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|  | **Australian Certified Organic Standard (ACOS)** | **National Standard** | **Korea** | **EU** | **USDA NOP**  NB: Apiculture is currently covered by USDA NOP Livestock Standards. However, the National Organic Standards Board has made the below recommendations (2010) to incorporate apiculture-specific standards into the NOP. |
| **Conversion** | 12 months | 12 months | Minimum 12 months | 12 months | 12 months |
| **Sources & management of stock** | | | | | |
| **Bee sources** | Bees should be from organic sources. Where not possible, they can be sourced from:  1) Colonies confined to brood chambers only covered by a queen excluder.  2) Divided colonies from conventional hives on brood combs only.  3) Package bee colonies  4) Nucleus colonies  5) Captured swarms on brood combs only.  6) Queen bees compliant with this Standard throughout the entire production season. | Queens are encouraged to be from organic sources. | Bees should be sourced as organic; use of non-organic bees only by permission of the Certification Body. |  | Expansion can be done by:   1. Purchase of organic hives. 2. Splitting of existing colonies. 3. Purchase of non-organic bees which undergo a 12-month conversion period. |
| **Replacement bees** | Existing colonies may be converted to organic. Replacement bees should be organic where available. | Where queen bees, package bees or nucleus colonies are from non-organic sources, the first extraction cannot be sold as organic. |  | Bees may be replaced at a rate of 10% per annum by non-organic queen bees and swarms if they are placed in hives with organic combs or foundations. | Bees may be replaced at a rate of 25% per annum by non-organic bees which have been managed organically for the last 60 days. |
| **Wing clipping** | Wing clipping is prohibited. | Wing clipping is prohibited. |  | Wing clipping is prohibited. |  |

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| **Forage/feeding** | | | | | |
| **Forage area** | Hives should not be within 5km radius of potential contamination sources such as conventional orchards and crops, livestock dip sites, urban centres, sanitary landfills, garbage dumps, contaminated water, golf courses and GMO crops. | Apiaries must be placed on sites where the operator can monitor all activities that may affect colonies. | Hives to be placed further than 3km of contamination sources. | Hives to be within 3km radius of organic nectar and pollen sources and/or vegetation/crops treated with low environmental impact methods. | Currently, all land within 3km must be certified organic (livestock standards). |
| **Supplementary feeding** | Honey and pollen must be organic; only in severe drought conditions can organic sugar be provided as a supplement. Feeding of sugar during honey flow is prohibited. |  | In drought conditions, organic sugar or honey may be provided as a feed supplement. |  |  |
| **Beehives & wax** | | | | | |
| **Wax/foundation sources** | Comb foundations are to be made from organic beeswax if available. Otherwise, wax from non-contaminating sources (i.e. not treated with prohibited substances) is to be used. |  | Beeswax may be sourced from non-contaminating sources if not available as organic. | Wax for new foundations must come from organic sources. | After conversion, all wax/foundation must be organic. |
| **Hive materials** | Hives to be made from natural materials. Use of plastics must be demonstrated to not pose a contamination risk. | Particleboard and/or toxic wood preservatives are prohibited. | Hives to be made from natural materials. | Hives to be made from natural materials. | Treated timber prohibited. Hives to be made of non-synthetic materials, but plastic foundation may be used if dipped in organic wax. |
| **Wax as a certified product** |  | Wax will only be certified if it comes from cappings from organic honey, OR melted down combs from certified organic foundation. |  |  |  |

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| **Healthcare** | | | | | |
| **Allowed disinfectants/ disease control agents** | Caustic soda, lactic, oxalic, or acetic acid, formic acid, sulphur, plant extracts, essential oils.  Other products require assessment by the Certification Body. Steam and flame also permitted. | Caustic soda, lactic, oxalic, acetic acid, formic acid, sulphur etheric oils, *Bacillus thuringiensis* (Bt), heat (flame, hot water), wax or paraffin dipping. | Lactic acid, oxalic acid, acetic acid, formic acid, sulphur, natural ether oils (menthol, eucalyptol, camphor), *Bacillus thuringiensis* (Bt), vapour, flame. | Formic acid, lactic acid, acetic acid, oxalic acid, menthol, thymol, eucalyptol, camphor, natural products (e.g. propolis, wax and plant oils). | Formic acid, thymol camphor, lactic acid, acetic acid, oxalic acid. |
| **Synthetic/prohibited treatments – *only used if imminent health is threatened*** | Hives can go through one year reconversion **ONLY if tests show no contamination in hives and honey after treatment.** | Bee products cannot be sold as organic for one year. Foundation wax must be replaced after use. | Once used, the beekeeping products cannot be sold as organic. Hives must go through one year reconversion. | Hives to be isolated after use. Foundation wax to be replaced with organic wax. One year reconversion. | Hives to be isolated after use. One year reconversion. |
| **Male brood destruction** | Only for *Varroa* control. |  |  | Only for *Varroa* control. |  |
| **Harvest/ extraction** | | | | | |
| **Repellents** | Synthetic chemical repellents prohibited. |  | Synthetic chemical repellents prohibited. | Synthetic chemical repellents prohibited. |  |
| **Smokers** | Only natural, uncontaminated materials to be used as smoker fuel. | Only natural, uncontaminated materials to be used as smoker fuel. |  |  |  |
| **Disinfectants/botanical compounds** | Permitted disinfectants/botanical compounds must not be used within 30 days of honey flow. | Permitted disinfectants/botanical compounds must not be used within 30 days of honey flow **OR when supers are on the hive.** |  |  |  |
| **Brood comb** | Destruction of/extraction from brood comb prohibited. |  |  | Destruction of/extraction from brood comb prohibited. |  |

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| **Postharvest** | | | | | |
| **Storage/handling temperature** | Honey must be stored below 45⁰C. | Honey not to be heated above 45⁰C. | Honey to be stored at low temperature and not be concentrated by heat. |  |  |
| **Residues** | Animal medicines should not be detected at 10%.  **Organosynthetic agricultural chemicals should not be detected** |  |  |  | NOSB rec: residue of a prohibited material in products should not exceed 5% of the EPA's tolerance. |
| **Disasters/Exemptions** | | | | | |
|  | In times of drought, fire or lack of floral availability, application to be made to the Certification Body outlining alternative foraging areas/supplementary feeding. The first extraction afterwards to be sold as non-organic. | As per the ACOS. Feeding is only permitted with organic honey tested to be free of American Foulbrood, or organic sugar. |  | As per the ACOS. |  |
| **Other** | | | | | |
|  | Over any five-year period, all hives in the system must be inspected by Certification Body inspectors. |  |  |  |  |