Member Training

info@livecertified.org for questions
HISTORY OF LIVE

GUIDELINES FOR INTEGRATED PRODUCTION OF GRAPES*

REPORTING REQUIREMENTS

HOW TO JOIN

*Information adapted from IOBC Guidelines for Integrated Production of Grapes, 2nd Edition 1999
History of LIVE

- Grassroots grower-based organization formed in mid-90’s
- Incorporated as 501(c)3 in 1999
- Salmon-Safe partnership formed in 1999
- Grown to include both Oregon and Washington (2006)
- Winery certification program developed in 2008
- Currently 293 vineyard members covering over 26,461 acres
- 9 Board members and 4 Technical Committees
Definition of Integrated Production in Viticulture

The economical production of high quality grapes, giving priority to ecologically safer methods, minimizing the undesirable side effects and use of agrochemicals, to enhance the safeguards to the environment and human health.
Objectives of Integrated Production in Viticulture

➢ To promote viticulture that respects the environment, is economically viable, and sustains the multiple functions of agriculture, namely its social, cultural, and recreational aspects

➢ To secure a sustainable production of healthy grapes of high quality and with a minimum occurrence of pesticide residues

➢ To protect the farmers' health while handling agro-chemicals
Objectives of Integrated Production in Viticulture

- To promote and maintain a high biological diversity in the ecosystem of the vineyard and in surrounding areas.
- To give priority to the use of natural regulating mechanisms.
- To preserve and promote long-term soil fertility.
- To minimize pollution of water, soil and air.
Professionally trained, environmentally and safety-conscious growers

- Vineyard managers participating in LIVE must be trained annually in all aspects of Integrated Production by attending locally organized training courses (and/or reviewing this document)

- Should have a thorough knowledge of the aims and principles of Integrated Production and of LIVE guidelines and standards

- Should have a positive and sympathetic attitude to environmental conservation and human health and safety
Conserving the Vineyard Environment

A balanced and natural vineyard environment with a diverse agro-ecosystem of plants and animals must be created and conserved.

- 5% Minimum Ecological Compensation Zones
  - Non-inputs of agrochemicals
  - Promote biodiversity of flora and fauna
  - Promotes beneficial insect habitat

- Green cover in winter is mandatory (other types of cover are allowed in areas with less than 15 inches of rain per year). Permanent green cover is encouraged.

- Alternating mowing regime leaves a food source for beneficials and conserves fuel
Trout lilies growing in vineyard alleyway

Native forbs growing in vineyard alleyway

Examples of Vineyard Floor Biodiversity
Site, Rootstocks, Cultivar and Planting Systems for New Vineyards

- Frost pockets and poor drainage should be avoided
- Disease resistant and diverse cultivars, rootstocks, and clones should be chosen
- Certified plant material should be used
Site, Rootstocks, Cultivar and Planting Systems for New Vineyards

Training systems
Preference must be given to training systems facilitating the application of cultural (non-chemical) techniques favoring:

- Vine longevity
- Biological diversity (botanical and zoological)
- The protection of soil against erosion
- Reduction of conditions favorable for the development of insect pests and diseases
- A more efficient application of pesticides
- Reduction of the amount of pesticides applied
Soil Management and Nutrition

Soil Analysis and Preparation

- Soil analysis should be done to learn the texture, organic matter, and macro nutrients
- Basic fertilization with organic and/or mineral components if necessary
- Thorough elimination of sources of disease inoculum (i.e. roots of old vines)
- Control of perennial problem weeds by rotating methods to avoid weed shifts or resistance
Soil Management and Nutrition

Structure, depth, fertility, fauna and micro-flora of the soil must be conserved and nutrients and organic matter recycled where possible.

- Maximum nitrogen application and period of application are defined regionally. See *LIVE Green and Yellow Lists*

- Encouraged to reduce nitrogen whenever possible to minimize leaching

- Application of P and K should not exceed 10% of the recommended amount given in the soil/plant analysis

- Foliar sprays should be calculated and formulated to match the deficiency problem
Alleyways and Weed-free Strip

- Aim to avoid soil erosion and compaction without detriment to yield and quality

- Maintain and enhance plant species diversity in the vineyard in order to increase ecological stability

- Minimize the use of herbicides
  - Use of cultivation where appropriate
  - Green cover
  - Rotation of modes of action (MOA) and methods of weed control
Irrigation

- Irrigation must be applied according to need (vine symptoms, ET data, etc.)

- Excessive soil moisture may result in leaching of nutrients and is wasteful

- Irrigation after véraison is restricted to the maintenance of plant health and promotion of fruit quality

Monitoring soil moisture and ET are needed to determine when and how much to irrigate. Photo by Patty Skinkis
Canopy Management

- Grapevines must be trained and pruned to achieve a balance between growth and regular yields and to allow good penetration of light and sprays.

- Proper ventilation of the grape zone in humid areas is an important and mandatory prophylactic measure against diseases (especially Botrytis).
Integrated Plant Protection

- All available cultural prophylactic measures (indirect plant protection) must be applied before or concurrently (as is appropriate) to direct control measures are used.

- At least two key beneficial insects must be protected and encouraged.
Integrated Plant Protection

Indirect Plant Protection

- Resistant rootstocks and appropriate cultivars
- Appropriate choice of planting and training systems
- Avoidance of excess nitrogen
- Canopy management
- Green cover
- Beneficial insects
Integrated Plant Protection

Risk Assessment and Monitoring

- Populations of pests and diseases must be monitored and recorded regularly

- Approximate infestation levels are determined

- Decision to use direct plant protection must be based on thresholds of existing and validated forecast models
Integrated Plant Protection – Surveying for Beneficials
Integrated Plant Protection

Direct Plant Protection

Priority must be given to natural, cultural, biological and highly specific methods of pest, disease and weed control, and the use of agrochemicals must be minimized

- Use of pesticides only when justified

- Most selective, least toxic, least persistent product or control procedure, which is as safe as possible to humans and the environment, must be selected. See LIVE Green and Yellow Lists
Selection of Pesticides

Pesticides are evaluated by Technical Committee on a regular basis based on the following criteria:

- Toxicity to man
- Toxicity to key natural enemies
- Toxicity to other natural organisms
- Pollution of ground and surface water
- Selectivity
- Persistence
- Incomplete information on the pesticide
**Integrated Plant Protection**

**Not Permitted**

- Pyrethroid insecticides and pyrethroid acaricides
- Organochlorine insecticides and acaricides if safer alternatives exist
- Acaricides toxic to beneficial mites
- Toxic, water polluting or very persistent herbicides (e.g. Diquat, Paraquat)
- Copper as a fungicide (as of 2015)
- Items on Salmon-Safe *High Hazard List*
Integrated Plant Protection

Permitted With Restriction

- Broad-spectrum organo-phosphate and carbamate insecticides
- Acaricides moderately harmful to Phytoseiid mites
- Targeted fungicides that show low residual persistence but high efficacy (maximum of 3 applications per season and not in succession, so that predatory Phytoseiid mites are not affected)
- Sulfur (use must be limited so that predatory Phytoseiid mites are not affected)
- Residual herbicides with dt90 < 1 vegetation period
Efficient and Safe Spray Application Methods

- Spraying equipment and spraying conditions minimizing the health risk of the operator and drift are preferred.

- Sprayers have to be calibrated annually by the grower and serviced by a recognized agent at least every four years.

- When new sprayers are purchased, low pressure/high volume or tunnel sprayers should be selected where possible.
3rd Party Inspection

- Vineyard members are visited in years 1 and 2 and every 3rd year thereafter (For winery program, year 1 and every 3rd year thereafter)

- Inspection fee is only billed in years inspected

- Inspector looks for compliance with LIVE standards
  - Checklist review
  - Mandatory recordkeeping is audited
  - Vineyard walk
  - Biodiversity and ecological infrastructures
LIVE Reference Documents

- LIVE Green and Yellow Lists (formerly LIVE Passport)
  - Key Pests
  - Key beneficial insects to be protected
  - Regional information such as rainfall data
  - Cultural controls
  - Regional considerations
  - Reviewed and updated annually
  - Chemical controls to be used only after (or in conjunction with) cultural methods have been exhausted and with valid reason and documentation
Salmon-Safe

- Certification in year 1 if in compliance
- Inspection is included at no extra cost and is performed simultaneously with LIVE inspection
- Salmon-Safe *High Hazard List* available on livecertified.org
Reporting Requirements

- LIVE Checklist
- Input Reporting
  - Pesticide
  - Fertilizer
  - Irrigation
- A map outlining and inventorying your ecological infrastructures
- Soil and tissue tests
- Sprayer calibration
- Any other supporting documentation requested by the inspector, including soil, tissue, irrigation water tests, sprayer calibrations, etc.
Reporting Requirements

- All documents to be completed on livecertified.org

- Deadline of December 10th of each year

- Your property is eligible for certification after two years of membership (vineyard) or one year of membership (winery)
How to Join LIVE

➤ Navigate to livecertified.org and click the link to Sign Up on the banner image

➤ Accept terms and conditions of membership and fill out contact information

➤ Pay appropriate fees (see contract) upon receiving invoice

➤ You will be sent a username and password and a vineyard or winery management page will be created for you

➤ An inspection will be set up in the summer or fall after you enroll. You will need to complete your LIVE Checklist, as well as pesticide, fertilizer, and irrigation reporting to be reviewed by your inspector.