

"We (Queensland Agricultural Journal) shall be very pleased to hear that Mr. Campbell's experiments achieve such a result, as it would be of exceedingly great value to Australia generally; and it would doubtless give rise to an extensive business in Papua, where there are large tracts of land on navigable rivers notably the Kemp Welsh River, covered with a luxuriant growth of this hitherto pest of the planters. And it must not be forgotten that native labour in New Guinea is cheap, plentiful and reliable."

There are no doubt many in Malaya who will also be interested to hear of further results in this direction.

T. F. C.

A Remedy for Bean-Fly.

In the last issue of the Garden's Bulletin page 205, mention was made of a beetle attacking the Lima Beans in the Economic Gardens. Other material was collected and forwarded to the Imperial Bureau of Entomology. In his reply the Director states:—"The fly is *Agromyza phaseoli*, Coq. a widely distributed pest of beans. The beetle belongs to the family Eumolpidae, the species being *Patria flavopustulata*, Baly.

"With regard to the methods for dealing with bean-fly, the remedies of which I enclose particular have been adopted with success in Australia.

"The action of an appliance for destroying *Agromyza phaseoli* depends upon a habit which this fly has of making a rapid upward flight when disturbed. In its simplest form it consists of a sheet of window glass set in a light wooden frame, with a curtain of calico about 6 in. wide attached to three of its sides, and a pair of wooden handles on the upper side. The under side of the glass is lightly sprinkled with kerosene, which spreads into a thin film over the glass. The frame is then carried over the young bean plants with the open side in front, and about 9 or 10 in. from the ground, the rear part of the glass just clearing the young plants. The advancing sheet of glass passes over the flies before they rise, and as they do so directly upwards, they strike the glass, become saturated with kerosene and die instantly.

"A larger horse-drawn apparatus, constructed on a similar plan, is suitable for larger areas. After about nine days the flies are less destructive, and as they prefer young beans, a good trap may be prepared by sowing a row of beans in the near vicinity 9 or 10 days after the crop is planted.

"The rows of beans should be covered about four days after planting the seed with a light layer of sawdust, which should then be wetted with kerosene emulsion applied with a watering-can. When the plants are in the second leaf, a second dressing with this emulsion should be given. It should be made with 1 lb. ordinary soap dissolved in about 2 gals. of boiling water. When

dissolved, sufficient cold water should be added to make 4 gallons and three-quarter pint of kerosene should be well stirred in. The emulsion must be warm when used and must be kept well stirred.

"In every case it is advisable that the beans should be burned after the crops have been gathered."

T. F. C.

Castor Oil.

The question as to the market possibilities of Castor Oil production from locally grown crops is again the subject of much discussion. "Tropical Life" Vol. XV, No. 12 contains an article in which the problem is considered from a commercial point of view, and from which the following extract is taken. Methods of cultivation are also given. "Taking the American and English figures as a guide, we see then that the price in 1909 was somewhat about 4s., and in 1910 in the vicinity of 5s. 4d. per bushel.

"The cost of production can only be arrived at according to locality; it would be somewhat similar to the cost of producing an acre of maize except that the harvesting is much more expensive. This is accounted for by the fact that the pods do not ripen evenly and the crop has to be gone over several times in order to harvest it. An estimate for producing, harvesting, bagging, and marketing, a 20 bushel crop of castor beans, allowing 10s. per annum for rent would not be less than £5 per acre.

"From the above figures farmers will be able to draw their own conclusion as to whether this crop can be considered payable. Furthermore, it may be stated that castor oil plants cannot be grown continuously on the same land for any lengthy period, because the crop exhausts the soil rapidly; so much so that some authorities state that it should be grown only once in five or six years on the same land."

T. F. C.