The main aim of the present research work is to evaluate the development, in natural conditions, of 21 colonies of *Apis mellifera scutellata* according to the variables egg-larvae and pupae, allowing to classify them in three groups: superior (homogeneous), inferior and intermediary groups. This research has been carried out in a natural population of *Apis mellifera scutellata* at the Municipal District of Mandirituba, Paraná. The population of the colonies was carried out according to Langstroth’ beehives model during the period of July to November 1992. Rejuvenation of the queens was carried out according to the method of KURLETTO (1976) modified by PEGORARO et al. (1996). A monthly mapping of the honeycombs from the 21 colonies took place during the period of May 1994 through April 1995 by a methodology adapted from AL-TIKRITY et al. (1971). For this purpose, during the month of May 1994, three aliquots of an energetic artificial food composed by 600 mL of a syrup containing two parts of granulated sugar, one part of distilled water and 5% of honey were administered to each colony. To separate the homogeneous groups of the superior (GH) and inferior (Gh) colonies, in regard to the variables of egg-larvae and pupae, the non parametric test of Friedman was used. The best classified colonies were considered with larger aptitude to produce.

**Key Words:** Apis mellifera, production.