



Research article

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The Thai revolution: The changes in agriculture in the kibbutzim and moshavim of the Arava in the 1990s¹

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Imagine a region separated by geography, climate, and ideology from the economic and social forces that affect the rest of the country. Physical isolation prohibits inhabitants of this area from utilizing many resources available to all other citizens, including inexpensive labor markets and direct consumer markets. On the other hand, the region contains a water supply unavailable to the rest of the country and unaffected by local weather conditions, and is naturally quarantined from agricultural diseases.

Imagine that this region, while climatically and geographically unified, is divided demographically and politically into two distinct subregions, differentiated by their ideological approach to social and economic organizations.

Despite the region's isolation, it is connected to the rest of the country legally and economically. It depends on government funding and support to develop, and trades in the same markets as other citizens. It is subject to government restrictions such as production quotas and labor laws.

One day, the powers-that-be decide to change the rules. The support once provided to agriculture is lowered considerably, while simultaneously a supply of low-cost labor previously denied to this area is made available. Although many of the ideological differences between the two regions have dissolved, the institutional and cultural differences remain in place, causing the inhabitants to react differently to the changed conditions.

desert running along the Syrian-African rift from the Dead Sea to the Gulf of Eilat. Sparsely settled since the late 1950s, the region today includes approximately five thousand permanent residents. The southern half of the valley, reaching to about one hundred kilometers north of Eilat, is in the jurisdiction of the Hevel Eilat Regional Council and includes ten kibbutzim. The northern half is in the jurisdiction of the Arava Tichona Regional Council and includes five moshavim. Both areas subsist mainly through agriculture.

The kibbutzim and moshavim of the Arava are in many ways different from their cousins in other regions. Four of the ten kibbutzim were founded by groups of immigrants from North America who made aliyah for ideological rather than economic reasons. These immigrants arrived with a higher education level than the average kibbutz member, but with no experience in agriculture. The other kibbutzim were founded by graduates of Israeli youth movements and children of established kibbutzim. The moshavim of the Arava Tichona were founded mainly by descendents of kibbutz and moshav members, with previous agricultural experience. Most literature on moshav settlement divides the moshavim between "veteran" settlements, created in pre-state Palestine by European immigrants, and "new" moshavim, settled in the 1950s by North African and Asian immigrants. The moshavim of the Arava were founded at about the same time as the "new" moshavim, but by children of veteran moshavim and kibbutzim.

It sounds like a case study written in an economic textbook, but this region actually exists. It is the Arava Valley, a long narrow

1. This work originally appeared in *One hundred years of kibbutz life: A century of crises and reinvention* by Michal Palgi and Shulamit Reinharz, editors. Copyright 2011 Transaction Publishers. Reprinted with permission by the publisher.

The 1990s saw major changes in the economic environment of the region—the "changing of the rules" referred to above. This chapter will examine the forces that brought about different reactions between the kibbutzim and the moshavim, and among the different kibbutzim.

1. Self-labor

Both the kibbutz and the moshav movements were founded on the ideal of self-labor, but demographic changes in the communities and in Israel as a whole during the 1950s and 1960s led to at least partial abandonment of that ideal. During the 1950s, the kibbutzim developed an industrial sector, which employed hired workers from nearby development towns. As Israeli cities expanded, many moshav members left agriculture for other types of work, "renting" their land to neighbors. Those who remained in agriculture were now farming plots larger than one family can work alone. With the 1967 occupation of the Palestinian territories, a large number of low-cost workers became available. By 1980, nearly a third of all agricultural workers were hired, 36 percent of them coming from the territories. The 2000 intifada closed off this labor group, but by then foreign workers more than made up for them, and in 2000 about two-thirds of all agricultural workers were employees, 45 percent of these foreign (see Figures 1 and 2).

Because of a combination of ideology and opportunity, the Arava settlements related differently to self-labor and, through the end of the 1980s, added only small numbers of volunteers and soldiers to their workforces. The stated basis for this practice was ideological, but practical reasons reinforced the ideology. The kibbutzim remained agricultural, with relatively little industry, and the moshav members nearly all farmed their own land, preventing the situation of having a plot too large for one family. The only city close enough to provide workers, Eilat, has never suffered from unemployment as many development towns did. The occupied territories were too far away to provide day workers. The connection of several of the kibbutzim to Zionist youth movements abroad ensured a population of volunteers to help with the unskilled labor and reinforced the ideology of the kibbutzim. Finally, the young settlements of the Arava in the 1970s and 1980s were demographically similar to their pre-state counterparts: young, healthy members committed ideologically to creating a new society, willing and able to engage in hard physical labor.

Within this common framework, differences existed among the kibbutzim from the beginning. The following discussion will examine the changes in attitudes toward self-labor in two of the kibbutzim—Ketura and Yahel—and the adherence to the principle in one—Samar. The other kibbutzim followed similar patterns.

The move from self-labor at Ketura was incremental and caused major social unrest in the community. "When I arrived here twenty-two years ago, the idea of bringing in volunteers for the harvest was considered extreme," says Bill Slott, former general secretary of Kibbutz Ketura. Eventually the kibbutz decided to supplement its workforce with volunteers. In 1994, Ed Hopland, economic manager of Ketura, tried and failed to convince the kibbutz members to bring Arab laborers to work in the fields. Three years later, when the kibbutz was struggling financially, the general assembly approved a plan to bring in laborers for the melon and watermelon harvests—but with many restrictions: only Israeli citizens would be employed, and they would work only in the fields, located across the highway from the living area of the kibbutz. Eventually Thais replaced the Arab workers, for practical reasons: "forty kibbutz members pick as many melons as twenty volunteers, ten Arabs, or five Thais," according to Slott.

While Slott desired to restrict the employment of foreign workers for ideological reasons, Hopland saw the issue as managerial. "Hired workers are a drug, and Thais are a hard drug, because they're so good," he explains. He feared that allowing any Thais to work inside the kibbutz will cause an

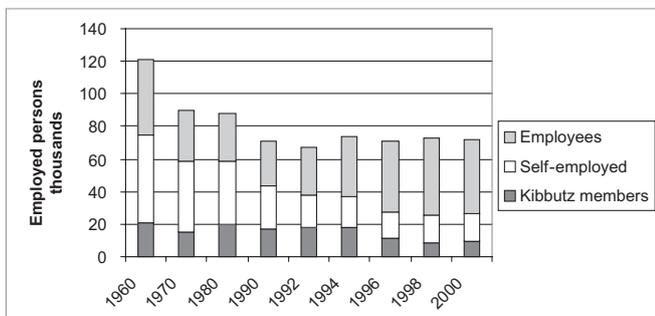


Figure 1: Self-employed, kibbutz members, and employees in agriculture (1960–2000)

Source : Central Bureau of Statistics

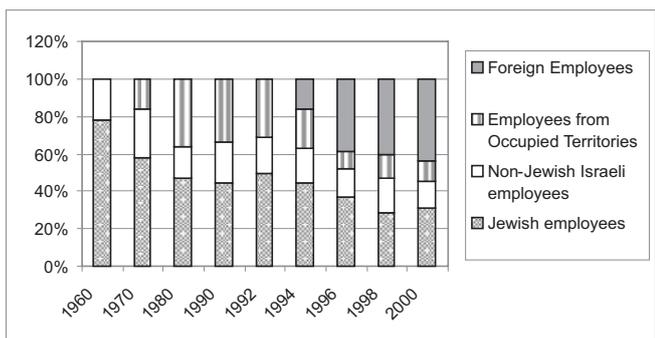


Figure 2: Agricultural employees by nationality

Source: Central Bureau of Statistics

uncontrollable flood that would eventually replace kibbutz members, who do not all have an alternative livelihood. Today Ketura employs Thai workers in the date plantations only—the kibbutz no longer raises field crops. According to kibbutz leaders, the decision to stop growing field crops was mainly economic, but was helped by the community's discomfort with foreign workers and ecological issues.

Samar founded in 1976 mainly by children of established kibbutzim, describes itself as anarchic. Decisions of the general assembly are nonbinding recommendations, and all workers run their enterprises autonomously. At the time that many of the neighboring kibbutzim began expanding the melon crop by employing Arab laborers, the general manager of Samar tried to convince the kibbutz to do the same. The field crop staff, however, refused to consider the possibility, and the issue never even reached the assembly. Since small-scale production of vegetables has become unprofitable, the kibbutz has grown only organic dates and crops that can be tended and harvested mechanically, for which kibbutz members have developed technologies.

Yahel, like Samar, was founded in 1976, but there the similarity ends. After facing an economic crisis in the mid-1980s, Yahel's members decided to take several steps toward privatization, including increasing the number of hired workers. Several families left the kibbutz in the wake of these decisions, but since then the community has been in consensus regarding the issue of hired workers, deciding whether to continue in a work branch or to hire an outside worker on an economic, not ideological basis. In the late 1980s, Yahel began employing Arab laborers in the fields, replacing them with Thai workers "as soon as they became available," reported Matthew Sperber, the then general manager of the kibbutz.

The moshavim all followed the same path to relying on hired labor. Until the 1980s, the climatic advantage of the Arava allowed them to grow small fields of vegetables for the local market profitably in seasons that were too cold in the rest of the country. The development of hothouses lowered this advantage and caused the moshavim to begin growing almost entirely for the export market, which demands much higher quality produce, which in turn demands more—and more professional—labor. The first Thai workers arrived in the late 1980s, and in 2000 there were twenty-five hundred in the region. "If you take away the Thai workers, there will be no agriculture here," Ami Shaham, Arava Tichona water commissioner, states. These workers are known for their reliability and stability; they come for long periods and can be trusted to work alone in the fields. In the packing houses, they preserve a high level of quality.

2. Crops and technology

Since the 1990s, the settlements of the Arava have differed not only in their labor decisions, but also in which crops they farmed and by what technologies. The kibbutzim took one of two tracks in the face of the changing conditions: either they greatly increased the amount of land being cultivated or they discontinued labor-intensive field crops altogether. A close examination of the economies of three representative kibbutzim in 1995 and 2001 shows the changes that took place between these years. Table 1 shows the contribution to profit from self-labor of agricultural branches of Ketura, Samar, and Yahel as a percentage of the kibbutz total in 1995 and 2001 (negative numbers indicate losses).

In 1995, the three kibbutzim were similar: agriculture provided about 60 percent of the income of the kibbutz, with 24 percent coming from dairy farms and 33 percent coming from field crops and dates together. Yahel and Ketura relied mainly on field crops and Samar on dates. In 2001, the three show very different pictures: Samar has increased the weight of agriculture in its economy to 73 percent while the other two have lowered it to about 45 percent. Dairies now provide only 15 percent of the income, and field crops are significant only at Yahel. Aquaculture, the Red Sea fishery owned jointly by five kibbutzim (not including Yahel), is a major branch for Samar and Ketura. Samar's date orchard provides a significantly larger percentage of the income than the other two.

Table 1: Contribution to profit from self-labor of agricultural branches as percentage of kibbutz total, Ketura, Samar, Yahel

Year	Kibbutz	Aquaculture (%)	Citrus (%)	Dairy (%)	Dates (%)	Fields (%)	Other livestock (%)	Total (%)
1995	Ketura	3	-1	18	12	26	3	60
	Samar	4		23	34	3	-2	63
	Yahel		-1	31	5	21	-2	53
	Average 1995	4%	-1	24	17	16	0	59
2001	Ketura	15		9	18	1		44
	Samar	23		15	33	2	-1	73
	Yahel		3	19	15	10		48
	Average 2001	19	3	15	22	4	-1	55

During the 1980s, the moshavim moved from raising crops in open fields to enclosed buildings. As a result, farmers who had grown several types of vegetables in open fields began specializing in one crop – at Paran, peppers – for export. According to Simha Yudovitch, deputy director of the Ministry of Agriculture, the government encouraged reluctant farmers to

move to hothouses by providing grants on the investment and refusing to award grants for investments that did not include hothouses or net houses.

Paran is located at a higher altitude than the other moshavim, with an increased danger of frost in the winter. As a result of this disadvantage, according to Paran member Hemi Barkan, the changes in the late 1980s completely forced members out of the market for a mix of vegetables including some grown in open fields. Since then, they have specialized in growing peppers in enclosed structures for export.

Table 2 shows the type of fields used for each crop, and Table 3 shows the distribution of vegetables grown at the different moshavim. Hothouses and net houses have little advantage over open fields in growing melons, onions, and watermelons, and therefore those crops are hardly grown at Paran and Tzofar. Barkan explains the complete reliance on peppers (as opposed to tomatoes or other hothouse crops) at Paran as a "copycat" syndrome. In addition, local residents agree that the conditions for growing peppers are best on Paran.

3. Economic success

Table 4 summarizes the ability of each region to profit from its limited resources from 1999 to 2002. We see that agriculture is a much bigger business in the Arava Tichona than in Hevel Eilot. The Arava Tichona uses three times as much land, five times as much operator labor, ten times as much foreign labor, and four times as much capital to create four times as much value-added (profit) as Hevel Eilot. Hevel Eilot farmers maximize profit from labor, both self and hired, while Arava Tichona farmers maximize profit from water and land. Both areas bring in enough income to support the families of the operators well, but not enough to repay the investment. The question remains why the kibbutzim of Hevel Eilot, while as successful as their northern neighbors in the small amounts of agriculture they attempt, do not expand these ventures.

Table 2: Production technologies of different crops, Arava Tichona, 2001–2002: number of dunam per crop and technology

	Tomatoes	Cherry tomatoes	Peppers	Melons	Watermelons	Onions
Hothouses	801	272	1,854	38		17
Net houses	15	20	4,038			10
Tunnels	18	55	491	1,523	891	10
Open fields	72	428	91	448	30	572

Table 3: Distribution of vegetables grown at the different moshavim, 2001–2002: number of dunam per crop

Product	Ein Yahav	Hatzeva	Paran	Tzofar	Idan
Tomatoes	335	213		116	242
Cherry tomatoes	459	161		80	75
Eggplant	305	60		12	82
Peppers	1,810	513	2,450	1,476	224
Melons	1,486	289		118	116
Onions	20	188	8	47	346
Herbs	137	159		42	
Watermelon	93	484	10	20	314
Other	174	198	343	133	67
Total	4,819	2,263	2,811	2,044	1,467

The wage earned by Hevel Eilot farmers is high enough that one would expect the kibbutz to allocate more workers to its agricultural branches—few other enterprises bring in NIS 340,000 per worker. However, in order to generate more income from agriculture, the kibbutz must invest in preparing more land for cultivation or building hothouses on existing land. These investments, even if partially covered by the Ministry of Agriculture and Jewish National Fund, lower the profit for the operator. In addition, they require additional hired labor, an issue that will be addressed in the next section.

Finally, we must address the issue of motivation for joining the community. Most kibbutz members arrived in the Arava for social reasons including creating a new kibbutz structure (social anarchy on Samar), revitalizing non-Orthodox Judaism (Yahel, Ketura, and Lotan), and settling the Negev. For them, agriculture was a means and not an end. The communalism of the kibbutz allows them to earn a lower salary working in the profession of their choice and to enjoy a standard of living between their salary and that earned in agriculture. Most, if given the choice between lowering their standard of living and giving up their profession, would choose the former. The moshav settlers, on the other hand, came to the Arava to establish farms and support themselves through agriculture. Those who failed left the area. Thus natural selection has left the Arava Tichona populated almost exclusively by successful farmers.

Table 4: Utilization of limited resources in the Arava Tichona and Hevel Eilot (average figures during 1999–2002, NIS 2000)

	Hevel Eilot	Arava Tichona
Annual value-added (million NIS) ^a	24.0	101.5
1990s' investment (million NIS) ^b	70.0	281.5
Number of operators ^c	70.0	360.0
Dunam per operator	123	58
Value-added per operator (NIS)	342,857	281,944
1990s' investment per operator (NIS)	1,000,000	780,000
Annual water consumption (thousand cubic meter) ^d	16,750	25,500
Water per operator	240	70
Water per dunam	1.92	1.06
NIS value-added per cubic meter of water	1.43	3.98
Number of dunam ^e	8,611	20,767
Value-added per dunam (NIS)	2,787	4,888
1990s' investment per dunam (NIS)	8,129	13,555
Number of foreign workers ^f	250	2,520
Foreign workers per operator	3.57	7.00
Dunam per foreign worker	34	8
Foreign workers per million NIS capital	3.57	8.95
Thousand NIS value-added per foreign worker	96	40

a. Total annual revenue minus total annual expenses, not including self-labor.

b. From the Jewish Agency, the Jewish National Fund, and the Ministry of Agriculture.

c. Hevel Eilot: Based on estimates by heads of the local growers associations; Arava Tichona: 90 percent of the population.

d. Consumption in 1999 (*source*: Hevel Eilot and Arava Tichona water commissioners).

e. Land cultivated in 1999.

f. Hevel Eilot, based on estimates by workers in the various branches; Arava Tichona, seven workers per family (estimate of Avi Shaham, water commissioner).

The kibbutz structure allows a profitable branch to cover the losses of an unprofitable one. While this could encourage "parasitism," it also allows the kibbutz to branch out in various directions, even when new enterprises are not immediately profitable. The moshav economy does not allow such diversification. A pepper farmer must put all his effort into

peppers if he is to remain competitive. Diversity in the moshav economy, while clearly beneficial to the community as a whole, is a risk that no individual farmer can afford to take. This basic difference explains much of the parting of ways of the kibbutzim and moshavim of the Arava. The moshav members had no choice but to develop highly professional intensive agriculture, because their economic structure did not allow them to invest in new enterprises that did not yield immediate profits. The kibbutzim, with a variety of employment opportunities, were able to leave agriculture in the hands of the few members interested in it.

The examinations of Yahel, Samar, and Ketura show that even within the general structure of kibbutz, different communities react differently to the same objective conditions. The managers of both Yahel and Ketura claim that their communities' decision regarding field crops was based entirely on economics and not ideology, yet as partners in the same cooperative venture, they came to opposite conclusions about its viability. Four members of Yahel were employed by the enterprise, and Yahel's packing house treated the produce after harvest, providing significant additional income. Field crops were still profitable for Yahel because the kibbutz provided services for the branch. Ketura's ambivalence toward it prevented it from doing the same.

4. Was the Thai revolution helpful or harmful to the settlements of the Arava?

In the Arava Tichona a small but vibrant population has taken the resources given by public institutions to support itself through agriculture, contributing to the nation through exports. This success, however, depends entirely on a second population, which in numbers is greater than the "native" residents. Farmers stress the Thais' efficiency and professionalism, and estimate that they would need three Israelis to replace every two Thais; replacing Thais with Israelis would push the farmers' profits below a livable wage.

Technological advancements could reduce the amount of labor involved in hothouse agriculture. Yudovitch of the Ministry of Agriculture claims that the ministry encourages adopting labor-saving technology, but that the farmers are uninterested. If this were so, the same combination of attractive grants and pressure used to introduce hothouses would be applied to convince the farmers to adopt these methods. The government's lack of action in promoting technological solutions or encouraging Israeli workers in agriculture shows that this is a priority on paper only. Until the government backs up its stated policy with feasible plans to allow the continuation of agriculture in changing conditions, the farmers of the Arava Tichona have no choice but to continue employing foreign laborers.

The situation among the kibbutzim, on the other hand, is quite different. The comparison of Yahel, Samar, and Ketura shows that the weight of field crops in Samar's and Ketura's economies were equal in 2001, despite the fact that Ketura had greatly expanded its field crops in previous years. In addition, Samar did not face the same financial difficulties faced by Ketura in the 1990s. This fact implies that Ketura would not have been worse off had it never employed the foreign workers. Could it have been better off?

The high salary earned by individuals working in agricultural branches with hired workers on kibbutzim (NIS 417,000 at Yahel) represents profit from hired labor and capital. According to Kressel (1997), "the growth of the place of capital in the profits of the kibbutz [. . .] brings the member to see that the value of his work is not what sets his standard of living as it once did, and then he asks: 'why should I work so hard?'" Further evidence to support this view comes from research on "social loafing"—the tendency of an individual to work less when part of a group than when alone ("parasitism" in kibbutz slang). Karou and Williams (2001) found that while this tendency exists in all cultures, it does not exist in all groups: "parasitism" will be reduced if members identify strongly with the group and if they feel that their contribution is valuable. In a kibbutz that receives much of its income as rent on its assets, members may feel their contributions are not valuable to the group product and thus contribute less.

We saw that the move to expanded fields with hired workers was successful at Yahel, but failed at Ketura. While the objective conditions of the two kibbutzim were identical, the organizational culture was very different. According to Grondona (2000), moral standards that differ greatly from the social reality deter development. Yahel abandoned the ideology of self-labor with little or no regret and succeeded in agriculture based on hired laborers. Ketura agreed reluctantly to infringe on this ideology and did not profit from vegetable farming. Samar retained the ideology and abandoned vegetable farming but developed its date plantations with mechanical means to reduce labor. In all three cases, the original stated value was the same: self-labor. The economic reality was the same: small-scale vegetable farming was no longer feasible. But when the kibbutz kept its values and actions consistent with each other, whether by changing the ideology wholeheartedly or by changing the actions, the kibbutz succeeded in its enterprise. When two remained dissonant, the enterprise failed.

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