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Future Oil Palm Seed Gardens?

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Commercial oil palms are hybrids between selected duras (D) and pisiferas (P). Duras have fruits with a thick shell while pisiferas are without shell and commonly female sterile. DxP, or tenera, are thin-shelled and, if between bred D and P populations, uniformly heterotic for yield. Commercial hybrid seeds are produced by isolating the female inflorescences of selected duras with pollination bags and, at anthesis, pollinating with the desired pisifera pollen. The isolation and pollination must be meticulous to prevent extraneous pollen contamination. The work is tedious and time-consuming. Many workers are required to produce the millions of seeds required by the industry each year. Less labour will be needed if the hybrid seeds are produced by controlled open pollination. For this, extraneous pollen is excluded by isolating the seed garden from (other) palms without, and ablating the male inflorescences of the palms within. For new dura seed gardens, isolation can be by planting the seed garden amidst other crops, as olfactory deterrents, or by ringing them with sterile pisiferas or oleifera x guineensis hybrids. For existing seed gardens isolation requires some labour, but far less than for controlled pollination, and can be further reduced if suitable male gametocides and male-sterile dura palms are developed.

Keywords: Elaeis guineensis, oil palm, DxP, seeds, pollinations.