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Title:

State of the Grain: Grain of the State: The Political and Moral Economy of Rice in Indonesia

Date:

2021

Citation:

Macrae, G. & Reuter, T. (2021). State of the Grain: Grain of the State: The Political and Moral Economy of Rice in Indonesia. Dundon, A (Ed.). Vokes, R (Ed.). Shifting States: New Perspectives on Security, Infrastructure, and Political Affect, (1), 55, pp.78-94. Routledge.

Persistent Link:

<https://hdl.handle.net/11343/295901>

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2 **State of the Grain: grain of the State: the political- and moral-**
3 **economy of rice in Indonesia.**

4 **Graeme MacRae and Thomas Reuter**

5 Every day, in villages and neighbourhoods across Indonesia, agents of the
6 state enact prosaic practices in which the understandings and intentions of the state
7 are implicit. They also implement larger programmes and projects in which these are
8 articulated more explicitly. The focus of much of this activity is food security.

9 In June 2018, we attended one such event in a fairly remote corner of the
10 mountains of north Bali¹. There are few local livelihood options here apart from
11 growing subsistence crops and selling surpluses in the local market. But it is good
12 country for a fruit called *manggis* (mangosteen), for which there is a rapidly growing
13 export market across SE Asia and especially China. Further west an entrepreneurial
14 farmer has already converted his ricefields to *manggis* orchards and is exporting them
15 to China through a partner in Malaysia. Most of his neighbours have now also
16 converted to supply him and everyone is doing well, so this has become a model both
17 farmers and government wish to emulate.

18 The meeting we attended, in the central village of the valley, was to help local
19 farmers get certified for export, which involves a raft of quality control, logistics,
20 storage, packing, and food safety standards. The atmosphere was informal, enhanced

1 by plentiful refreshments prepared from local produce, (*photo?) but the format was
2 of a mass of farmers filling the hall, with the visiting experts and representatives of
3 the state across the front. The first speaker was a young and charismatic organic food
4 entrepreneur who had organised the meeting and was sponsoring the process. He was
5 followed by three agricultural scientists from a state university who explained the
6 processes and standards for certification. A woman from the provincial level
7 Department of Agriculture explained the bureaucratic procedures involved and how
8 she could facilitate them. The farmers had many questions, and the meeting ended
9 with agreement to proceed with the plan and a ritualised exchange of gifts and group
10 photographs.

11 This is the kind of development Vice-President Jusuf Kalla meant when he
12 spoke about “*financial inclusion ... through value chain innovation*” and
13 “*[improving] productivity on all fronts ...*” (Jakarta Post, May 23 2016) and is
14 reflected in many official voices, such as the website of the Ministry of Agriculture to
15 “Develop Agro-industry ... productivity and competitiveness in international markets
16 ... (by ... developing ... processing industries and production of reliable export
17 commodities ... (and) ... increase certification of agricultural products for export and
18 develop agro-industry ... at village level” (Ministry of Agriculture 2017)². It is
19 consistent also with the dominant global model of food security and agricultural
20 development shared by the transnational agro-food industry, the international

1 agricultural research system, multilateral organisations such as FAO and the World
2 Bank, and subscribed to by most governments³.

3 If this project succeeds, it will transform the local economy, bring a substantial
4 flow of money into the area, and raise incomes for many households. However, by
5 subordinating local food production in favour of a regional market in luxury foods, it
6 will also reallocate local land and labour to a single cash crop with the attendant
7 vulnerability to disease and market fluctuations, while simultaneously increasing
8 dependence on purchased food from outside the area. An unintended consequence of
9 the new prosperity will be loss of the local food security embedded in a long tradition
10 of subsistence production. Improved livelihoods do not automatically or necessarily
11 lead to improved food security.

12 While policy appears to sidestep this fundamental contradiction, the position
13 of the state is, in fact, somewhat ambivalent. Notwithstanding the commitment of
14 recent governments to the mainstream industrial-business approach to food
15 production and agricultural development, in practice this occurs simultaneously with a
16 rather different agenda expressed through other programmes, projects, and everyday
17 practices.

18 A few days earlier, we were at another meeting in one of the shrinking pockets
19 of semi-rural land between centres of tourism and urban development in south Bali.
20 This one was organised by the subdistrict field officer of the district office of the
21 Department of Food Security (DKP⁴), which also sits within the Department of

1 Agriculture. His first daily task is monitoring and reporting prices and availability of
2 key commodities in local markets after which he implements programmes originating
3 from the central ministry in Jakarta. One of these is the revival of backyard gardening,
4 which has declined in the face of increasing wage labour and processed foods,
5 especially in urban areas. Associated with this is the establishment of women's
6 gardening groups. This village has a relatively successful one, on a plot of village
7 (*desa*) land previously used as a garbage dump. The village is also providing some of
8 the funding. The meeting was held at the local primary school with several officials
9 from the district office of DKP, as well as the heads of village, neighbourhood
10 (*banjar*), and school. The purpose of this meeting was to monitor progress, discuss
11 issues arising, and agree on future plans. The women were lined up in the students'
12 desks, while the officials sat behind a long table on a raised dais at the front, again
13 subtly reminding all where the power lay. A DKP official chaired the proceedings.
14 After the usual formalities of Indonesian bureaucratic tradition⁵, the field officer and
15 the head of the village made their reports followed by a technical expert from DKP.
16 Progress was generally satisfactory, but they were not meeting their target for raising
17 chickens. This was important because raising animal protein for consumption is a
18 current policy priority and a box that needed to be ticked in reporting up the
19 administrative chain. The women protested that they preferred raising their chickens
20 at home (as they have always done), because it is easier and they can watch them
21 more closely. The officials, who were all from more or less similar village

1 backgrounds, understood this and accepted it as a reasonable solution. Finally, the
2 women were invited to ask questions of which the main ones were about funding for
3 next season's seed-raising and seeking support from local hotels and restaurants.

4 After the meeting, we all adjourned (the officials by car, the women on foot)
5 to the community garden itself>(*photo?). The rubbish had been cleaned up, and there
6 were now rows of healthy-looking vegetables, compost heaps, and a netting house for
7 raising seeds. Other delegations of the state turned up as well. One was from the sub-
8 district office of the agricultural extension service⁶, also part of the same department,
9 whose usual priority is not home gardening but top-down programmes for maximising
10 production and accessing markets. But now they have decided, or been instructed, to
11 support this project despite its rather different agenda. Another delegation was from
12 the (district level) Departments of Tourism and Agriculture, bringing a visiting
13 Mexican expert on 'gastronomic tourism' who made a brief speech in English. As the
14 inspection reverted to the less formal style of Balinese inter-village visiting, the head
15 of the village excused himself to meet with representatives of the Department of
16 Public Works about upgrading irrigation to increase the productivity of nearby rice
17 fields.

18 Here, explicit in the agenda of DKP but supported by village administration
19 and reflecting local sentiment, is a rather different approach to local food security--
20 bottom-up and based on local self-sufficiency. But alongside, mixed in, and even
21 hidden within this approach, are traces of the mainstream agenda of maximising

1 production through technological interventions. We see also the way in which high-
2 level policy is moderated and adjusted to local level realities by officials who are
3 grounded in and understand local context.

4 This duality of approach is deeply rooted in Indonesia, both at the levels of
5 culture and of statecraft. It is also widespread in other places and is reflected in
6 historical relationships between states and food, especially staple grains. An
7 anthropology of the state is necessarily also an anthropology of grains, and such an
8 anthropology is necessarily grounded in history.

9 States and Grains

10 States began with control over grains, and they have been mutually dependent ever
11 since⁷. The popular legitimacy of states has always been subject to a stable and
12 affordable supply of staple foods, as many rulers have found to their cost (Cullather
13 2003:260, Thompson [1971^{BIB-039}](#), Patel and Friedmann [2009^{BIB-021}](#), Garnsey and
14 Rathbone 1985, 22, Will and Wong [1991^{BIB-042}](#):3)⁸. For most states, food security has
15 in effect meant security in one (or occasionally more) key grains. Indonesia is the fifth
16 largest contemporary state in terms of population, and the third largest producer and
17 consumer of rice. Maintaining a reliable and affordable supply of rice has been and
18 remains a priority of modern Indonesian states since the colonial era. Contemporary
19 Indonesia, we suggest, may still be seen as a grain-state.

1 The orthodox story about the origins of states is that they developed in
2 symbiotic relationship with large-scale grain cultivation⁹. In southeast Asia, James
3 Scott (2009) juxtaposed the orthodox model of the rice-based states of the mainland
4 with the smaller-scale, more flexible social organisation of the adjacent mountain
5 areas. Since then he has taken his argument a step further, separating the story of
6 states from this orthodoxy (2017). Scott's argument is provocative and fairly
7 convincing, but it does not challenge the dependence of states on grain-- only the
8 historical sequence and causal links between them. Extensive cultivation of grains
9 was a necessary prerequisite to state formation rather than vice versa (2017:116-122)
10 and this, in turn, depended on favourable combinations of soil, water, and climate
11 (2007:124-5). The basis of this dependence was that, unlike other crops, grains lend
12 themselves readily to taxation (2017:129), and this was indeed the basis of most
13 ancient grain-states. But grains also have other state-friendly qualities, including ease
14 of storage, transport quantification, and recording. Long after the historical demise of
15 most grain-based taxation systems, states have managed grain supplies to provide
16 food security for urban populations, mitigate famine and, not coincidentally, provision
17 armies (e.g. Will and Wong 1991^{BIB-042} on Qing China)¹⁰. In the process, in many
18 places grains became a cultural and ideological marker between people within and
19 beyond the state (2007:136-7, see also Avieli 2012^{BIB-003}). Our aim here is not an
20 extended discussion of Scott's argument, but to use it as a point of departure for

1 thinking about the relationship between contemporary states and grains, at least in
2 Indonesia.

3 Another orthodoxy about the precolonial states of southeast Asia is that they
4 depended more on control over (scarce) people than over (plentiful) land¹¹. One of the
5 classic works building on this truism is Clifford Geertz's study of the micro-states of
6 Bali (1980^{BIB-010}), which he argued were constituted by ritual performance rather than
7 control over material resources. But his hyper-culturalist argument was prefaced by
8 some recognition of material factors, including the logistical constraints of balancing
9 military control up/down the accessible ridges with the difficulty of exerting it
10 laterally across the deep gorges (Geertz 1980^{BIB-010}):--a geo-specific case of Scott's
11 general point that states "cannot climb hills" (2009:20-21). While this observation is
12 significant in the micro-histories of these micro-states, Geertz is silent on the agro-
13 economic dimensions of this political geography. One of the last and most successful
14 of these polities was Ubud, on the eve of the colonial takeover at the end of the
15 nineteenth century. While it conforms nicely to Geertz's logistical geography, its
16 extraordinary political and military success was based not on ritual performance but
17 on a system of centralised management of rice harvests (MacRae 1997^{BIB-018}: 332).
18 So, state-building, even on the scale of Bali, was clearly based on management of
19 grains, even if it was limited, as both Geertz and Scott argue, by topography.

20 But no state can live "by bread alone". In the foothills of the Himalayas, there
21 were precolonial states of essentially similar topographic form--larger than Balinese

1 ones but much smaller than those on the plains. One which survived longest into the
2 colonial period was the kingdom of Tehri. The subsistence base was cultivation of a
3 diverse mixture of grain, legume, vegetable, and fruit crops as well as livestock.
4 Tehri, too, was constrained by its steep mountain and valley topography, but its
5 primary valley happened also to be a major trans-Himalayan trade route between
6 India and Tibet. The economic base of the state was taxation, the majority of which
7 came not from taxes on local agriculture but on this translocal trade (Rangan
8 2000:70-72)¹².

9 Scott (and others) make the same point about early states--that their social and
10 technological complexity inevitably required non-local resources which, in turn,
11 required trade and preferably a logistically favourable location (Scott 2017^{BIB-030}:125).
12 The wet-rice-based states of southeast Asia, many of them enormous in area,
13 economy, and population, were all located on, near, or strategically linked to fertile,
14 well-watered rice-growing plains, but also at key points, ideally a river-mouth harbour
15 connecting to both inland and maritime trade routes. Contemporaneous descriptions
16 of one of the greatest of them, Majapahit, emphasise equally the richness of food
17 supply and the cosmopolitan population of seasonal traders (Hall 1992^{BIB-013}:217-
18 221).

19 While virtually all pre-modern states had a symbiotic relationship with one or
20 more key grains, the combination of ecological constraints and opportunities afforded
21 by wet-rice cultivation were in some respects different from those of other grains,

1 especially wheat, the dominant grain across most of Europe and the Middle East.
2 While Euro-Mediterranean empires from Rome to Austro-Hungary had to rely on
3 transport of wheat over huge distances from sources spread across their far-flung
4 empires, the productivity, constant cropping and nutrient recycling of wet-rice
5 enabled much higher population densities in more compact and centralised
6 settlements. This, in turn, freed up labour for activities other than food production,
7 which was expressed, among other ways, in extraordinarily sophisticated ritual,
8 artistic, and architectural production. On the other hand, the complex translocal
9 networks of market exchange across these wet-rice environments limited the ability of
10 states to exert administrative control over them (Palat 1995:58-60). So, unlike the
11 centralised administrative regime imposed (more or less) uniformly across the Roman
12 empire, padi-states tended to devolve administration to satellite sub-states forming the
13 celebrated mandala-state pattern, reinforced by Indic politico-religious ideology
14 (Geertz 1980^{BIB-010}, Tambiah 1977^{BIB-037}). So, not only are successive Indonesian
15 states grain-states, but characteristics specific to wet-rice cultivation have shaped the
16 distinctive and enduring cultural relationship of Indonesian states with rice. But our
17 main point here is that, while states have always depended on grains, they have also
18 depended on trade. The relationship is triangular: trading states need grain and grain-
19 states need trade.

20 This pattern of economic dualism, which reaches back to the earliest times in
21 Indonesia (and most other places as well), remains a characteristic of the

1 contemporary Indonesian state deeply embedded at every level of policy and practice,
2 but evident also in the everyday practices and discourses of its citizens. This duality
3 plays out differently in different times, places, and circumstances.

4 [The contemporary rice-State in Indonesia](#)

5 Indonesia has a lot of mouths to feed (about 260 million). For most of this population,
6 rice is the staple grain, and Indonesia is globally the third largest consumer of rice. It
7 is also the third largest producer and, indeed, produces much of its entire food supply,
8 largely as a result of rich volcanic soils and a warm, wet, tropical climate. But
9 population is growing fast and consumption patterns are changing, while arable land
10 is limited, and the logistics of reliable distribution across a mountainous archipelago
11 of thousands of islands present challenges to food security at the national level.

12 Indonesia has been largely spared the catastrophic famines that haunt the food
13 histories and cultures of its larger neighbours India and China, but lower-level local
14 shortages and malnutrition have always been part of the national food-scape and are
15 evident in both popular and official thinking (van der Eng [2012^{BIB-040}](#), Moon [2007^{BIB-}](#)
16 [019](#):22, Day [1966^{BIB-008}](#):315). Consequently, food security has been a preoccupation of
17 Indonesian states since the colonial period.

18 While there is considerable dietary diversity across the diverse ecologies and
19 cultures of the archipelago, the main staple for the vast majority of Indonesians,
20 especially on the densely populated island of Java, has long been rice (Moon [2007^{BIB-}](#)

1 019:76). Even during the hungry decades of the 1950s and 60s, it contributed between
2 half and two-thirds of national calorific intake (van der Eng 2012^{BIB-040}:5, van der
3 Kroef 1963^{BIB-041}:381). Rice also occupies a somewhat exalted position in national
4 ideology, traditional cultures, and religious belief and ritual. Indonesian culture is in
5 many respects a rice-culture¹³. While intensive cultivation of rice has enabled and
6 conditioned much of the form of contemporary Indonesian life, dependence on a
7 single crop and commodity also creates challenges to food security¹⁴.

8 The fertile, well-watered river plains of Java were a major regional and
9 imperial rice-bowl from around the ninth century. When Java became the core of the
10 Dutch East Indies in the seventeenth century, it remained self-sufficient in rice and
11 exported surplus to support growing plantation economies in other parts of the East
12 Indies, until the middle of the nineteenth century when a combination of population
13 increase and forced cultivation of sugarcane began to reverse this flow and, by the end
14 of the century, Java was dependent on imports of rice, mostly from Thailand, (British)
15 Burma, and (French) Indochina (Kano 2008^{BIB-016}: 34-6, 139-141). These colonial
16 states, while competing with each other, also cooperated to form a regional economy
17 across colonial regimes in relation to key commodities, including rice. The brokers of
18 most of this inter-state trade were Chinese merchants. This was the beginning of a
19 regional import-export economy of rice surpluses and of Chinese brokerage of this
20 trade, both of which continue until the present (van der Eng 2012^{BIB-040}:8)¹⁵. This
21 dualism between trade- and subsistence-based sectors was the basis of the (once)

1 influential theory of colonial **dual economies** (Boeke [1953^{BIB-004}](#), Furnivall [1956^{BIB-}](#)
2 [009](#)). But the rice insecurity created by its subordination to sugar production was also
3 the beginning of the fear that underlies the ongoing preoccupation of Indonesian states
4 with rice-security.

5 During the 1930s, as the colonial economy shifted toward petroleum and
6 manufactured products, the area devoted to sugar declined, rice production recovered
7 correspondingly, and Java again approached self-sufficiency (Kano [2008^{BIB-016}](#):366).
8 But during the Japanese occupation, nearly all available grain was diverted to their
9 war effort, and this is remembered as a time of hunger¹⁶. After independence, the new
10 state led by President Sukarno made self-sufficiency in food (especially rice) a
11 national priority. In a famous speech at the opening of a state agricultural university in
12 1953, he described food security as **"a matter of life and death for the nation"**. For
13 Sukarno, as for most Indonesians, the way to achieve this was self-sufficiency of
14 production (Nielson [2013^{BIB-020}](#)). But his government struggled to manage political
15 and economic instability and food security declined. Average calorie intake was less
16 than in the 1930s (van der Eng [2012^{BIB-040}](#):5), while rice availability in 1956 was less
17 than it had been a century earlier (van der Kroef [1963^{BIB-041}](#):380), and there were
18 serious food shortages in some areas. A grassroots movement seeking better
19 conditions and land reform for peasant farmers was a strong political influence, but
20 equally so were the voices of urban consumers wanting a stable and affordable supply

1 of rice. The inability of the state to manage this, among other tensions, was a
2 significant factor in the demise of Sukarno's government in 1965.

3 The new government, led by President Suharto, reversed Sukarno's orientation
4 to independence and opened the country to foreign aid and investment. But one area
5 in which the preoccupation with self-sufficiency remained was agriculture and food
6 production. Government statistics and yearbooks throughout Suharto's New Order are
7 replete with lists of local crops, harvests, and productivity (*photo?). In practical
8 terms, self-sufficiency meant increasing production through increasing cropping
9 areas, improved irrigation, and technical innovations. The keystone was an
10 international package of new higher-yielding varieties, driven by petrochemical
11 fertilisers and pesticides, which came to be known as the Green Revolution. These
12 were introduced across the country from the late 1960s, enforced by government
13 decree, and supported by substantial subsidies. By the late 1970s, they were grown
14 almost universally across the country and old varieties were disappearing fast. Yields
15 increased dramatically and by the mid-1980s, the country achieved self-sufficiency in
16 rice--but only briefly, as unintended consequences had begun to accumulate. Insect
17 plagues decimated crops and ever-greater quantities of fertiliser were needed to
18 maintain productivity. Declining oil revenues and internal corruption undermined
19 economic growth and, under the increasing influence of globalising neoliberalism,
20 especially through the IMF, the government began withdrawing subsidies to
21 producers. By 1990, rice farmers, who had lived well since the 1970s, were squeezed

1 between rising costs of production and sale prices kept low by government decree.
2 Since then subsidies have returned (especially for fertiliser), and the government has
3 made some efforts to support farmers, but throughout the traditional rice heartlands of
4 Java and Bali, those who can are reallocating both land and labour to more lucrative
5 ends. This, too, has become part of the challenge for rice security.

6 This brings us back to the duality (or contradictions) of contemporary
7 government policy on rice security. The passage cited above, from the 2017 website
8 of the Department of Agriculture, about encouraging agro-industry and exports, was
9 followed immediately by one about “food sovereignty” (*kedaulatan pangan*)¹⁷ and the
10 need for self-sufficiency at a national level, but also about bottom-up approaches to
11 food needs and the well-being of primary producers of food.

12 Two approaches

13 While this dualism within state policy and practice is grounded in Indonesian history,
14 it also overlaps with a fundamental bifurcation of approaches within the entire global
15 agri-food sector. On one side are a set of top-down, technology- and market-based
16 approaches shared by major global players including transnational agri-food
17 corporations, the international agri-food research system, multilateral agencies such as
18 FAO and other UN agencies, the IMF, World Bank and other development banks, and
19 influential foundations such as Ford, Rockefeller, and Gates. The combined power of
20 these agencies has influenced, and in some cases forced, most governments to

1 subscribe predominantly to this approach. On the other hand is a cluster of broadly
2 similar approaches shared by organisations of farmers, consumers, environmentalists,
3 and local communities, (mostly smaller) NGOs, and a minority of researchers who
4 work close to the ground and characterised by terms such as sustainable, community-
5 based, organic, low external input, agro-ecology, permaculture, and food sovereignty
6 (Alonso-Fradejas, et al [2015^{BIB-001}](#), Edelman et al [2014^{BIB-006}](#), Perfecto et al [2009^{BIB-}](#)
7 [022](#), Pottier [1999^{BIB-023}](#), Schanbacher [2010^{BIB-028}](#)). The gap between these approaches is
8 exacerbated by assumptions and terminologies that make it difficult for their
9 proponents to even communicate, let alone agree. In the case of Indonesia, this
10 dualism overlaps with and intersects with the ongoing debates over self-sufficiency in
11 complex ways. These enigmas have long been a puzzle to scholars of Indonesia, one
12 of whom has recently reminded us that “it falls on us to consider how specific
13 histories and ideologies continue to shape critical public policies in Indonesia and
14 elsewhere” (Davidson [2019^{BIB-011}](#)). One aim of this chapter is to do this at an
15 ethnographic level.

16 Some states, notably the USA, are themselves key players in the mainstream
17 techno-market system. Others, especially developing ones such as Indonesia, are
18 ambivalent about the mainstream system, especially in the face of their experience of
19 untoward consequences from the colonial era through the Green Revolution to the
20 neoliberal globalisation of agri-food markets. Despite this ambivalence, they are not
21 always in a position to refuse interventions of this system. For example, the assistance

1 currently provided by the International Rice Research Institute includes development
2 of new rice varieties ... hybrid rice ... post-harvest technologies ... Green Super Rice
3 varieties ... optimising the productivity (of) irrigated rice systems ... developing a
4 Golden Rice version of popular local varieties ... use of remote-sensing technology
5 and to ... accelerate impact and delivery of technology” (IRRI 2016^{BIB-014}). Likewise,
6 the World Bank bases its assistance on the need to prioritize investments in the
7 provision of public goods and services that effectively support farmers and improve
8 the climate for private investment ... to strengthen agricultural productivity, diversify
9 the agro-production and rural economic base ...” (World Bank 2010^{BIB-044}).

10 Our point here is not the relative merits of the two approaches, but the way
11 they map onto the preoccupations, purposes, policies, and practices of the Indonesian
12 state-- an unlikely mix of reinforcing, contradicting, conflating, and confusing. We will
13 illustrate this, and also the structural complexities and contradictions inherent in the
14 state system, by returning to some ethnographic examples at some of the coalfaces
15 where state policy and priorities meet the people through programmes, projects, and
16 everyday practices.

17 **The Department of Agriculture**

18 Beneath the central Ministry of Agriculture, the department operates through dozens
19 of offices at provincial and district levels. The main centres of gravity of decision-
20 making power and budgets lie at district (*kabupaten*) level. Denpasar is the capital

1 city (*ibukota*) of (the province of) Bali, but it contains a surprising amount of
2 farmland and an office of the Department of Agriculture. Its farmland is also
3 surprisingly productive but is shrinking by about 10% per year as a result of
4 conversion to housing and commercial uses. The state no longer has the power to
5 outlaw conversion of agricultural land. This is now in the hands of *subak* (farmers
6 irrigation cooperatives) which are governed by their own, often quite ancient rules.
7 The department can only encourage *subak* to outlaw conversion by way of these rules.
8 The new head of the office is an enthusiastic advocate of urban agriculture, citing
9 overseas examples of vertical farming and reintroduction of home gardens. But he is
10 also determined to protect what remains of conventional agriculture by providing
11 incentives such as relief on land tax, as well as introducing and encouraging new
12 technologies to increase productivity and profitability. They disseminate these new
13 technologies through seminars in their office and practical demonstrations and
14 workshops in the field. On a fairly typical day in mid-2018, they held two such
15 seminars for heads (*pekaseh*) of *subak* and extension officers. One was on a method
16 for regrowing rice plants from post-harvest stumps instead of uprooting and
17 replanting them, thus saving time, labour, and seed¹⁸. This was presented by the
18 production section of the provincial office. The second was for a low-tech method for
19 extracting "biosilica" from rice mill waste for use as a fertiliser and pesticide. This
20 was followed by a field workshop the next day, delivered by a visiting expert from the
21 premier national state agricultural university. Part of the work of the department is

1 harnessing this kind of knowledge in the state research system to the policy aims of
2 increasing production and delivering it in the form of technology packages through
3 the extension system and its counterparts in the farmers' organisations.

4 **The Extension System**

5 The real frontline, where the generalisations of state food policy and the knowledge of
6 the research system meet the reality of the food production system, is the national
7 agricultural extension system. Its tasks are many, but its underlying mission is
8 increasing the productivity necessary to provide national food security by way of self-
9 sufficiency, especially in rice. This was made more explicit than usual in 2015 when
10 the Ministry of Agriculture, after a couple of poor harvest seasons, instigated a
11 programme of Accelerated Planting (Percepatan Tanam) and Grand Harvests (Panen
12 Raya) of (mostly) rice (Suara Pembaruan 2015), which was delivered primarily
13 through the extension system but with logistical and manpower assistance from
14 military, one of the largest and most powerful elements of the state apparatus.

15 Across the country there are nearly thirty thousand extension officers (PPL)¹⁹
16 organised in subdistrict units and answerable to district offices of the Department of
17 Agriculture. Ubud (in Bali), despite its public image as a tourist destination, is still at
18 the centre of an agricultural area. The extension office is a typical one, housed in a
19 rundown government building on an ill-tended lot overshadowed by new restaurants
20 (* photo?). It has eight PPL, one for each village in the subdistrict, as well as an

1 expert on plant pests and diseases (POPT)²⁰ and an office manager. The PPL spend
2 three days of the week visiting *subak* in their area, and the other two writing reports
3 and attending meetings and training sessions by experts from the district department
4 or beyond. Most of them are approaching retirement and are, at best, sanguine about
5 what has happened to their jobs over their careers. They began as graduates of state
6 agricultural training centres in the late 1970s or 80s at the height of the Green
7 Revolution. At this time, they were trusted as experts by both farmers and
8 government. Government also provided consistent support both to them and to
9 farmers, but since then they believe that commitment of government to agriculture has
10 steadily weakened, and their role has been reduced to delivery of top-down technical
11 packages which in many cases they have little confidence in.

12 As PPL retire, they are not always replaced, either because of departmental
13 policy or funding, or because of a shortage of new recruits. In recent years a growing
14 chorus of media reports (Syahutiti [2012^{BIB-034}](#), KabarNusa [2015^{BIB-015}](#), Jawa Pos 2017,
15 Swadaya 2017, Kompas 2017, Tanjungpura Times [2017^{BIB-038}](#)) have highlighted the
16 running down of the system, especially following the dismantling in 2001 of the
17 centralised national system and devolution of extension services to the district level,
18 where different systems prevail but with an overall decline in numbers, training, and
19 replacement (see also Subejo et al [2014^{BIB-032}](#): 104, World Bank [2007^{BIB-043}](#):v). In
20 2009 there were, across the country, nearly 28,000 PPL employed as civil servants,
21 plus nearly 25,000 employed on a daily contract basis to plug local gaps in the

1 system²¹. The total of less than 53,000 is well short of the 72,000 required by state
2 legislation on the basis of one per village, and the contract PPL are, not surprisingly,
3 generally regarded as less committed and often less experienced and well-informed.
4 The media reports and subsequent academic ones (Syahutiti 2014^{BIB-035}, Subejo
5 2006^{BIB-031}) explicitly correlated this running down of the system with declining
6 production levels which, in turn, were framed as a threat to national food security.

7 This pattern of decline has been accompanied by fundamental structural
8 changes in the extension system. Legislative reform in 2006 (Indonesia 2006)
9 established two new categories of extension--private enterprise (Swasta or Swakarsa)
10 and "self-help" (Swadaya). The former are paid employees or agents of suppliers of
11 agricultural inputs, while the latter are farmers recognised for their experience who
12 are willing to help others on a voluntary basis, supported by very modest stipends.
13 Both are supposed to work alongside traditional PPL to implement national policies
14 and priorities.

15 These reforms were encouraged, assisted, and funded by the World Bank's
16 Decentralized Agriculture and Forestry Extension Project (2000-2005) (World Bank
17 2007^{BIB-043}:v). Despite acknowledging very limited success in its main aims of
18 increasing productivity and farmer incomes, the final report recommended continuing
19 the project with an increased focus on market information, privatised extension
20 services, and ICT access (2007:ix-x).

1 Neither of these new categories of extension developed quickly but, as the
2 weaknesses of the state system became more evident, the government began to
3 encourage and legitimise them with formal certification (KabarNusa [2015^{BIB-015}](#), Input
4 Sulsel 2016, Swadaya 2017, Antara [2017^{BIB-002}](#), Tanjungpura Times [2017^{BIB-038}](#),
5 Kompas 2017, Agrofarm 2017). PPL Swadaya are not yet in evidence in Bali,
6 probably because of the close link between *subak* and the PPL system, but they are
7 now well established in Java (or at least DIY), formally paired with state PPL at the
8 village level.

9 Mas Heri and Mas Mul are PPL Swadaya on opposite sides of Yogyakarta.
10 Both understand their role as working alongside their state counterparts to implement
11 state programmes, but both feel the need to adjust these programmes to local
12 conditions. Mas Heri's experience is that old local rice varieties grown with organic
13 fertilisers made from local natural resources are more resistant to diseases and
14 produce better in local soil than the hybrid varieties promoted by their state
15 counterparts. He advises his farmers accordingly and they choose between his advice
16 and conventional methods. The main incentive to conventional methods is the
17 preferential subsidies provided for petrochemical compared to the natural fertilisers--
18 a small example of the multiple biases built into the state system toward the agro-
19 industrial model²².

20 Mas Mul is located far south of the city in an area with a strong tradition of
21 local community and farmers self-help organisations and a more independent, even

1 critical view of government. He does not work closely with his official counterpart
2 because he believes most state programmes, which he describes as “top-down”, do not
3 align with local needs and priorities. So he works independently on projects he
4 regards as worthwhile, such as the revival of backyard farming (pertanian
5 pekarangan) and a farming school for young people. They have planted a plot of rice
6 with a fish pond in the middle and vegetables around the edges (* photos?). He, too, is
7 trialling the regrowing of rice plants for a second season, not in response to a
8 government initiative, but because of hearing stories of it as a practice prior to the
9 GR. He receives no state support for these projects, but the land for the farm school
10 was provided by the village, and he is supported in other ways by Tani Lestari, a local
11 farmers’ organisation focused on independent self-help²³.

12 What does all this (no doubt confusing) detail about the extension service and
13 its discontents tell us about the contemporary rice-state? Firstly, that while the state
14 devotes lip-service to increasing production through technical improvement, its will to
15 practical implementation is severely compromised by the fragmentation and
16 confusions of decentralisation with its accompanying budget shortfalls and general
17 running-down of extension services. Secondly, that the state has moved toward a
18 (typically neoliberal) approach of propping up its own ailing extension system with
19 private enterprise and (more or less) voluntary labour instead of rebuilding it as a state
20 service. The result, especially when combined with the diversities of devolution, is a
21 more fragmented system, the results of which are mixed and varied. Thirdly, that PPL

1 Swasta/Swakarsa are essentially sales representatives for products of unknown
2 efficacy, health, and environmental effects--not really agents of the state at all but
3 commercial beneficiaries of the outsourcing of extension. This tends to have an effect
4 of nudging farmers toward more input- and cash-intensive methods of production.
5 Fourthly, that the PPL Swadaya, who are mostly experienced and committed farmers
6 despite their poor pay and lack of government support, are in many cases sceptical
7 about mainstream techno-market approaches favoured by the state and are in fact
8 promoting locally based, sustainable approaches that fit better with the other, less
9 visible side of the state agenda--toward local self-sufficiency.

10 Limitations of space preclude more of these ethnographic excursions into the
11 state-food nexus--into the seed saving and disease management agencies, the agri-
12 food research and education systems, the state grain-management agency (BuLog),
13 the mixed views of senior civil servants, the many local community and farmers
14 organisations who are working in various ways to support, subvert, critique, resist or
15 simply find ways of working with the agendas and agencies of the state. They all
16 illustrate and confirm in various ways our primary arguments about the centrality of
17 food/rice-security in the consciousness and practice of the Indonesian state and the
18 fundamental tensions and contradictions in this relationship between state and grain.
19 Sharma and Gupta (2006:10) refer to these as the cultural dimensions of the modern
20 state and the discursive constructions built upon them. These cultural dimensions in
21 turn speak to an argument for the continuing importance of grains to states but also,

1 less directly, of states in the global grain trade, notwithstanding an appearance of
2 transnational corporate control of that trade.

3 These insights have been enabled by what Sharma and Gupta (2006:9) identify
4 as a key element of distinctively anthropological approaches to the state--
5 ethnographic-level attention to the quotidian practices by which the state becomes
6 manifest in and intersects with the everyday lives of its citizens. Our main
7 methodological point is that, when we approach the workings of the state on an
8 ethnographic level, the pristine abstractions of policy begin to dissolve in a mass of
9 local detail, socio-cultural complication, and institutional cross-purposes. The trick,
10 for a productive anthropology of the state is to integrate these ethnographic
11 observations and insights with high-level analysis of state policy and practice and
12 political-economic structures and processes underlying them.

13 And finally, in the process of this focus on ethnographic level analysis,
14 anthropology has lost sight of, or at least interest in, its much earlier concerns with the
15 origins and histories of the state. We show here how the Indonesian state (and
16 probably others) draw for their ideology, legitimacy, and even aspects of their
17 structure, on earlier state forms which remain embedded in national or regional ways
18 of thinking about the state. When we look again at state in historical perspective,
19 factors emerge that are not necessarily obvious in contemporary states. One is the role
20 of food, especially grains, in the formation, maintenance, and ongoing legitimacy of
21 states.

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¹ This chapter is based on ethnographic research by the authors in Bali and Central Java in 2017 and 2018, but it is grounded also in their research in these areas going back to the early 1990s. Their current research is funded by the Australian Research Council.

² This is our translation of clause 2 of the "Mission and Vision" section of the ministry website in late 2017. Since then it has changed in ways that reflect the tension discussed here. And, as it happens, on the very day of this meeting, the Minister of Agriculture announced an agreement with Russia for export of *manggis* (Republika 2018^{BIB-027})

⁴ Dinas Ketahanan Pangan = Department of Food Security. The Indonesian administrative system works down from the national level through province (Propinsi), district (Kabupaten), sub-district (Kecamatan), village or town (Desa/Kelurahan), to neighbourhood with minor variations from one area to another. All departments have offices down to the district level, but the structure of these too varies from one district to another.

⁵ This includes ritualised invocations of both state and god, which in Bali includes offerings to local deities, as well as welcoming of visitors.

⁶ Balai Penyuluhan Pertanian = Agricultural Advisory House.

⁷ The classical states of Central and South America are partial exceptions as are some of the almost-states of Polynesia and West Africa.

⁸

⁹ James Scott's book *Against the Grain* (2017) is constructed as a critique of this model, but ironically he cites no examples of it. In fact the writings of the most likely suspects (e.g. Childe 1948, Carniero 1970) or even introductory textbooks (Keesing 1981^{BIB-017}:42-62) are considerably more nuanced and less different from Scott's own argument than he implies.

¹⁰ A recent UN report on its threatened grain stocks in Yemen illustrates the way in which food security now spans beyond states to multilateral organisations (ReliefWeb 2019).

¹¹ See for example Gullick [1965^{BIB-012}](#):125. The same observation has also been made in areas other than southeast Asia.

¹² This focus of taxation appears to contradict Scott's point about the taxability of grain crops, but the difficulty for the state here was that grain plots were small in size, varied in species and mixed with other legume and vegetable crops.

¹³ This cultural rice-centrism is true of most of the dominant lowland cultures across monsoon Asia. (e.g. Avieli [2012^{BIB-003}](#):21-27, Cullather 2003:260).

¹⁴ Among the national programmes of the Department of Food Security is one for encouraging diversification of diets away from rice, especially by encouraging consumption of other staples such as corn, cassava, sago and sweet potato.

¹⁵ Managing Chinese control over national economies is another, related preoccupation of states in Southeast Asia, including Indonesia.

¹⁶ We heard stories of this in the 1990s, from the last generation of Balinese who remembered the Japanese occupation.

¹⁷ The meaning of "food sovereignty" in the discourse of the Indonesian state is somewhat different from its wider global use, pioneered and championed by La Via Campesina, and is closer in meaning to national level self-sufficiency and independence.

¹⁸ This system, known as Salibu (Salinan Ibu) is actually an old method, recently rediscovered and systematised by agricultural researchers.

¹⁹ Penyuluh Pertanian Lapangan = agricultural field advisors.

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- ²⁰ Pengendali Organisme Pengganggu Tanaman = Manager of organisms which interfere with plants.
- ²¹ Indonesian statistics are not known for their accuracy, reliability or consistency but are usually good enough to provide broad pictures. The rounded-off figures used here are mostly from Subejo (2014:104-5). Eight years later, the figures cited by the head of the extension section of the ministry of agriculture were 25,000 civil servant PPL, 19,000 daily contractors and 72,000 villages (Tanjungpura Times 2017^{BIB-038}). The primary legislation on extension services is UU 16 (2006) Tentang Sistem Penyuluhan Pertanian, Perikanan dan Kehutanan.
- ²² While our focus here is primarily on the ideological dimension of this duality, it has political-economic dimensions also, in this case that the main petrochemical fertiliser corporation is government owned.
- ²³ For a more detailed discussion of Tani Lestari (and other farmers' organisations), see Reuter and MacRae 2019^{BIB-025}.