

# Inequality in Israeli Agriculture

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**ABSTRACT:** When the State of Israel was settled fifty years ago, an effort was made to divide land and water resources equally among farmers. In this paper, we will attempt to explore the degree of equality in the State's agriculture as it exists today.

With the establishment of the State of Israel fifty years ago, special emphasis was placed on agricultural development. Hundreds of settlements were established in the early years of the State mainly by the new immigrants who had no agriculture background. In the settling process that was based on public funds, the State made an effort to divide the resources (like plots of land and water supply) as equally as possible among the farmers. Naturally, during the years, not all of the farmers succeeded equally well; therefore, not all of them continued in agriculture. In this paper, we will attempt to explore the degree of equality in the agriculture of the State of Israel today. The information is based on the 1995 Agriculture Survey conducted by the Central Bureau of Statistics, which contained a sample of approximately 4000 active farms. We also made use of data from the 1971 and 1981 Agriculture Censuses for mapping changes in inequality in family farms over the years.

The size of the farm is measured for each active farm by the Gross Value Added (GVA). The GVA is calculated for each farm by multiplying the various physical data (land, water and labor) that were reported in the questionnaire by an average coefficient.

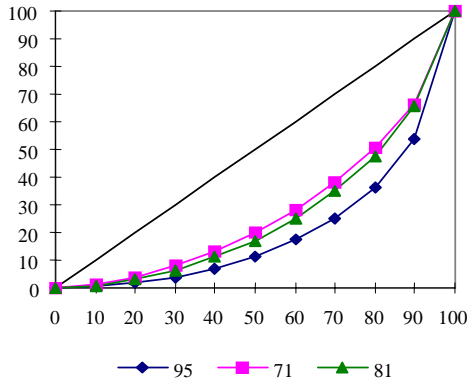
There are several types of localities in Israel; therefore, a separate calculation was made for each type of locality. Each type of locality was divided into decile groups. After the distribution into deciles, a Lorenz Curve was created and the well-known Gini Index calculated.

The main results of our analysis were as follows:

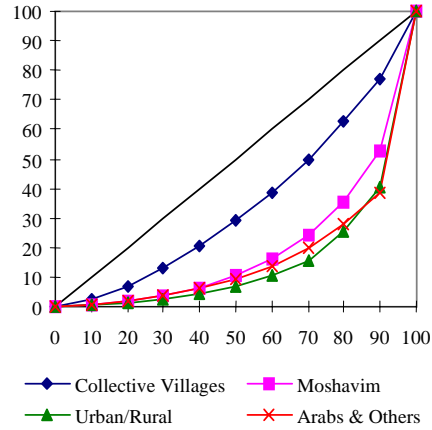
1. In 1995, the **Kibbutzim** — rural localities in which production and most of the consumption is collective — were more equal in size (Gini index = 27.8 percent) than family farms (Gini index = 59.9 - 69.8 percent).
2. In **family farms**, there was a relatively small difference in the farm distribution by size. In the Moshav — a rural locality consisting of family farms — the Gini index was 59.9 percent. In other types of localities and small villages, the Gini Index was 69.8 percent in Jewish farms and 67.4 percent for non Jewish farms.
3. **Inequality of the family farm** grew significantly over the past 25 years, from a Gini Index of 44 percent in 1971 to Gini Index of 58.6 percent in 1995 (in 1981 the Gini Index was 52.1 percent) with regard to the GVA and water supply. This could indicate that the policy of distributing equal size farms did not last as long as expected. It remains to be seen to what extent the enormous increase in farm productivity followed by decrease in farm output prices contributed to the increase in the inequality of the family farms.
4. Another interesting finding is that there is no great difference in the distribution by type of farm. Among farms dealing in crops, orchards have a Gini Index of 78.2 percent, flowers and nurseries

have a Gini Index of 71.9 percent and vegetables and field crops have a Gini Index of 80.4 percent. In the livestock category, the cattle and poultry branches had Gini Indexes of 70.7 and 75.9 percent, respectively.

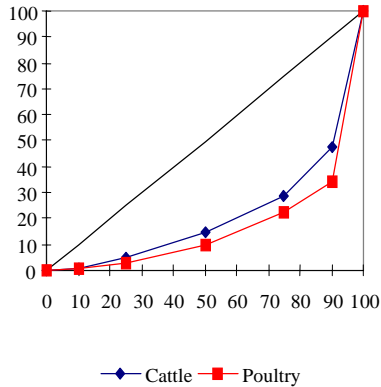
**Figure 1. Lorenz Curve Family Farms, 1971-1995, Gross Value Added**



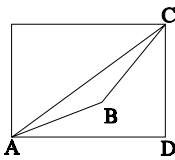
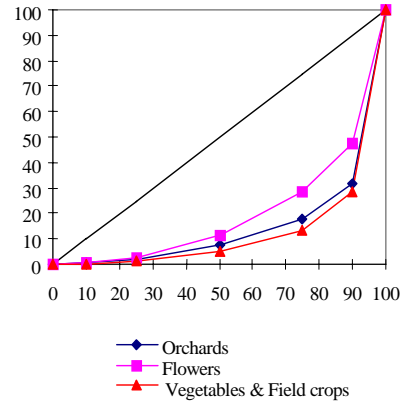
**Figure 2. Lorenz Curve 1995 by Farm Type**



**Figure 3. Lorenz Curve Livestock**



**Figure 4. Lorenz Curve Crops**



**Clarification:** Gini Index = The area of the triangle DABC/DADC

A more rigorous definition can be found in "A Falk Institute for Economic Research in Israel — A Critique of Poverty Measurement" by Shlomo Yitzhaki.