THE POLLINATION OF THE OIL PALM
(*ELAEIS GUINEENSIS.*)

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The first step in the propagation of superior types of oil-palm is evidently the elaboration of a method for growing trees of known parentage. Inasmuch as vegetative propagation is impossible the need of controlling pollination is evident. The oil-palm is monœcious, male and female spadices occurring on the same tree but at different periods; bisexual inflorescences are rare (cf. I). Inasmuch as the flowers are visited by numerous weevils, it was thought probable that pollination was normally dependent on insects. Proceeding on this assumption, calico bags were employed in the first instance to prevent cross-pollination. It was found, however, that even when the flowers were not artificially pollinated, fruits developed. It became evident therefore that not only were insects not essential for pollination but that a new type of bag was required. The calico bags were accordingly replaced by green Willesden canvas bags treated with mineral oil. In order to facilitate inspection of the spadices without exposure, small circular windows were let into the bags. The bags, which were approximately twice as large as the inflorescences, were fitted some four days before the stigmas became receptive. Before bagging the spathe and encumbering leaves were cut away. The spadix when exposed was washed with 0 1 per cent. formalin and the bag securely tied over a grease band on the peduncle. Supports were placed inside the bag in order to prevent it touching the flowers. When the stigma were judged to be receptive, the window was removed and the pollen introduced through a glazed paper pipe. The pollen was stored in calcium chloride desiccators. The controls, which were not pollinated, were opened when the stigmas became receptive as in the case of the inflorescences that were pollinated. The bags were removed when the stigma withered, and all immature flowers removed.

The results which are shown in Table I. seem to indicate that the method is satisfactory and that the pollen may be stored for a very considerable period. The paucity in the number of inflorescences handled is due to the fact that the method finally elaborated was not ready until the close of the autumn flowering cycle. The results are presented as they appear to be conclusive. It is interesting to note that self-sterility is not apparently an obstacle to self-pollination.

TABLE No. 1.

TREATMENT	No of Spadix	No. of fruits developed	Age of pollen in days
Controls Not Pollinated	1	—	—
	2	—	—
	3	—	—
	4	—	—
	5	—	—
	6	—	—
Pollinated	7	570	16
	8	54	3
	9	830	1
	10	338	30
	11	17	60
Self-Pollinated	12	517	22
	13	60	84
	14	118	80

LITERATURE CITED.

(1) Mason, T. G. and Lewin, C. J. (1925). Sex and Correlation in the Oil-Palm *Elaeis guineensis*. Annals of Applied Biology.—*Tropical Agriculture*, Vol. III., No. 10.