planted (million ha.)	
	2018	Change 2014–2018 (%)
Rice	16.0	+16
Maize	5.7	+49
Cassava	0.8	-21
Soya	0.7	+10
Groundnuts	0.4	-25
Mung beans	0.2	-5
Sweet potato	0.1	-29

Source: Deptan (2019)

Table 11.4 Smallholder farm sizes, 2013

Farm size (ha.)	Number (millions)	% of total
<0.1	4.3 ^a	17
0.1–0.19	3.6	12
0.2–0.49	6.7	26
0.5–0.99	4.6	18
1.0–1.99	3.7	14
2.0–2.99	1.6	6
≥ 3.0	1.6	6
Total	26.1	100

Source: BPS (2013)

^aThe number of farms under 0.1 ha is widely believed to be under-enumerated in the 2013 Agricultural Census due to definition changes, resulting in a large apparent drop since the 2003 Agricultural Census in the total number of smallholders and especially those under 0.1 ha. In 2003 the corresponding number—with a different definition of “farm household”—was 9.4 million. The 2018 Intercensal Agricultural Survey (BPS 2018) arrived at a total of 27.7 million smallholder farmers, including an apparent jump in those under 0.5 ha from 14.6 to 16.2 million; it is unlikely the number would have declined sharply between 2003 and 2013 and risen again between 2013 and 2018

“it certainly does not lead to large-scale [farm] enterprise. The accumulated holdings will be sharecropped or rented out, and agro-economically speaking nothing changes, the small-farm enterprise persists” (Ploegsma 1936, 61).

Outside the densely populated regions of Java, Bali, and parts of some other islands where irrigated rice farming is practised, some two-thirds of Indonesia’s total land area is claimed by the Ministry of Environment and Forestry as state-owned land under its jurisdiction. In these regions, peasant households occupy land under customary tenure, inherently insecure.

There are no formal barriers (and in most of Indonesia, no customary barriers) to women’s ownership and inheritance of land. One exception is West Manggarai, Flores (see Chap. 12); another is the island of Bali, where Hindu customary law prevents daughters from inheriting ancestral lands (Saitya 2021). On the other hand, there are numerous “cultural” barriers (both in the bureaucracy and in rural communities) to women’s discursive and material recognition as farmers. Nonetheless, 11 per cent of *petani utama* (the self-defined “primary farmer” or farm head in farm households) are female, as seen in Table 11.7; this number undoubtedly underestimates the reality due to the discursive cultural barriers just mentioned.

As in so many other parts of the world, land prices in Indonesia are rising rapidly, and not only in urban and peri-urban regions. Land is a safe investment and in many parts of Indonesia, speculative investment and absentee ownership are becoming more common, although absenteeism is technically illegal under Indonesia’s Agrarian Law. Absentee-owned land is one of the sources of land for share rental. Buying land is becoming an increasingly unrealistic option except for those who are already rich. In the 12 rice-producing villages that AKATIGA studied in 2013–2015, the price of one ha of irrigated rice land varied between about IDR 100 million² (US\$7143) and IDR 1500 million (US\$107,143). Agricultural worker wages at that time were generally around IDR 50,000 (US\$3.60) per day, and informal-sector earnings—for those with little

²US\$1.00 is approximately 14,000 Indonesian Rupiah (IDR).

capital—were generally not much more than IDR.1 million (US\$71.40) per month. Migrant worker wages in factories, or in oil palm plantations in Malaysia, were around IDR 2.5 million (US\$179) per month. Therefore, even if a young migrant could save IDR 500,000 (US\$35.70) per month out of those earnings, it would take him or her between seven years (in the cheapest location in South Sulawesi) and 100 years (in the most expensive in Central Java) to buy a rice farm of only 0.4 ha. This crude illustration underlines the fact that for landless rural youth, saving to buy any significant amount of land is no longer a realistic prospect unless they have access to a lucrative overseas migration opportunity.

Compared to Indonesia's "green revolution" period of the 1970s and early 1980s, smallholder farming in Indonesia receives little government support, and much of the available support does not reach small farmers. Government-sponsored cooperatives have generally failed, and smallholders face oligopolistic trading markets for both inputs and outputs. Subsidized smallholder credit schemes no longer exist, and crop insurance—increasingly important in the context of climate change and high-input agriculture—is in its infancy.³

Pluriactivity—household livelihoods composed of a combination of farm and non-farm activities—has been common for a long time, at least in densely populated regions, among both large and small-farm and landless-worker households. In general, larger farmers transfer surpluses into investments in relatively high-return, non-farm activities such as trading and shopkeeping, agro-processing and transport, while small farmers and landless farm workers transfer labour without capital into low-return activities—often providing less income per day than agricultural wages—such as petty trade and handicrafts (Ambarwati et al. 2016). Alexander et al. (1991) give some historical examples of this pattern from the late colonial period, White and Wiradi (1989) for Java in the "green revolution" period, and Ambarwati et al. (2016) for recent years.

³Lately, the Ministry of Agriculture, through the state-owned insurance company Jasindo, has initiated a crop insurance programme for landowners or sharecroppers of irrigated land. But on the ground, however, this scheme is still very limited.

Who Gets What in Indonesian Agriculture?

Looking at various agricultural commodities gives us an introductory idea on Bernstein's (2010) "who gets what?" question. In rice-producing areas of Java, Sumatra, and Sulawesi, large numbers of rural households—sometimes more than 50 per cent—are landless or have very small holdings and work as sharecroppers or pure wage labourers. The majority of rural households in these regions still need to buy rice for their own family for part of the year (i.e., they are net buyers). As already mentioned, their livelihoods are derived from various sources, both farm and non-farm activities. For landless and near-landless workers, wages in manual harvesting work (using the sickle) still provide the highest return to labour when compared to other work. In a few regions, the subsidized introduction of small combine harvesters has threatened harvesting opportunities.

Smallholders in areas of high-value vegetable production such as in West Java and North Sumatra are in a similar situation to rice farmers, but more dependent on middlemen collectors for marketing. The risks in commercial vegetable farming are higher than for staple food crops, but in a good season, the profits can be much better than rice. Urban young people and green groups who are interested in farming are often involved in these activities.

In export cash crops like coffee and tobacco—which, as can be seen in Tables 11.1 and 11.2, are mainly smallholder-grown—the main players are big agribusiness corporations. They operate in the upstream and downstream of farming rather accumulating land. Since the markets are relatively narrow, market channels are the key. The big players do not necessarily have land but dictate the prices, giving smallholders the inputs and training/dictating to them on how and when to plant. Small farmers obtain low returns while the big players capture the value-added in high-return processing.

Indonesia is the world's biggest producer of oil palm, as shown in Tables 11.2 and 11.3; plantations now cover more than 14 million ha, mainly in Kalimantan and Sumatra, with a government target of further expansion to 29 million ha. Big corporations have "grabbed" large

amounts of land where the occupants do not have formal ownership certificates and the land falls under the jurisdiction of the Ministry of Forestry, as discussed above. Most of the oil palm is formally or informally under the control of big plantation actors, sometimes operated on classic plantation lines, sometimes combining this with smallholder contract-farming schemes. About 10 million people (2 million workers and their families) now live in the oil palm zones and depend on the plantations for income once the land frontier is closed. This level of employment (with only one worker per 5 ha) is very low, even compared to other plantation crops; in rubber, for example, the ratio is closer to 1:1 (Li 2018). Plantation expansion often leaves the original landholders in place, but confined in enclaves on which they may be able to continue some kind of farming on a reduced scale; the real squeeze begins a generation later when the remaining land in the enclave proves insufficient for the needs of young (would-be) farmers. As one elder in West Kalimantan explained to Tania Li: “‘When the company came we thought our land was as big as the sea.’ But more companies came. Now his children and grandchildren are landless. They are marooned in a sea of oil palms in which they have no share” (Li 2018, 59). These large-scale land deals have closed off the smallholder option, not only for today’s farmers but also for members of the next generation who face permanent alienation from land on which they, or their children, might want to farm, and in the absence of livelihood opportunities elsewhere.

Young People and Agriculture

For rural young people in Indonesia, agriculture is the largest sector of employment (see Table 11.5). The next two largest sectors of rural youth employment are trade and manufacturing. In 2019, 38 per cent of the rural youth labour force (15–34 years) worked in agriculture; this increased to 40 per cent in the following year (the first year of the pandemic and related economic disruption). In 2020, agriculture still employed a much higher proportion of rural youth than trade (17 per cent) or manufacturing (12 per cent).

Table 11.5 Percentage of the rural youth labour force employed in three main sectors, 2019 and 2020

Year	Sector ^a		
	Agriculture	Trade	Manufacturing
2019	38	16	14
2020	40	17	12

Source: BPS (2019, 2020)

^aThis proportion only for rural youth labour force

To the best of our knowledge, there are almost no studies of young farmers available in Indonesia, besides an exploratory study on rural youth by AKATIGA in 12 rice-producing villages (Nugraha and Herawati 2015) and the study by the Indonesian Institute of Sciences (LIPI) on the “crisis of agricultural re-generation” in three villages of Central Java (2015). Both of these studies focused more on young people’s aspirations and apparent turn away from farming rather than seeking out young people who wanted to (or had already) become farmers.

Age and Gender of “Primary Farmers”

Some data on the age and gender structure of Indonesia’s farming population in 1983, 2013, and 2018 are shown in Tables 11.6 and 11.7. These data are drawn from the Agricultural Censuses of 1983 and 2013 (a complete enumeration) and the Inter-census Agricultural Survey 2018 (a sample survey). They show the age of those members of farming households who self-report themselves as the *petani utama* (“farm head”).

Table 11.6 shows that the average age of farm heads has been rising significantly over the period 1983–2013, and if we add in the 2018 Sample Survey data, the trend has continued after 2013. In the space of one generation, the proportion of farm heads under the age of 35 has roughly halved, while those 55 years and older have roughly doubled.

Table 11.7 shows the gender of these self-reported farm heads in 2013 and 2018. These data suggest that (1) only 11 per cent of Indonesia’s farm heads were female in 2013 (with a slightly higher proportion, 13 per cent, in the 2018 sample survey); (2) the female percentage among farm

Table 11.6 Changing age of smallholder farm heads^a, 1983–2018

Age group	% of all farm heads		
	1983	2013	2018
<25	3	1	1
25–34	22	12	10
35–44	31	26	24
45–54	25	28	28
≥55	18	33	36
Total	100	100	100

Sources: BPS (1983, 2013, 2018)

^aFarm head (*petani utama*) in this table and Table 11.7 is defined as “the farm holder who represents the [farm] household. The farm holder selected was the highest income earner from agricultural undertaking amongst the farm holders within the household. If two farm holders had the same income, then the [one with] the largest activity in agriculture was selected” (BPS 2013, 78)

Table 11.7 Age and gender of farm heads in smallholder farming, 2013 and 2018

Age group	2013				2018			
	% of all farm heads	% male	% female	Total (millions)	% of all farm heads	% male	% female	Total (millions)
≤24	1	90	10	0.2	1	89	11	0.3
25–34	12	94	6	3.1	10	94	6	2.9
35–44	26	93	7	6.9	24	91	9	6.7
45–54	28	89	11	7.3	28	88	12	7.8
55–64	20	85	15	5.2	22	86	14	6.1
65+	13	79	21	3.3	14	79	21	3.8
Total	100	89	11	26.1	100	87	13	27.7

Sources: BPS (2013, 2018)

heads rises with the age of the farmer—possibly associated with widowhood and/or divorce; (3) the population of “farm heads” is still relatively youthful with 39 per cent of farm heads under 45 years of age (35 per cent in 2018) and only 33 per cent over 55 years (34 per cent in 2018); and (4) however, only 1 per cent of farm heads are under 25 years of age and a further 12 per cent between 25 and 34 (2013), or 10 per cent, in 2018. Table 11.6 shows that even in 1983, the proportion of farm heads under 25 years of age was very small (only 3 per cent). At that time, most boys in rural areas were leaving school at age 15, and girls often at age 12. Thus, in the past as in the present, there was a long gap between the age

of leaving school and the time at which young people could take over management of a farm.

Looking at these statistics, we can ask: are farmers being forced to continue farming into their old age because of the lack of successors—this is the most commonly assumed explanation—or are they living and/or staying healthier longer and therefore not ready to hand over farms to their successors? Is the problem that the young are unwilling to start farming, or that they are unable to start because the old are unwilling (or unable) to stop? Or is there another, more complex dynamic at work, as Jonathan Rigg (2019) argues based on his research in Thailand, meaning that these are the wrong questions to ask and that we need to reconsider the ways that we think about ageing and occupational change, about what is a farmer and what is farming?

Modes of Intergenerational Transfer of Farm Land and Property

As stated earlier, in most parts of Indonesia, both male and female heirs can inherit land and other family property. Shares are sometimes equal, and sometimes daughters receive less than sons. In Kupang (E. Nusa Tenggara province) male children inherit more land than daughters. Daughters may keep the land they are cultivating after marriage, but when they die, the land reverts to their parents or male siblings or their descendants (Ruwiastuti et al. 1997, 30). In Western Lombok (West Nusa Tenggara province) inheritance rules follow the *sistim nina nyenyon mama melembah* (the woman carries one load on her head, the man two loads on a shoulder pole), that is, male heirs receive twice the share of female heirs. The same principle, *sepikul segendong*—comparing the two-basket *pikul* shoulder pole carried by men with the single basket which women carry on their backs—is often reported as customary norm in parts of Java, but not always followed in practice. In some cases where landholdings are too small to be further sub-divided, daughters do not receive a share, but depend on the male heir(s) to give them a share of the harvest (Ruwiastuti et al. 1997, 30). In Hindu-majority Bali where

daughters are customarily barred from inheriting ancestral property, they may inherit property acquired during their parents' lifetime, but in practice sons still receive larger shares of non-ancestral property (Saitya 2021, 49).

Besides the Bali study just mentioned, we have not found any detailed ethnographic studies on the processes of intergenerational farm transmission. AKATIGA's study in 12 rice-producing villages in Java and South Sulawesi found that land could be transferred either when a son/daughter married, when the parents became sick or too weak to continue farming, or on the parents' death. Children waiting to inherit land may either stay in the village and help on the farm or—more frequently—migrate to work in various non-farm occupations. Cases where children had been able to become independent farmers (rather than farm helpers) while their parents were still living were rare. When grown-up children help on the parental farm, the parents may give them a share of the harvest (Nugraha and Herawati 2015). In some regions, such as our Kulon Progo research village discussed in Chap. 14, it is not uncommon for children to farm their parents' land on a share tenancy basis, under the same conditions as prevail between landowner households and their landless share tenants.

In many parts of the world, the transfer of farmland and assets and their division among (potential) heirs are sources of great tension between generations and/or between siblings, and sometimes a taboo subject that is almost impossible to discuss openly within the family (White 2020, Chapter 4). In Indonesia to date, there have been very few studies of these dynamics, which require ethnographic research. Our case studies in the following chapters go some way towards filling this gap.

Young People: Turning Away from Farming?

As in many other countries (White 2020: Chapter 4), available research and anecdotal evidence—in the absence of systematic survey research—suggest that many young rural Indonesians aspire or intend to work outside agriculture, and many of their parents have the same ambitions for

their children. A LIPI report warns about the “regeneration crisis” in the agricultural sector (LIPI 2015).

A 2014 study by the Koalisi Rakyat untuk Kedaulatan Pangan (People’s Coalition for Food Sovereignty) and Oxfam in various regions in Indonesia found that 63 per cent of rice farmers’ children, and 54 per cent of horticulture farmers’ children, did not want to become farmers. Moreover, 50 per cent of rice farmers and 73 per cent of horticulture farmers did not want their children to become farmers (Wiyono et al. 2015). This study, however, makes the classic logical jump of assuming that these children’s preferences represent a future reality. The AKATIGA study also notes a strong expressed preference for non-farming futures, but also underlines the need to see this preference in the context of the agrarian structures, which mean that many (often most) young people have no prospect of inheriting land, and certainly no prospect of obtaining parental land while they are still young (see below). The same study also notes—although information on this is limited—that many of today’s older farmers also previously chose to migrate—as their children do today—returning to the village and to farming only when land became available (Nugraha and Herawati 2015).

Young people’s apparent aversion to the idea of farming futures is partially related to the image of farming as occupation and of rural life generally, but economic and structural issues are certainly also an important cause. The AKATIGA researchers have been studying these issues since 2013, in 12 rice-producing villages in West Java, Central Java, and South Sulawesi. We talked with young men and women between the ages of 13 and 30 from different backgrounds. Some were children of landowners, others from smallholder, tenant farmer, or landless families. When we look closely at these rural young people’s views and hopes, the picture is quite complex, as is summarized briefly below.⁴

In most of these rice-producing villages, the landholding structure means that most young people have no realistic prospect of becoming independent farmers, or at least not while they are still young. Landlessness is widespread and less than half of farmers own the land they cultivate. The only people who have some chance of owning land while they are

⁴ More details are given in Nugroho and Herawati (2015) and AKATIGA and White (2015)

still young are those who come from wealthy land-owning households. But they typically go to university and aim for a future in a secure, salaried job; their parents also have the resources to get them into these jobs. They may look forward to inheriting and owning land, but as a source of income through rent—they have no interest in farming it themselves.

Meanwhile, young people growing up in smallholder farming families may eventually inherit a piece of land, but their parents have too little land to hand over part of it to their children while they are still young. As a result, many young adults become share tenants on their parents' land. They may be in their 30s or 40s when they finally receive land from their parents. For those whose parents are landless, there is only the prospect of becoming a sharecropper or farm labourer, unless they can find another way to access land. Share tenancy conditions are quite burdensome, with the tenant providing all of the purchased inputs as well as their own labour, and delivering half of the crop to the landowner⁵ (Wijaya and White 2019). For these young people, the only possible way to become an independent farmer is to first find work outside of agriculture (and often outside the village) and hope to save enough money to buy or rent land.

Due to either its image, its vulnerability, or its low incomes—even though the actual levels of income in available urban occupations may be no better—smallholder farming is not really an attractive prospect for many rural youth. On the other hand, the great interest of speculative finance and trading mafias in agriculture, and the growing markets for agricultural products, suggest that agriculture can potentially offer promising futures for smallholders, if given the necessary support. Current conditions and trends, however, are certainly not in favour of young farmers. It is hard for a young (would-be) farmer to become an independent farmer owning his or her own land unless they are first able to accumulate capital in other sectors or through other activities.

It is not surprising, then, that so many young rural men and women decide to migrate to work in various kinds of paid jobs or informal-sector work, often in other regions and sometimes as far away as Malaysia,

⁵This is in contravention of the Law on Share Tenancy, which stipulates that the crop should be divided after the deduction of input costs.

Taiwan, Hong Kong, or the Gulf states. But young people's decisions to farm or not to farm, and to stay in the village or to migrate, are not permanent decisions. As already noted, many of today's older farmers themselves migrated when they were young, returning home when they had saved money or when land became available.

Meanwhile, the large-scale plantation sector offers few attractive labour or career opportunities to young people. Wage levels and labour conditions in this sector are generally very poor. To date, there is only one study available focusing on young people's prospects in this sector. Li's (2018) study of oil palm plantations in West Kalimantan concludes that once land frontiers are closed, opportunities for plantation-related wage work are very limited, and the corporations make no provisions for either land or jobs for the next generation.

...low wages, impoverishment and fragmented families are the future that lies ahead if Indonesian's oil palm plantations continue to expand. The prospect of 20–30 million hectares of oil palm, much of it in plantation mode, is dismal indeed. An intergenerational perspective helps clarify why many people who live in plantation zones are in despair, and the social devastation that will come unless there is a radical change of course. It also clarifies why 'sustainable development'...is fundamentally incompatible with expanded plantations. (Li 2018, 71)

Patterns of Rural Youth Labour Mobility

After graduating from secondary school or further education, poor (landless and near-landless) rural youth start to explore various options of non-farm income opportunity. Young women may try to work in factories, in petty trade, as shop assistants in urban areas, or as domestic workers in Indonesia or abroad. Young men are less visible in factory and trading sectors, but more in the construction sector.

A study by AKATIGA found that both young men and women tend to change jobs often, trying to gain experience and access better opportunities (Djamal and Pithaloka 2017). They often use creative strategies and stop shifting jobs when they have found a good opportunity. The

AKATIGA study found, for example, one woman who had the opportunity to work as nanny in an expat home. She tried to learn English and widened her network among the expat helpers to get maps of opportunity since her boss would probably not stay in Indonesia for very long. Another young woman who found a job as a nurse tried to be more professional and to become part of a good nursing agency. A young man who started selling coloured textiles for *batik* and Muslim clothing made the effort to better understand the market and then adjusted his product accordingly. These are examples of young people who have found relatively well-paying occupations and are able to accumulate some savings. Their capital will often be invested back in the village, mainly to buy land and housing or livestock as a form of saving; the livestock will be sold before the big Muslim holidays when they need money and the price is high. Relatives who stay in the village (such as siblings, spouses, or parents) will take care of the land, house, and/or animals. When women marry, get older, or find that it's becoming harder to find good jobs, they return to the village and utilize their savings to become a farmer or to finance other activities (e.g., a small grocery store, trading clothes from the city, or other non-farm activities). Often, young men working in the city leave their children and/or wife in the village, and young women who go abroad may also leave their child and/or husband in the village.

Young people from larger land-owning or wealthy farm households tend to inherit land from their parents, but generally are not interested in becoming farmers themselves; instead, they become landlords, sharecropping out their land in small parcels. Although their original source of accumulation may be their farmland, as time progresses, their main source of accumulation is no longer from farming. In this case, farming or land-based income is additional income, as savings in the form of land or as a buffer for their other businesses. Their main income sources generally involve supplying various products and services in the village: farm inputs and equipment, building materials, capital goods rental (machinery rental), large grocery stores, transportation (buying a truck for transport of goods to other areas), and so on. They may also work in speculative businesses such as buying and selling land. The big landowners tend to be able to expand their landholdings at relatively low cost, as poorer landowners who need money (in a medical emergency or to finance a

migration, for example) will sell or mortgage their land to these landowners at relatively low prices (Ambarwati et al. 2016).

Education and Pathways into/out of Farming

Education is often seen as a road to a better future for rural youth and also for better futures in farming. Agricultural education and training, however, generally do not produce a new generation of young farmers. In 2017, various online media reported that Indonesian President Joko Widodo criticized that “many graduates of the Institut Pertanian Bogor (the top agricultural university in Indonesia) find jobs in banking, so who wants to be a farmer?” (CNN Indonesia 2017). Moreover, one of the professors at Institut Pertanian Bogor admits that in 1985–1986, more than 50 per cent of his alma mater worked in banking (Suryowati 2017). More often they seek employment in the financial sector in big cities that offers better salaries than many other sectors. Those graduates who do become involved in the agricultural sector are more likely to be involved in post-harvest trading and processing in urban areas (Hidayat 2017).

There are 1837 Agricultural Vocational Secondary Schools (SMK Pertanian) in Indonesia (Directorate of Vocational Education 2022). The fees are relatively low compared to other vocational or general high schools. The Ministry of Agriculture, the Ministry of Education, Culture, Research, and Technology, and various private-sector donors have established scholarship schemes to attract more students (Ernis 2022; Ulum 2017). Most of the students are children of smallholder farmers. The SMK curriculum framework includes an obligatory internship in collaboration with farmers and businesses that are located nearby the SMK.

However, most of the graduates of agricultural vocational schools—both SMK and Islamic Boarding Schools—that we have visited in Java and Flores during the course of this research are not working as farmers, even though the school provides them with extensive field experience, internships, and real-life involvement in agriculture and agribusiness activities. Most of the students attend these schools as a stepping-stone to higher education opportunities or to find employment in factories or the

service sector in semi-urban areas, mostly not directly related to agriculture.

There are also agriculture-focused polytechnics at the tertiary level, sometimes focusing on specific branches. Examples are the Sekolah Tinggi Pertanian (Agricultural Polytechnic) known as the “Oil Palm University” in Yogyakarta, and the Politeknik Kelapa Sawit Citra Widya Edukasi in Jakarta (Citra Education Widya Oil-Palm Polytechnic), which is also focused on the oil palm industry. Private-sector investors have established these schools to meet the need for lower-level technical staff in the rapidly growing oil palm industry. They cooperate with various palm oil companies to channel their graduates into positions within these companies. The Ministry of Agriculture supports Sekolah Tinggi Penyuluhan Pertanian (Polytechnics for Agricultural Extension, STPP) in several cities and provides scholarships for both private/public agricultural extension or vocational students in agriculture to continue studying at STTP. In 2016, the Ministry of Youth and Sport launched its Youth Farmer programme, which targets young people who have an interest in agriculture and can promote this interest to other young people. In this programme, enrollees are trained in land management. The research team, however, was unable to locate sources or documents that explain how the programme is implemented.

New Types and Styles of Farming

Though still limited, there are various emerging types of “new farming” differing from the traditional pattern, all of which (we think, based on scanty and anecdotal evidence) mainly involve young men and women. One is the cultivation of non-traditional, high-value seasonal crops such as watermelon on rice fields (either independently or on contract) and medium-scale poultry farming on contract (see, e.g., White and Wijaya 2021). Another is organic farming. Organic farming products are available in large supermarkets in big cities, but in general, the market share is still very small; organic Arabica coffee exports are one exception. In the main areas of intensive food crop production, pure organic farming is not easy to achieve since the groundwater is often contaminated with

nitrogen or other chemicals. Formal certification costs are also prohibitive for most smallholders; more realistic is “trust-based” organic or near-organic production in which groups of producers build nested markets with networks of consumers.

Another new form of farming is urban farming. Following the global trend, urban farming is often discussed in social media and linked to the recycling movement. In some cases, a small area of urban land is used to introduce urban schoolchildren to green activities and agriculture. There are dozens of communities formed to promote urban farming with names such as 1000-yard Community, Jakarta Farming, and Green Bogor, but the total area of urban land cultivated is still negligible. Some authors have pointed to urban agriculture as an alternative anti-poverty option, providing resilience in times of economic crisis or when urban development policies such as the development of shopping malls displace residents (see, e.g., Purnomohadi 2000; Siregar 2001, 2006; Suryana 2006). In his study of four urban-fringe locations in East Jakarta, Semiarto Aji Purwanto (2010) argues that such regions deserve our attention for a better understanding of the complexities of urban-rural relations. Peri-urban farmers who have migrated from rural areas often return to their villages and maintain social ties there, making them not “full” migrants.

Institutions and Initiatives Channelling Rural Youth Interests

Besides government, some independent farmer organizations and non-governmental organizations (NGOs) have programmes that encourage young people to learn about, and engage in, farming. Unfortunately, no systematic information on such initiatives is available and we provide only a few illustrative examples here. One example is Serikat Petani Pasundan (SPP), which has established *sekolah pertanian* (farming schools) for local farmers and their children. SPP raises funds to provide scholarships for farmers’ children, and several of the graduates are involved in regeneration of SPP activities. As an example of an NGO initiative, Plan Indonesia’s Youth Economic Empowerment (YEE) programme aims

to improve the capacity of vulnerable young people, especially girls (80 per cent) to secure decent work or build an independent and sustainable enterprise. In some rural areas, this programme has assisted targeted young people and their communities in developing horticultural farming (Djamal and Pithaloka 2017). On a smaller scale, the NGO Sunspirit in East Nusa Tenggara province has programmes to develop the potential of young people in various economic sectors, including agriculture. They provide training in farming techniques and promote seed banks in cooperation with the farming community.

Other initiatives, particularly those aimed at wide audiences or operating at a national level, emphasize fostering agribusiness entrepreneurship and “smart farming” with sophisticated technologies. One of these is the youth branch of the state-sponsored All-Indonesia Farmers’ Harmony Association (HKTI), which we will discuss in a later section. In 2014, the Innovation Community Youth and Agriculture, which various external donor NGOs sponsored, launched a series of annual competitions to identify 10 Young Agripreneur Ambassadors. The purpose was “to promote agripreneurship among youth and make agriculture more attractive as source of jobs for youth”; the ten chosen ambassadors were expected to “campaign to show the young generation that agribusiness is cool and there are young agripreneurs who have been successful in developing their agribusiness” (Wulandaru 2018).⁶ On a larger scale, the International Fund for Agricultural Development (IFAD) has included Indonesia in its Youth Entrepreneurship and Employment Support Services (YESS) programme. In a pilot project in four provinces, the programme aims to support poor and vulnerable youth in 320,000 households. Specific targets to be achieved in the six-year project include 33,500 young farmers/entrepreneurs reporting a profit and 32,500 young people finding agri-sector-based jobs (IFAD 2018).

Another important requirement to increase opportunities for young people in the farming sector is democratic and rooted institutions that young (would-be) farmers can use to articulate their interest in agriculture and increase their bargaining position. Unlike their counterparts in

⁶ This programme appears to have folded in 2018 as donors shifted to other priorities; both of these sites have been inactive since 2018.

neighbouring countries like Thailand and the Philippines, Indonesia's tens of millions of peasants and agricultural workers—the country's largest single occupational group—have no strong national movement, organization, or political party representing their interests. Two generations ago, in contrast, the Indonesian Peasants' Front (BTI) and Plantation Workers' Union (SARBUPRI) together claimed almost eight million members. Following Soeharto's takeover of power in 1966, the government dissolved the BTI and all other independent peasant organizations and replaced them with a single, state-sponsored monolith organization, the *Himpunan Kerukunan Tani Indonesia* (Indonesian Farmers' Harmony Association, HKTI), which was officially mandated to promote the interests of small farmers and farm workers.

In the more than 50 years of its existence, HKTI has done little towards fulfilling its mandate; it has “functioned as a figurehead organization with no effective role in voicing the concerns and aspirations of Indonesia's tens of millions of villagers” (Bourchier 2015, 175). In recent years, for example, it has been silent in the face of the forced expulsion of local peasants from millions of hectares of land for corporate agriculture (especially oil palm), airports, dams, and other infrastructure projects. Currently, the HKTI serves mainly as a vehicle for political ambition, providing support for political parties or candidates for high political office at the national or regional level. For a decade since 2010, the HKTI was locked in a leadership struggle between military and non-military business and political elites, with two rival HKTIs, two rival chairmen, and two rival websites claiming legitimacy (Hasan 2010). Neither website showed any vision of agrarian renewal or offered any programmes or activities aimed at rural youth. Since 2020, the two factions have been reconciled under the chairmanship of former General Moeldoko, who is also Presidential Chief of Staff, a businessman, and chair of the Democratic Party. A youth branch, HKTI Pemuda Tani, is now active. Its chairperson is a PhD candidate and board member of Bank Raya Indonesia, an agricultural arm of the state-owned Indonesia People's Bank (BRI); the Secretary General is owner of the agri-export and import Pinus Nusantara Group. Its aims are “to attract young people's interest and capabilities in agriculture,” with an emphasis on technological innovation and agribusiness.

Unfortunately, more than two decades after the collapse of the Suharto regime, the rural institutions or associations supposed to serve the needs of small farmers are basically top-down imposed institutions inherited from the Suharto era. Water user associations, farmers' cooperatives, farmers' groups, and other institutions are used to channel government programmes and subsidies. Farmers' cooperatives are mainly busy channelling subsidies for seeds, fertilizers, and machinery. In general, although there are a few exceptions, very few farmers receive support from farmer groups. The subsidies are captured by local rent seekers who use the names of the whole farmer group to capture subsidies and other government programme opportunities.

However, there are several local-level movements and activities that promote the needs and interests of small-scale farmers. Serikat Petani Indonesia (Indonesia Peasants' Union), for example, is active in some regions and has strong links to the global organization La Via Campesina; others are the Serikat Petani Pasundan (SPP) in West Java and the Alliance of Agrarian Reform Movement (AGRA) in South Sulawesi. Aliansi Petani Lembor (APEL) tries to build and develop farmers sovereignty through media and local government. Since the emergence of these movements, starting in the last years of the Suharto period, they have tended to suffer from chronic fragmentation, a problem common to Indonesia's civil society landscape. Their campaigning priorities are often disconnected from the concerns of the mass of Indonesia's rural people, especially the young generation (White et al. 2023). An important question, therefore, is whether the emergence of more autonomous, democratic (young) farmer's movements (and maybe a national federation of such movements), and their efforts to include young people in their activities and in their policy lobbying, can present young rural men and women with a vision of a farming future that is more attractive to them as well as the needed support to realize such vision.

Recent years have seen the emergence of a number of locality-based young farmer movements and networks, such as the Bali-based Petani Muda Keren (literally Trendy Young Farmers, www.petanimudakeren.com) or the Yogyakarta-based Petani Muda (Young Farmers, www.petanimuda.co.id). Again, there is no systematic source of information on these initiatives. At first glance, they seem to involve relatively

well-educated young farmers, particularly in commercial horticulture, and to focus on technological innovations beyond the reach of the majority of rural youth. *Petani Muda Keren*, for example, describes itself as “a movement that aims to integrate farming from upstream to downstream, based on the concepts of small-scale farming integrated with digitalization and IoT [Internet of Things]...with smart farming we can manage our farms at a distance, for example: irrigating, fertilizing, monitoring PH levels and humidity, checking by CCTV, etc” (*Petani Muda Keren* (n.d.)).

Indonesia has for the last two decades had a huge programme for rural poverty reduction (PNPM) that at its peak covered all villages in Indonesia. PNPM created rural revolving fund institutions and village development implementation teams that were democratically elected. In villages where these institutions have survived and still manage a lot of revolving fund money, the institution has been found to serve (relatively) the majority and to involve many women and the relatively young who have confidence to manage the funds transparently in front of all their fellow villagers. At present, these institutions are not targeted specifically at the young or at farmers, but could be utilized by the rural youth to further their interest in becoming farmers.

Regarding young (would-be) farmers’ problems in gaining access to land, Indonesian administrative regulations continue to move in the direction of greater autonomy for villages to manage their own affairs. There is increasing scope for local-level adjustments to current land tenure structures. One village that we have studied in Kebumen (Central Java) has helped its landless and near-landless villagers to gain access to village public land through more appropriate tenancy arrangements, and to limit absenteeism and excessive concentration of ownership. Part of the block grants that villages now receive under Law 6/2014 on Villages—amounting to more than IDR 1 billion per village per year—could be used to increase the stock of public land. The targeted allocation of use rights over that land could be a means to give poor people, women-led households, and the young a better chance of obtaining a piece of farmland. Similarly, village governments and farmer groups should be able to insist on better support for smallholder production and reject inappropriate technologies (such as combine harvesters) that the Ministry of

Agriculture has introduced in some areas; these benefit only a minority of the richest families and jeopardize harvesting employment opportunities (Wati and Chazali 2015).

Young People and Farming in Indonesia: Concluding Reflections

There are many reasons why leaving the village may seem attractive, and farming futures unattractive, to young people. Mass media often portray the rural world and farmers as backward and poor. But many dimensions of rural life are changing fast. In many villages connectivity is now as good as in the cities, motorbikes are cheap and common, and young people are busy with smartphones and social media accounts. Young people engage actively with global ideas and global youth lifestyles, which may make them look at rural life and farming differently to how their parents did.

If Indonesia's food needs are to be met in future largely by smallholder farmers, rather than by the large corporate industrial food estates that technocrats favour, rural life and farming have to be made more attractive to young people. We need to have a clear idea of the main barriers—both practical and cultural—to young people's entry into farming, either while still young or as a later lifetime option. When we look at young people's migration and their apparent decision not to become farmers, we need to take a longer-term, life course perspective.

The issue of young people and access to land needs to be taken seriously. In Indonesia, this generational issue has attracted little attention in land policy discourse. There is a need to look at possibilities to take land out of private property markets and to allocate it in use-right form to young people as well as to find ways to curb speculative investment in land. The latter is bad for the economy—it is an unproductive, parasitic form of investment—bad for social cohesion in rural areas, and as we have seen, bad for young people's prospects. While men and women formally have equal rights to own land, there are many practical gender

distinctions and barriers to young women's access to land and farming opportunities.

As was also the case in the Indian, Chinese, and Canadian studies in this book (see the concluding chapter) our Indonesian farmer respondents, both young and old, did not raise issues of environmental degradation or climate breakdown. Looking back, we wish that we had done more to explore their awareness of and concerns about these looming problems. In this connection, a recent national survey on climate change that the polling agency Indikator conducted has found that the great majority of young rural Indonesians are indeed concerned about climate change. Seventy-nine per cent of young rural people (aged 17–35) were concerned about “environmental degradation,” which came narrowly behind “corruption” as a top level of concern; they also prioritized protecting and preserving the environment over the current national obsession with economic growth (CERAH 2021). This is clearly an important area for further research. Issues of climate breakdown and campaigns for the creation of millions of “green jobs” in ecological regeneration is one area in which rural youth movements can forge alliances with their peers in urban and environmental movements.

Indonesia's young people are the most important potential source of innovation, energy, and creativity in developing new, environmentally responsible, and highly productive farming practices. Much can be done in general education, the media, and particularly on social media to correct the prevailing images of farming and rural life. Concrete examples of young men and women farmers, practising new, smart, and creative ways of production and making a decent living, can potentially have powerful impact. For most young rural people, it is not rural life or agriculture as such, but the lack of local jobs and the poor incomes from smallholder farming under present conditions that reinforce their decision to leave their homes and villages.

Methodology and Introduction to the Five Sample Villages⁷

The case studies that we present in the following three chapters are drawn from field research conducted in three study villages in Java (Central Java and Yogyakarta), and two study villages in West Manggarai (Map 11.1). In these villages, we interviewed 109 young farmers, including 49 young women farmers. We first introduce the five villages and then describe the field methodology, including the selection of the young farmer samples.

Sidosari, Pudak Mekar, and Kaliloro (Java)

Our three sample villages in Central Java and Yogyakarta⁸ reflect the characteristics of the region: densely populated, with very small farm sizes, significant rates of landlessness, and long histories of pluriactivity and out-migration—not always permanent—of young people. In all of these villages, both sons and daughters inherit land. Sidosari is a village in Central Java's lowland rice-bowl region with good canal irrigation. *Pudak Mekar* is closer to the southern coastal area (Indian Ocean) where almost all of the area is *tegalan* (rainfed land). These villages are located in Kebumen District, around 165 kilometres south of the provincial capital of Semarang. Kaliloro is a rice-growing village with good canal irrigation located between the river Progo and the Menoreh foothills, some 35 kilometres northwest of Yogyakarta City.

Langkap and Nigara (Western Manggarai, Flores)

Langkap is an upland village directly adjacent to the Mbeliling forest. Being developed as an ecotourism village, Langkap has both natural and cultural tourism potentials. Nigara is also mainly an upland village, but one of its hamlets is far separated from the rest in the lowland part of the

⁷All names of people and villages are pseudonyms.

⁸Yogyakarta is a Special Region in southern central Java, geographically an enclave within the province of Central Java.



Map 11.1 Study villages in Central Java, Yogyakarta, and West Manggarai. (Source: edited from <https://www.freepik.com/>, accessed on 3 July 2023)

village, which has irrigated rice fields. This hamlet is part of an area that was developed as a rice-growing area since the Suharto era (1967–1998). These villages have a combination of rice fields and dry land farming as well as a system of customary tenure in which land can only be allocated to men.⁹

In both of the West Manggarai study villages, some “land grabs”—not spectacular, but no less important to those who experience them—have been observed in recent years. Almost half of all customary land within these two villages has already been sold to national or international private investors who plan to develop tourist resorts in these areas.

Sample Selection and Interview Methods

We interviewed 109 young farmers (60 men and 49 women). For the purpose of selection, we defined “young farmer” as all of those farmers (male and female) under 45 years of age, following the guideline agreed in the four-country Becoming a Young Farmer project. This limit, which may seem high to many readers, is appropriate in the Indonesian context for various reasons. In many villages, as already mentioned, young farmers are former migrants who turn to farming only in their late 20s or early

⁹Widows in Langkap also receive a piece of customary land from the customary head.

30s. If we had restricted our sample to the standard United Nations' definition of "youth" (ages 15–24), we would have missed many young farmers. Furthermore, as we wanted to explore the experiences of young farmers, we did not want to have a sample only of those who had just recently begun farming. All of those farmers aged 40 or over in our sample started farming while in their 30s, and many of them in their early 30s or late 20s. The oldest age at which a respondent had become an independent farmer, among our 109 young farmers, was 38; the average age of starting was 24 years; and the modal age was 27.

In all of the research locations, we selected the young men and women respondents by a combination of information from key informants and snowball techniques. More details are provided in the case-study chapters. Data collection was mainly qualitative, including semi-structured interviews, but also included a short household survey questionnaire. The semi-structured interviews were inspired by the life-history method, with a focus on key moments over the young respondents' life course in the process of becoming a farmer.

We also interviewed several older farmers, parents of our young farmer respondents, mainly to obtain information on intergenerational changes in farming practices and intergenerational transfers of resources and farming knowledge.

In all of the villages, we tried to identify and interview respondents from different geographical locations within the village, as location may be an important influence on farming and other economic activities (e.g., in relatively remote neighbourhoods compared to those close to the main road).

For the duration of the research period, the research teams stayed with villagers. This enabled us to complement the interview-based methods with participant observation by taking part in everyday activities. Staying in the village was also important for generating rapport that made it easier for the research team to discuss delicate topics such as intergenerational and inter-sibling relations and inheritance. We often engaged our young respondents in informal conversation while joining them in day-to-day activities in and around the house. In this way, they felt freer to tell their stories because they did not feel they were being "interviewed." These conversations often happened in the kitchen while preparing food,

in the early evening when women like to sit together and chat, or while enjoying the evening meal together.

In all of the research locations, in the case of married young farmer couples (where both were active farmers), we tried to interview husband and wife. In such cases, to complete the structured questionnaire (on landholdings, family structure, and other basic household-level data), we tried to interview them together. For the subsequent in-depth interviews, we tried, where possible, to interview women separately, as they felt more comfortable telling their stories without their husbands' presence.

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