



# Apimondia

International Federation of Beekeepers' Associations

<b>Apimondia Working Group number</b>	<b>AWG 7</b>
Name	Queen rearing and impact on the genetic variability (and health) of productive bee colonies
Subject	Do selection, commercial queen rearing at a large scale, instrumental insemination and damage to feral colony populations due to varroa affect the genetic variability (and the health) of productive bee colonies?
Date of creation	25/10/2010
Place of creation	Sao Paulo - Brazil
Scientific Commission(s) involved	Biology + Bee Health + Technology
Regional Commission(s) involved	Five Commissions
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Document(s) to provide	A document with useful information for beekeepers
Action(s) to do	Submitted abstract in Apimondia 2011 Congress (Argentina)
Digital Kit to provide	
Dead line	
Target(s)	Beekeepers, Beekeeping newspapers, beekeeping web portals
Recommendation(s)	Migratory beekeeping and especially queen trade in the opening world markets are contributing factors to loss of honey bee genetic diversity. In addition the transfer of invasive pathogens and pests are real threats as our

	<p>recent past has shown. Hence, the increased globalisation is one of the possible factors in the current bee losses, experienced nearly worldwide. Loss of genetic diversity is connected with the loss of characters that favour adaptation of honey bees to their local conditions. To safeguard bee biodiversity requires close cooperation across a range of scientific and beekeeping disciplines. Management practices are required that incorporate selection for disease tolerance, while considering genetic diversity and vitality criteria. Conservation of local honey bees demands for local agreement to arrange protected and isolated mating station. Legal rules have to be adapted to this direction.</p> <p>The International Federation of Beekeepers' Associations (Apimondia) can contribute in many ways to this means. First and foremost the dissemination of information concerning the necessity of and the requirements for conservation of local adapted bee populations. Current experience from several attempts to facilitate conservation strategies, have demonstrated that protection of honey bee populations is possible. Adding value to local breeds can happen via slow food certification. Making honey costumers aware that protecting genetic diversity is a valuable contribution to insure food safety, is an obvious task. Specific guidelines for breeding can be provided with the contribution of the related Apimondia working group.</p>
Observation	

# QUEEN REARING AND SELECTION PRACTICES AND THEIR IMPACT ON THE GENETIC DIVERSITY AND FITNESS OF HONEY BEE COLONIES

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The Apimondia working group on honey bee diversity and fitness (AWG 7) was created on October 25, 2010 as a Scientific Working Group of Apimondia. The aim of this AWG is to collect information on honey bee queen rearing practices, and examine their impact on the genetic variability and general health of honey bee colonies. The AWG consists of 23 members from 16 different countries. The world wide survey being conducted by this AWG is focused on gathering information on how selection methods, instrumental insemination, disease management procedures, introduction of exotic bee lines, queen replacement strategies, and loss of local colony populations due to introduced parasites and pathogens, affect the ability of our bees to survive and reproduce. The information collected will contribute on an international level to our understanding of how apiculture practices affect honey bee genetics, health and productivity.