

Monthly changes in various drone characteristics of *Apis mellifera ligustica* and *Apis mellifera syriaca*

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This study was conducted to investigate drone rearing activity and semen production of *Apis mellifera ligustica* and *Apis mellifera syriaca* drones, and also to monitor the tendency of worker bees of both subspecies towards egg laying under semiarid conditions. The results showed that there were no significant differences in drone brood production between both honeybee subspecies throughout the study period. Honeybee workers of both subspecies needed significantly shorter time to start egg laying during February and March in comparison with the time needed for laying workers during the remaining months of the study period. Syrian bee workers started egg laying earlier than Italian workers. Drones from laying workers were much smaller and produced less sperms with higher abnormalities than normal drones. Drones produced from queens in May were heavier and produced more sperms with lower abnormalities than those produced during other months. The drone brood rearing of both subspecies tended to follow the same general cycle in 2005 and 2006. The study suggests that virgin queens would have a more chance to receive enough amount of viable sperms from drones in April and May in semiarid Mediterranean conditions.

