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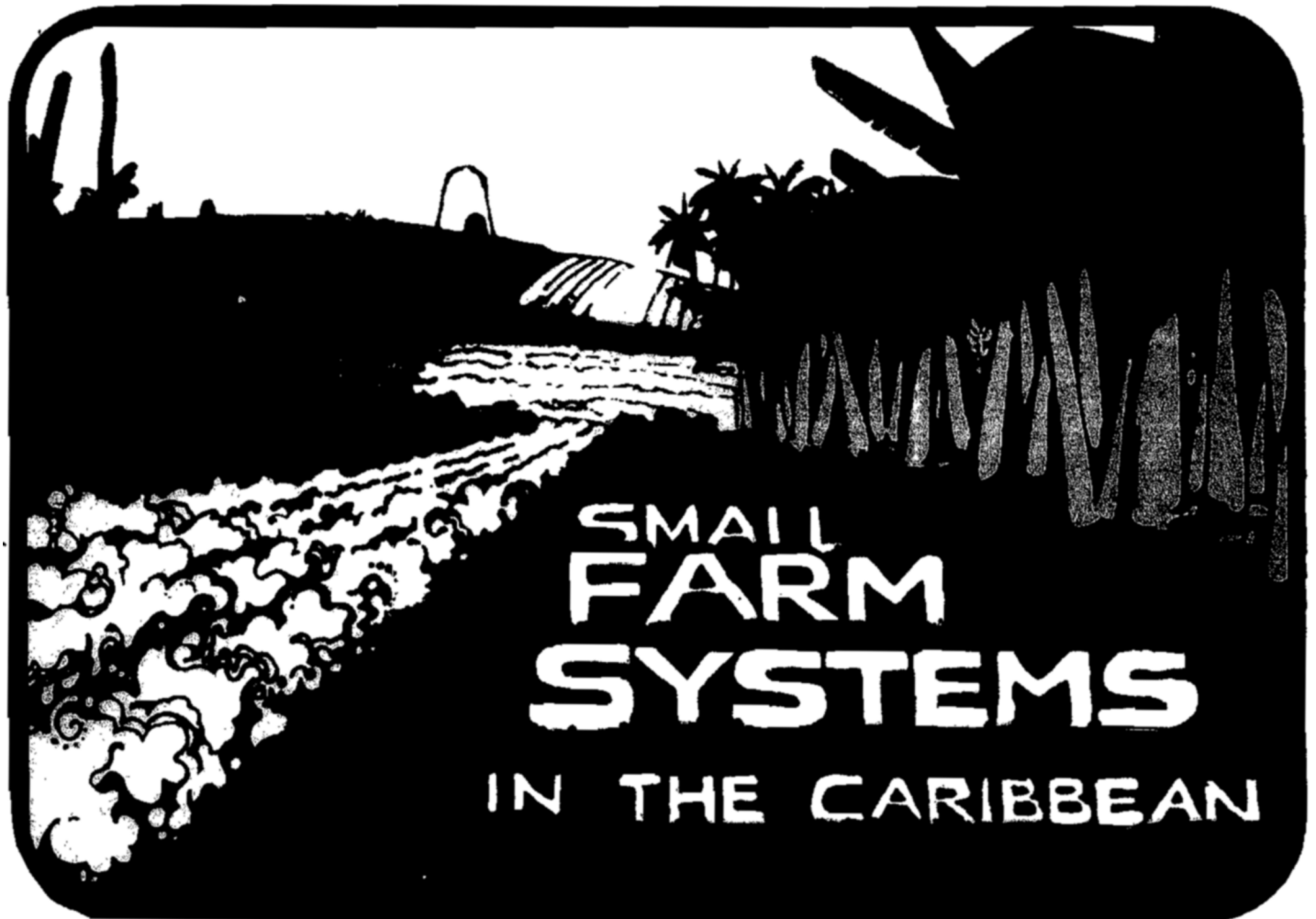
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# PROCEEDINGS

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# Potentials for Beekeeping Expansion in the Caribbean

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The advantage of increased beekeeping is that it is a small-scale farm and rural activity which can be established at low cost, and does not require private land ownership at all.

In the Caribbean, the Dominican Republic is by far the largest honey producer, with substantial production of beeswax, both of which move into the overseas market, generating hard currency. The recent development of pollen export in that country is another important source of foreign currency.

A first step required is the development of a source of

package bees and queens, and the needed hardware for hives and associated activities.

A second and major step is to inventory the local nectar and pollen plants, as well as time of nectar flow. Bees make honey from nectar, not pollen as a forester erroneously reported in a U.S. Department of Agriculture report. The first author has prepared such a study for Puerto Rico, and a preliminary one for the Caribbean area.

Beekeeping in the Caribbean occupies a rather low level among the priorities of the area. Handicapped by the fact that it is rarely a large and visible employment creator, and most often the activity of small farmers, it receives little attention.

Symbolic of the lack of concern with this area of agriculture was the report of the U.S. Department of Agriculture which had a scientist at the Institute of Tropical Forestry in Puerto Rico write of a tree that "... its flowers attract bees that make honey from its pollen." As far as the world of beekeeping knows, honey is made from nectar, never the pollen.

The status of beekeeping varies. The Dominican Republic is probably the largest honey and beeswax producer in the Caribbean, and, under the direction of a German food technologist, is now exporting pollen, 109 tons in 1983. The Dominican Republic prohibits the importation of bees and bee products, which is no great problem as the country has good production of queens and package bees. In addition the Salesian Fathers agricultural school at Vega has an excellent training program in beekeeping, which is very pragmatic and practical.

In Puerto Rico, the law prohibits the importation of more than one queen and thirty workers. This law is of questionable value in Puerto Rico, as there is no real bee industry on the island, and no queen and package bee production. Until such an industry is established, importing bees from the state inspected hives of the United States would be a relatively safe procedure. Limiting the importation of bees is hurting the expansion of the industry. Israeli agriculturists on the south coast of Puerto Rico were anxious to expand their bees recently and ordered bees from Georgia. Regrettably the law intervened. There are less than 100 beekeepers in Puerto Rico. Most of the honey used on the island is imported from the Dominican Republic, the United States and some European countries.

Pollen is of value as a secondary crop. Currently Spanish pollen in the United States retails for about \$5 a pound. In the Dominican Republic this crop has gained momentum from the work of an entrepreneur who provides beekeepers with hives and equipment, then is repaid by the beekeepers from the sale of pollen. The pollen company sent its leader to the United States to learn the import requirements for drying and preparation. The factory, small but efficient, follows the recommendations of the

Food and Drug Administration as to cleanliness and purity, and ships to the United States without problem.

There are several parallel steps that can be followed to expand the bee industry on the islands of the Caribbean. First, a source package and queen bees is essential. For smaller regions it is fairly impractical to expect local production. In such cases it is recommended that the importation of inspected bees be permitted from the nearest disease-free source, either the United States or possibly the Dominican Republic.

At the same time one or two persons, depending on the population to be served, should receive some practical training in all aspects of beekeeping, particularly management skills. The University of Georgia has an excellent one year program which would meet this need.

Another basic need is the preparation of a chart of the nectar and pollen sources, time of blooming and locale of the plants. We have begun this study for the Caribbean region, and plan on expanding it as the opportunity arises to visit other islands. The first author has completed a detailed study of this nature for Puerto Rico. This information is of great help to the beekeeper in planning his year's activities. There is usually a lull in honey production during the dry season, but with careful management the bees can come through in good shape.

A secondary benefit from beekeeping, in addition to providing the small grower with a supplemental source of income and additional nourishment for his diet, is the increase in many crops from the pollinating activities of bees. The range of plants they work is huge. The cucurbits particularly profit from beekeeping activities.

A source of the needed hardware is also vital. Larger islands, such as the Dominican Republic, can produce their own equipment, from head veils to hive bodies and smokers. Smaller countries must depend on importing such equipment from outside. The average cost of a beginning set-up for one hive would range from about \$75 to \$100, a modest sum. In the absence of a private group, local governments could consider some small loan program to allow rural inhabitants to borrow enough for three or four hives, and allow those already in beekeeping to expand.

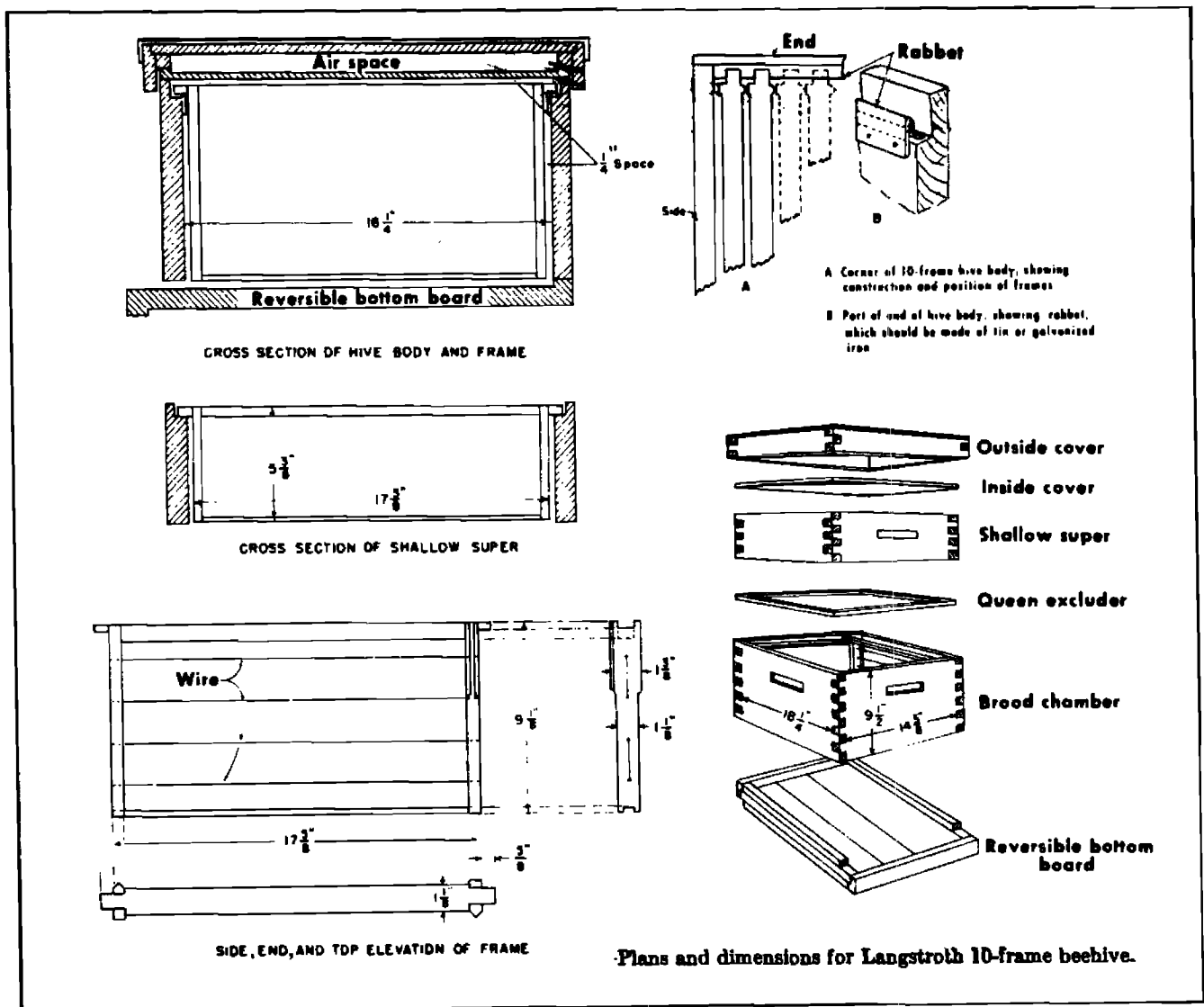
The formation of community beekeepers into active organizations to discuss problems and goals is an important function and

is best suited to the extension service programs. Contests for honey, even cooking contests to encourage the use of honey locally, contribute to the strengthening of local bee industry. When needed, posters should be distributed, whether to extol beekeeping and its contribution to agriculture as well as income and nutrition, or to indicate the presence of problems, such as the wax moth.

An outstanding source of information on tropical beekeeping is the International Bee Research Association, Hill House, Gerrards Cross, Bucks SL9 0NR, England. Their series of leaflets on tropical beekeeping is excellent. For the organizers of beekeeping programs, the leaflets for beekeepers are particularly valuable, covering topics from marketing of bee products to education aids on apiculture, and much more.

The Caribbean Food Crops Society could play a major role in the development of beekeeping in the Caribbean. As originally envisaged, those needing technical help would apply to the Society, which in turn would provide a specialist, and arrange for transport grants, while the host country would provide quarters and meals for the visiting expert. This sort of an approach would lower costs greatly, while expanding available help to the smaller countries.

In summation, the investment of small amounts of money can bring about an increase in beekeeping, a small scale activity of greatest benefit to the small grower. Increased income, production of honey, a highly marketable product, and secondary products, beeswax and pollen, are all within the grasp of the countries of the Caribbean.





BN-3080

—Worker, queen, and drone bees.

U.S. Department of Agriculture drawings

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