



Central Coast Vineyard Team

Promoviendo prácticas sustentables en viñedos
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SISTEMA DE PUNTOS POSITIVOS

Herramienta para una auto-evaluación del uso de prácticas de manejo
sustentable en viñedos

OTOÑO DEL 2001

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AGRADECIMIENTOS

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Productores de Uva de Vino

En este paquete encontrará el Sistema de Puntos Positivos™—herramienta de 1,000 puntos de auto-evaluación del alcance de las prácticas sustentables para viñedos usadas en su campo. En los últimos cinco años, docenas de bloques han sido evaluados usando el PPS y alrededor de 15,000 acres han sido ranqueados. Los puntajes se usan para educar y guiar a los productores hacia prácticas más sustentables y cuantificar la adopción y el rechazo de prácticas de alto riesgo usadas en los viñedos de la Costa Central. El PPS fue desarrollado e ideado por una asociación de productores y la colaboración de bodegas, extensiones cooperativas, educadores y asesores ambientales. El resultado final describe un viñedo sustentable en el cual se mantienen los recursos naturales y humanos.

El Sistema de Puntos Positivos (PPS) encara a un “rancho completo” para la evaluación del manejo de viñedos. El sistema promueve el balance y la diversidad biológica, tanto arriba como bajo tierra y reconoce que la existencia de suelos con buena salud es crítica en sistemas sustentables. El sistema prioriza procesos biológicos naturales sobre insumos químicos. Pero donde se usen químicos, se promueven varias técnicas que aseguren que los químicos sean lo menos destructivos, tóxicos y que sean aplicados con efectividad. Las prácticas del Sistema de Puntos Positivos™ tienen en cuenta varios aspectos sobre protección del medio ambiente asociados a la producción agrícola: proteger la calidad del agua subterránea y de superficie, minimizar la erosión del suelo, reducir riesgos asociados con el uso de pesticidas e insumos químicos, proteger la seguridad del trabajador y conservar el hábitat del viñedo.

Los productores que completan la evaluación del Sistema de Puntos Positivos™ se identifican como los “Productores Cooperadores”. Los productores que participan ayudan a seguir construyendo sobre el trabajo ya realizado por el Grupo Vitícola de la Costa Central el cual beneficia al productor individual, a la industria y a la comunidad. No se cobra nada por ser un “Productor Cooperador”. Aunque su puntaje se usa para analizar tendencias, su nombre nunca es publicado con su puntaje (todos los puntajes y la identidad del evaluado son confidenciales).

Los Productores Cooperadores se benefician en varias formas por participar:

- θ Les permite identificar áreas débiles del manejo o que necesitan mayor atención. De la misma manera, se identifican áreas donde se utilizan prácticas sustentables con éxito.
- θ Les permite documentar cambios en las prácticas, con del tiempo. El PPS puede ser utilizado como una herramienta que asiente la implementación de medidas específicas en el viñedo.
- θ Completando la evaluación los productores aprenden sobre nuevas prácticas que pueden ser utilizadas en el viñedo. Todos están de acuerdo en que el PPS es una herramienta de educación.

Además, la cooperación beneficia a la industria en varias formas:

- θ Demostrando a la comunidad que la industria es representada por productores comprometidos a mejorar las prácticas y el manejo de la producción en viñedos.
- θ Demostrando a las agencias que los productores están dispuestos a evaluar sus operaciones voluntariamente para proteger la salud de los recursos naturales y humanos.
- θ Demostrando al público que la industria se preocupa por la salud del medio ambiente y la seguridad de los trabajadores.
- θ Demostrando a otros productores que la implementación de prácticas sustentables puede ser también un éxito comercialmente.

Este paquete contiene el PPS y la hoja de puntaje (al final). Si ha completado una evaluación el año pasado, complete una evaluación para este año usando el mismo bloque. Si no está seguro, llame al CCVT (Tel: 805-462-9431). Cuando termine, envíe el puntaje por fax a la oficina (Fax: 805-462-9439). Si nunca antes completó una evaluación, llame para arreglar una cita al CCVT y un miembro irá a su oficina para ayudarlo. Este paquete además contiene una hoja para hacerse miembro del CCVT si está interesado. Gracias por apoyar al CCVT participando en este programa innovativo.

GRUPO VITICOLA DE LA COSTA CENTRAL SISTEMA DE PUNTOS POSITIVOS

Declaración: El Grupo Vitícola de la Costa Central busca identificar y promover métodos de producción que sean los más seguros ambientalmente y viticultural como económicamente sustentables, mientras se mantienen y mejoran la calidad y el sabor de las uvas de vino. El grupo sería un modelo para los productores de uva, el cual, además, busca promover la confianza del público demostrando el respeto y camaradería por los recursos naturales.

Categoría	Máximo Puntaje Total
Manejo de Pestes	200
Manejo del Suelo	200
Manejo del Agua	200
Manejo Vitícola	200
Calidad del Vino	100
Continuación en la Educación	100
Total	1,000

Ranquee su viñedo en base al total del campo o por bloque.

I. MANEJO DE PESTES

OBJETIVO: El manejo de pestes en un viñedo es dinámico. Infestaciones, problemas debido a la resistencia de las pestes y nuevas técnicas de muestreo y monitoreo requieren que cada productor determine las prácticas más seguras y efectivas a seguir en su viñedo. El objetivo es entender que pestes pueden causar daño y bajo que condiciones es probable que ocurra. Un Programa de Manejo de Control de Pestes incluye una inspección seguida en la viña buscando pestes y daños, uso de la mejor práctica que prevenga el desarrollo de la plaga o el daño de la misma y el uso responsable de técnicas de control que se apliquen sólo en caso de ser necesarias.

A. MONITOREO/MANEJO/CONTROL DE INSECTOS

Ideal: Usar métodos sustentables que disminuyan el desarrollo de insectos o el daño que puedan causar en la viña o el cultivo disminuyendo la necesidad del uso de pesticidas. Si las uvas son producidas sin el uso de insecticidas de amplio espectro, dése el puntaje máximo (51) en la Sección A.

- 7 puntos 1. Tiene alguna idea o conoce algo sobre los insectos que se han encontrado o detectado (o que muy posiblemente se lleguen a encontrar) en su viñedo?
- 4 puntos 2. Sabe algo sobre los ciclos de vida de las plagas de su viñedo?
- 4 puntos 3. Tiene alguna idea sobre los insectos predadores naturales y benéficos que atacan o parasitan las plagas de su viñedo?
- 4 puntos 4. Anota o tiene acceso a datos del tiempo y registros de grados-días (grados de temperatura acumulados) durante la estación?
- 4 puntos 5. Se lleva a cabo un programa de monitoreo para detectar la presencia y determinar la dinámica de poblaciones de las plagas de su viñedo?

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- 4 puntos 6. Cuando es posible, se remueven las diferentes especies de plantas que se alternan y que hospedan a las plagas (p.e. el pasto Bermuda y elderberry para el picudo saltador; mostaza para el **orange tortrix**)?
- 4 puntos 7. Se elige el cultivo de cobertura dependiendo de la situación del problema de nematodos (p.e. con lesión en las raíces o nematodos en cítricos se elige el brome blando o cebada—de invierno como cultivo cobertor que inhibe estos nematodos)? Si en su viña no hay de estos nematodos, dése 4 puntos.
- 4 puntos 8. Se usan trampas de feromonas, cintas pegajosas para el monitoreo de insectos?
- 4 puntos 9. Se fumiga en base a umbrales de niveles económicos y momento apropiado de control, durante la apertura del nido de los insectos, para obtener mayor efectividad en la aplicación?
- 4 puntos 10. Cuando se necesita fumigar, se opta por el uso de insecticidas “más suaves”, materiales de menor riesgo sobre los insectos benéficos?
- 4 puntos 11. Se usan materiales selectivos en vez de insecticidas de amplio espectro?
- 4 puntos 12. Se identifican los sectores de “alto riesgo” del viñedo y se usan como indicadores en el momento de tomar la decisión de fumigar (p.e., fumigando bloque por bloque en vez de fumigar todo el viñedo)?

B. MONITOREO/MANEJO/CONTROL DE ENFERMEDADES

Ideal: Uso de métodos de producción sustentables que disminuyan la incidencia y propagación de enfermedades que dañan a las viñas y al cultivo, trabajando con el esfuerzo de reducir el uso de materiales químicos para el control de enfermedades. Si la calidad del vino se mantiene usando un programa de manejo de enfermedades donde el uso de materiales químicos ha sido reducido, dése el máximo puntaje (31) en la Sección B.

- 6 puntos 1. Sabe cuáles enfermedades pueden atacar su viñedo?
- 4 puntos 2. Sabe cuáles son los agentes causales y los métodos de propagación?
- 5 puntos 3. Se lleva a cabo un programa de escrutinio para detectar la presencia y la severidad del ataque de enfermedades que podrían aparecer en su viñedo?
- 4 puntos 4. Se usan el Índice de Polvo de Mildew en la Uva ó el Modelo de Presión de Infestación de la Enfermedad Botrytis para decidir cuando fumigar?
- 4 puntos 5. Se realizan sanitaciones regulares en contra de aquellas enfermedades que se propagan desde los tejidos de las hojas infestadas que quedan en el viñedo (p.e., **bunch rot**, **phomopsis**, **crown gall**)?
- 4 puntos 6. Se usan prácticas culturales desfavorables a la propagación de enfermedades (p.e., poda tardía para *Eutypa*; evitar lesiones en el tronco para **crown gall**; remover las hojas para *Botrytis cinerea*)?
- 4 puntos 7. Hay en su viñedo una estación meteorológica, mecanismo de archivo de datos del tiempo, termómetro de máxima y de mínima y un medidor de lluvias, y son usados como herramientas para decidir modificar las prácticas culturales?

C. MONITOREO/MANEJO/CONTROL DE MALEZAS

Ideal: Uso de métodos de producción sustentables que disminuyan el crecimiento de malezas que compiten con las viñas u hospedan enfermedades e insectos. Si la calidad del vino se mantiene con el programa del manejo del suelo donde los métodos químicos para el control de malezas son mínimos, dése el puntaje total (44) en la Sección C.

- 7 puntos 1. Conoce las diferentes especies de malezas que pueden crecer en su viñedo?

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- 5 puntos 2. Se usan métodos mecánicos para el control de malezas entre surcos (p.e., tejidos de alambre, arado francés, **bezzeredi**, desmalezadora clemens)?
- 4 puntos 3. Se maneja la vegetación natural como cultivo cobertor en viñedos de edad intermedia?
- 4 puntos 4. Do you manage your cover crop up for weed suppression?
- 4 puntos 5. Are most problematic weeds treated at a time when they are most susceptible to the herbicide (p.e. glyphosphate on field bindweed at flowering)?
- 5 puntos 6. Is a systemic, contact herbicide material used as a spot treatment instead of spraying the entire berm or the strip in the vine row?
- 6 puntos 7. Where soil leaching is a problem, have you discontinued the use of triazines or other problematic herbicides that may leach into the groundwater (i.e. simazine)?
- 5 puntos 8. When herbicides are used, is the application rate adjusted to your weed pressure?
- 4 puntos 9. When herbicides are used, do you consider your soil type when determining application rate?

D. BENEFICIALS RECOGNITION/MONITORING/RELEASES/HABITAT

Goal: To keep aware of the latest information on biological controls for grape pests to be able to recognize the beneficial insect species in your own vineyard. If wine quality is maintained by conservation or release of beneficial insect species for pest management take full points (29) for Section D.

- 7 points 1. Are you familiar with the beneficial insects that naturally occur in your growing region?
- 7 points 2. Do you monitor populations of your beneficial insects or the degree of parasitism on pests in your vineyard?
- 5 points 3. Are year-round habitat or refuges provided to encourage the presence of beneficial insects (i.e., cover crops for spiders and other beneficial insects)?
- 5 points 4. Are beneficial insects released in your vineyard as an alternative to needed pesticide treatments?
- 5 points 5. Are owl or raptor refuges provided for bio-control of rodents?

E. OTHER

- 4 points 1. Have you sealed or do you regularly water your vineyard roads for dust abatement?
- 4 points 2. Are exclusion methods used for vertebrate pest control (i.e., deer fence; wire mesh cylinders or grow tubes around new vines; bird netting)?
- 4 points 3. Is the sprayer routinely calibrated and are worn nozzles and screens replaced in order to insure the best coverage and efficacy of agricultural chemical applications?
- 4 points 4. When making a spray application is the tractor driven at the proper speed to optimize coverage?
- 4 points 5. Are pesticides with different modes of action alternated within the seasonal spray program in order to minimize the risk of the pest resistance problems?
- 25 points 6. Do management practices, pest monitoring programs, and IPM practices allow you to avoid the use of Category 1 or Restricted Materials? (See Appendix for list of Category 1 and Restricted materials.) If so, take 25 points.

II. SOIL MANAGEMENT

OBJECTIVE: Good stewardship of the land and soil is a prerequisite to good farming. Soil structure and nutrient content affect vine health and vigor. A healthy vine can often tolerate more pest damage or better compete with weeds than a less healthy one. The objective is to conserve or improve naturally occurring beneficial soil characteristics and use best management practices to correct any deficiencies in soil tilth, water or nutrient status.

A. SOIL MONITORING/PLANT ANALYSIS

Goal: To conserve and maintain the naturally occurring chemistry and fertility of the soil that promotes vine growth; and to detect potential imbalances (e.g., toxicities, deficiencies) that may deter vine growth. If you have begun or are maintaining a soil and plant monitoring program that includes all the components take full points (36) for Section A.

- 8 points 1. Is the soil periodically sampled and tested for nutrient content (i.e., NO_3^- , NH_4^+ , P, K^+ , Ca^+ , Mg^+ , organic matter content)?
- 7 points 2. Do you routinely monitor your soil's pH, EC (electrical conductivity), and toxicities (i.e., Na^+ , Cl^- , B)?
- 7 points 3. Do you have an annual program of bloomtime petiole collection for plant nutrient analyses?
- 7 points 4. If the vines have nutritional problems, have you correlated your soil tests to your leaf petiole tests?
- 7 points 5. Do you have aerial photographs of your vineyard site (either infrared or standard film) and use them in vineyard management decisions?

B. PRE-PLANT SOIL STRUCTURE MODIFICATION

Goal: To correct soil-related impediments to vine health and growth prior to planting. If you detected soil-related problems and corrected them before planting take full points (25) for Section B.

- 5 points 1. Before planting, did you have your soil tested for pH, salinity, cation exchange capacity (CEC) and soil-borne pests?
- 4 points 2. If the soil was alkaline or saline, was gypsum (CaSO_4) applied; or if your soil was acidic, was limestone ($\text{Ca}(\text{CO}_3)_2$) applied to help neutralize the acidity?
- 4 points 3. Were backhoe pits dug prior to planting to analyze the soil profile and used to determine possible physical impediments to root growth?
- 4 points 4. If the soil harbored vine pests, was it planted to a non-host crop or allowed to lay fallow to reduce the pest populations previous to vineyard planting?
- 4 points 5. If there were physical impediments to root growth or water permeability problems in this block did you deep-rip, slip plow or install a tile drainage system to correct it?
- 4 points 6. If necessary, was organic matter incorporated into the soil prior to planting?

C. POST PLANT SOIL STRUCTURE MODIFICATION

Goal: To correct soil-related impediments to vine health and growth and to reduce farming practices that contribute to deterioration of soil structure. If you have a program to promote and maintain good soil structure in your vineyard, take full points (22) for Section C.

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- 4 points 1. Is a permanent cover crop maintained in your vineyard?
- 5 points 2. Do your soil management practices promote good tilth and a friable soil?
- 5 points 3. Are back hoe pits dug periodically in order to monitor vine root growth and/or soil structure?
- 4 points 4. Do you follow up on the results of the back hoe pits and take corrective measures if needed?
- 4 points 5. Do you use tractors and/or vineyard equipment that minimize soil compaction, such as high floatation tires or track-layers?

D. EROSION CONTROL

Goal: To conserve soil stability and eliminate erosion and offsite movement of sediments. If you have eliminated erosion take full points (34) for Section D.

- 7 points 1. Do you know your soil series, or have you consulted with your local USDA Natural Resource Conservation Service office to determine your soil series and its respective erosion hazard?
- 6 points 2. Do you know the permeability and runoff rates of your soils and do you irrigate accordingly?
- 6 points 3. Is a winter cover crop maintained for erosion control?
- 5 points 4. If your vineyard is on a steep slope, do you cultivate or work the soil across the slope?
- 5 points 5. If you have a hillside vineyard, do you have water diversions on the longer slopes to transport the runoff safely?
- 5 points 6. Have you developed a cultivation plan that minimizes the number of tractor passes per season?

E. COVER CROP

Goal: To preserve or improve soil structure and soil nutrient content, conserve soil stability and eliminate erosion, reduce dust related programs and provide habitat for beneficial insects with the effective use of a cover crop. If you plant and maintain cover crops take full points (28) for Section E.

- 6 points 1. Is a cover crop encouraged or planted in vine row middles?
- 5 points 2. If your vineyard has a nitrogen requirement, is your cover crop a nitrogen-fixer (clovers, vetches, legumes, etc.)? If your vineyard has no nitrogen requirement, take the 5 points.
- 6 points 3. Is your cover crop an effective habitat for beneficial insects?
- 6 points 4. Have you reduced mite pressure where you maintain a cover crop that effectively keeps the dust level down?
- 5 points 5. If you need to reduce vine vigor, do you manage a cover crop to do so?

F. AMENDMENTS

Goal: To promote and maintain high levels of biodiversity in soil microbiology or correct deficiencies which may affect soil chemistry, organic matter content, water holding capacity or nutrient holding capacity. If you have improved soil organic matter levels and maintained a balanced soil chemical status take full points (27) for Section F.

- 9 points 1. Is any organic matter added to the soil, such as compost, manure, pomace, and municipal green waste?

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- 6 points 2. Is green manure from your cover crop incorporated into the soil?
- 6 points 3. If the soil is alkaline or saline, is gypsum CaSO_4 applied?
- 6 points 4. If the soil is acidic, is limestone $\text{Ca}(\text{CO}_3)_2$ applied to help neutralize the acidity?

G. COMPOSTING

Goal: To divert agricultural organic or municipal green wastes into vineyard soil in order to benefit soil tilth and health. If you are producing compost for your vineyard take full points (28) for Section G.

- 7 points 1. Is winery pomace included in the vineyard composting program?
- 7 points 2. Is green waste diverted from the waste stream to your composting program (i.e. municipal green waste, other crop or food processing residues)?
- 7 points 3. Do you effectively manage your fresh organics into compost by using effective composting techniques, such as application of moisture, turning, and temperature monitoring?
- 7 points 4. Do you support commercial compost programs by purchasing compost?

III. WATER MANAGEMENT

OBJECTIVE: Good water management results in healthy vines, enhances resistance to pests, improves weed control, promotes uniform maturation of the crop and is a responsible use of a natural resource. An effective program in monitoring of water quality and distribution uniformity can lead to the conservation of water resources and quality while meeting vine water needs. A well designed and maintained on-farm water management system prevents off-site water movement and non-point source pollution of surface and ground water.

A. MONITORING WATER QUALITY

Goal: To monitor water quality, water resources available for irrigation, and energy efficiencies of the water application system. If you keep records of water quality and well and pump performance tests, take full points (28) for Section A.

- 10 points 1. Do you periodically have your water tested for pH, electrical conductivity (EC), sodium adsorption ratio (SAR), nitrates (NO_3^-), sodium (Na^+), chlorides (Cl^-), bicarbonate (HCO_3^-), and boron (B) levels?
- 10 points 2. Do you periodically have your well(s) tested for pump energy efficiency, and monitored for changes in water yield (gallons per minute) and drawdown?
- 8 points 3. Do you have a backflow prevention device installed on your well or water source?

B. OFFSITE WATER MOVEMENT

Goal: To prevent off-site movement of rain, irrigation water and sediments, and to eliminate non-point source pollution of surface waters. If you have eliminated off-site movement of water take full points (28) for Section B.

- 6 points 1. Do your irrigation practices minimize run off?

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- 5 points 2. Are management techniques in place for control of sediments carried by any irrigation or rainfall run off into neighboring farmland or natural waterways (i.e. grassed waterways, filter strips, sediment ponds)?
- 5 points 3. Are devices in place to divert water away from public roads (sprinkler guards, flow channels)?
- 6 points 4. Is a subsurface drainage system in place where needed?
- 6 points 5. If there is a soil permeability problem, have amendments been used to improve water infiltration?

C. IRRIGATION SYSTEM EFFICIENCY MAINTENANCE

Goal: To use available water resources in the most efficient and uniform manner possible. If your irrigation system is operating at peak efficiency take full points (56) for Section C.

- 8 points 1. Is a low-volume system (e.g. drip) used for irrigation?
- 8 points 2. Is a low volume system (e.g. pulsators) used for frost control? If no frost control system is required, take the 8 pts.
- 8 points 3. Do you routinely test the irrigation system for distribution uniformity and application efficiency by monitoring emitter outflows and pressure differences across a block?
- 7 points 4. If drip irrigation is used, is the distribution uniformity at 90% or better?
- 7 points 5. Are water filters regularly inspected and cleaned?
- 5 points 6. Are irrigation lines regularly flushed out?
- 5 points 7. If required, is chemical maintenance of your irrigation system performed in order to prevent plugging?
- 8 points 8. Are there flow meters on the wells or other pumps to monitor water usage over the season?

D. IRRIGATION SCHEDULING AND AMOUNT

Goal: To achieve the most beneficial use of applied irrigation water while conserving water resources and eliminating non-point source pollution of groundwater. If you use and record the water budget method in your vineyard take full points (64) for Section D.

- 8 points 1. Do you know the effective rooting depth of your soils?
- 8 points 2. Do you know the amount of water available in your soil profile at budbreak?
- 7 points 3. Do you record seasonal rainfall?
- 4 points 4. Are soil based monitoring devices used to track soil moisture depletion (i.e., gypsum blocks, neutron probes, tensiometers)?
- 4 points 5. Are plant-based moisture monitoring devices used to monitor the moisture status of your vineyard (pressure bombs, sapflow monitoring, etc.)?
- 8 points 6. Are evapotranspiration (ET) calculations used as one of the tools to determine irrigation requirements, and is an ET budget followed for the season? (ET data is available through CIMIS, California Irrigation Management Information System 1-800-92CIMIS, or 1-800-922-4647.)
- 8 points 7. If your soil builds up salts, do you know your leaching requirements? If you have no salinity problems, take the 8 points.
- 7 points 8. Is water conservation practiced, for example, irrigating at night when the ET demand is at its lowest?

- 10 points 9. Where past local experience has indicated improved wine quality may result, have you experimented with deficit irrigation timings?

E. FERTILIZATION / FERTIGATION

Goal: To apply required fertilizers in the most efficient manner and eliminate non-point source pollution of groundwater. If you have optimal fertilizer use efficiency through the use of fertigation take full points (24) for Section E.

- 6 points 1. Are leaf petiole analysis results used as a guide, and vine vigor and fruit quality considered when making fertilizer application decisions?
- 6 points 2. If fertilization is needed, do you fertilize by injection (fertigate) into your irrigation system?
- 6 points 3. Is water quality analysis considered prior to choosing fertilizer materials in order to prevent plugging of the irrigation system?
- 6 points 4. Are fertilizer applications timed to maximize nutrient uptake efficiency to reduce the potential for non-point source water pollution (i.e. "spoon feeding" methods or nitrogen budgeting)?

IV. VITICULTURAL MANAGEMENT

OBJECTIVE: Decisions made prior to establishment of a vineyard may result in production practices which are environmentally safe and sustainable. Many vineyard insect and disease problems can be reduced or avoided by making informed choices prior to planting.

A. SPACING/ORIENTATION/DENSITY/SITE DEVELOPMENT

Goal: To establish a vineyard which uses natural conditions to promote a healthy microclimate within the canopy, conservation of soil and water resources within the block and enhances native habitats that may exist. If you have matched your vineyard design to the site conditions take full points (50) for Section A.

- 8 points 1. Did you consider disease management when laying out your row orientation?
- 12 points 2. Is the spacing matched to the potential vine vigor?
- 8 points 3. Did you consider erosion hazard when choosing row orientation?
- 12 points 4. Was wine quality a consideration in the orientation/spacing decision?
- 5 points 5. Were your existing oak habitat, riparian areas and other natural habitat taken into consideration when developing vineyard sites?
- 5 points 6. Did you consult with your local agencies (i.e. NRCS, RCD, UCCE, or county planning department) and develop a conservation plan?

B. ROOTSTOCK / SCION / CLONE

Goal: To select a rootstock and scion that will eliminate the need for chemical or cultural intervention to correct a problem with vine vigor, a pest problem, or an environmental condition that would impact either vine health or wine quality. If you have matched the vineyard site to rootstock/scion combinations take full points (50) for Section B.

- 8 points 1. Are disease and/or pest resistant rootstocks planted?
- 7 points 2. Are certified plant materials used?

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- 7 points 3. Were the soil characteristics considered when rootstock(s) were chosen?
- 6 points 4. Is the scion matched to your growing region?
- 6 points 5. Do you have a rootstock trial on your site, or have you used information obtained from a similar site (other grower or U.C. trials) when making your rootstock choices?
- 6 points 6. Do you have a clonal selection trial on your site, or have you used clonal information obtained from a similar site when making your scion choices?
- 10 points 7. If you have trials on your vineyard, is the fruit from your trials harvested and vinified separately for later evaluation?

C. TRELLISING

Goal: To use the optimum trellis design to balance vine capacity and wine quality. If you have matched your trellis system to local conditions and rootstock/scion vigor take full points (50) for Section C.

- 10 points 1. Is a trellis system used that accommodates your vine vigor?
- 10 points 2. Is a trellis system used that promotes good canopy microclimate (i.e., improved sunlight exposure or air movement)?
- 10 points 3. Have you modified or retrofitted your existing trellis system in order to improve canopy microclimate and improve wine quality?
- 20 points 4. Do you have a trellis trial plot, or have you used data from local trials to determine which trellis system is the best suited to your site for wine quality improvement?

D. CANOPY MANAGEMENT

Goal: To monitor the canopy microclimate to insure sound and quality fruit. To take corrective actions to improve the canopy microclimate when existing conditions may adversely affect vine health or wine quality. If you have improved the wine quality of your fruit through effective canopy management techniques take full points (50) for Section D.

- 8 points 1. Is your canopy microclimate monitored (light meters, atmometers, leaf wetness/relative humidity/temperature sensors)?
- 8 points 2. Is the fruit-to-pruning weight ratio between the range of 5-10?
- 10 points 3. Do you rate or score your canopy pre-harvest (i.e., evaluate sunlight exposure, count number of leaves per clusters, R. Smart vineyard scoring system, point quadrat)?
- 8 points 4. Is shoot density managed to promote fruit separation, i.e., shoot thinning, shoot positioning, sterile shoot removal where needed?
- 10 points 5. Where needed, are you removing leaves in the fruit zone to reduce disease, pests or improve wine quality?
- 6 points 6. Is pruning adjusted to keep each vine in balance (fruit/foilage)?

V. WINE QUALITY

OBJECTIVE: The very best wine quality attainable is the ultimate achievement. Harvest is the culmination of an entire year of work in the vineyard and the condition of the fruit upon arrival at the winery is a critical part of the process.

A. MEET CONTRACT PARAMETERS

Goal: To provide the winery with grapes in the best possible condition. If your fruit meets or surpasses the winery's expectations, take full points (50) for Section A.

When your fruit is delivered to the winery:

- 8 points 1. Is the grape °Brix within specified contract optimum?
- 8 points 2. Is the juice pH within specified contract optimum?
- 8 points 3. Is the Material Other than Grapes (MOG) content below specified contract amount?
- 8 points 4. Is the percent rot or mildew in the fruit below specified contract amount?
- 5 points 5. Do you know what block(s) each load of fruit was picked from?
- 8 points 6. Prior to harvest, are you able to provide the winery with a reasonably accurate crop projection?
- 5 points 7. Do you provide weekly maturity analysis(Brix, TA, and pH) to your winery customers?

B. TASTE "YOUR WINE"

Goal: To understand that wine quality is founded in the vineyard. The grower and the winemaker work together to produce a particular wine style. If you and the winemaker work as a team in producing the best wines possible from your vineyard, take full points (50) for Section B.

- 10 points 1. Do you taste and evaluate the wines from your vineyard?
- 10 points 2. After step B1 above, are you able to determine which of your viticultural practices contributed positively to wine quality?
- 20 points 3. If wine quality needs to be improved, are you attempting to determine which of your viticultural practices can be altered in order to achieve wine quality improvement?
- 10 points 4. Do you regularly confer with the winemaker or winery representative and have him/her in your vineyard to discuss all of the above?

VI. CONTINUING EDUCATION

OBJECTIVE: To learn and to stay aware of the latest developments in one's field is crucial to career and personal growth. One must constantly strive to keep informed and remain current. Techniques in grapegrowing are changing and improving; therefore, the grapegrower and winemaker must also change and improve.

A. GROWER

Goal: To remain abreast of the latest developments by reading journals, listening to peers and participating in meetings. If you are fluent with the latest in grapegrowing and pest management techniques, take full points (27) for Section A.

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- 6 points 1. Do you regularly attend UCCE, CAWG, ASEV and other industry meetings, seminars and symposiums to keep up to date on grapegrowing and winemaking issues?
- 6 points 2. Do you subscribe to and read farming, trade and industry journals (i.e., American Journal of Enology and Viticulture, Practical Vineyard and Winery, American Vineyard)?
- 6 points 3. Do you have current membership in local growers' and vintners' associations and attend the meetings to keep informed on local issues?
- 9 points 4. Do you own and use a copy of *Grape Pest Management*, 2nd Edition, UC DANR Publication 3343?

B. EMPLOYEE

Goal: To promote the vineyard as a safe and desirable place to work. The grower must be concerned about the health, safety and continuing education of his/her employees. The employee is an integral part of the team that successfully works together to produce quality wine grapes and quality wines.. If you are in full compliance, have incentive programs in place that promote education and reward employee safety, take full points (41) for Section B.

- 5 points 1. Do you have **full compliance** with all Department of Pesticide Regulation (DPR), Worker Protection Standard (WPS), SB 198 and Cal-EPA laws and regulations?
- 5 points 2. Do you routinely hold employee safety and training meetings; stressing topics such as the importance of personal hygiene and daily change of clean clothing, safe use and handling of pesticides, and pesticide use notification?
- 5 points 3. Are your employees encouraged to be team members that contribute to and share the responsibilities of producing quality wine grapes?
- 5 points 4. California law requires education of employees regarding mandatory re-entry intervals (REIs) stated on the pesticide label. If you **did not** have to take disciplinary action against either employees or supervisors for violations of any re-entry intervals , take 5 points.
- 5 points 5. Do you offer incentives or have an employee safety "rewards" program in place that recognizes and appreciates individuals for safe job performance ?
- 5 points 6. Are your employees each trained to be pest/disease scouts to help with monitoring in the field?
- 5 points 7. Do you regularly hold informal employee meetings to discuss your growing philosophies and long and short term work goals?
- 6 points 8. Do you educate and enforce your employees to recycle all that you can from your farm operation (i.e. steel and oil from the shop, paper and plastic from the office, etc.)?

C. WINEMAKER (CUSTOMER)

Goal: Public perception of grapegrowing is an important part of marketing wine. Promotion of the positive aspects of winegrape growing is essential. If you are working to improve the image of grapegrowers and their craft, take full points (32) for Section C.

- 11 points 1. Do you provide full pesticide use reporting to the winery on a monthly basis?

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- 11 points 2. Are you involved with the Growers' and Vintners' Associations that strive to educate the public about IPM and sustainable agricultural practices in the vineyard?
- 10 points 3. Are you a part of an aggressive marketing program that educates and promotes the positive image of the Central Coast Vineyard Team and its Positive Points System Protocol, especially in the tasting rooms

APPENDIX

EPA Category I materials (signal words **Poison / Danger**) and Restricted materials currently registered for use on wine grapes:

Scientific Name	Common Name	Restricted	Category I (Danger/Poison)
Insecticide - Foliar Applied			
Azinphos-methyl	Guthion	x	x
Carbaryl	Sevin	x	
Endosulfan	Thiodan	x	x
Fenbutatin-oxide	Vendex		x
Methomyl	Lannate	x	x
Propargite	Omite		x
Metasystox-R	MSR	x	
Insecticide - Soil Applied			
1,3-Dichloropropene	Telone II	x	
Carbofuran	Furadan	x	x
Fenamiphos	Nemacur	x	x
Metam sodium	Vapam	x	x
Methyl bromide	Brom-o-gas	x	x
Trichloronitromethane	Chloropicrin	x	x
Fungicides			
Dichloronitroanniline	Botran (dust)	x	
Calcium Polysulfide	Lime Sulfur		x
Herbicides			
Paraquat	Gramoxone	x	x
	Simazine	x	
	Karmex	x	
	Diuron	x	
	Princep	x	
Vertebrate Control - Baits			
Powder		x	x
Zinc Phosphide	ZP Bait	x	x
Strychnine		x	x
Vertebrate Control - Fumigant			
Aluminum phosphide	Phostoxin	x	x

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Evaluation Sheet

Grower Name: _____ **Evaluation Date:** _____

Vineyard Name: _____ **Evaluation Block(s):** _____

Vineyard Address/Location: _____

Mailing Address: _____

Phone: _____ **Fax:** _____ **Email:** _____

Acreage of Block(s) Being Scored: _____ **Total Acreage At This Location:** _____

Age of Vines Being Scored: _____ **County:** _____ **Version:** _____

Begin each category by answering the questions in order by section and number. First read the goal for each section, and if you take the full points, skip to the following section. If you do not take the full points, answer each question in the section. Enter number of points earned per question. A "yes" answer gains the designated points, and a "no" answer gains zero. There are no partial points taken for any question.

I. Pest Management 200 Total Points Possible

Section A	Section B	Section C	Section D	Section E	Total Points Earned	
1.(7)	1.(6)	1.(7)	1.(7)	1.(4)		
2.(4)	2.(4)	2.(5)	2.(7)	2.(4)		
3.(4)	3.(5)	3.(4)	3.(5)	3.(4)		
4.(4)	4.(4)	4.(4)	4.(5)	4.(4)		
5.(4)	5.(4)	5.(4)	5.(5)	5.(4)		
6.(4)	6.(4)	6.(5)		6.(25)		
7.(4)	7.(4)	7.(6)				
8.(4)		8.(5)				
9.(4)		9.(4)				
10.(4)						
11.(4)						
12.(4)						
Total	Total	Total	Total	Total		
(51)	(31)	(44)	(29)	(45)		

II. Soil Management 200 Total Points Possible

A	B	C	D	E	F	G	Total Points Earned	
1.(8)	1.(5)	1.(4)	1.(7)	1.(6)	1.(9)	1.(7)		
2.(7)	2.(4)	2.(5)	2.(6)	2.(5)	2.(6)	2.(7)		
3.(7)	3.(4)	3.(5)	3.(6)	3.(6)	3.(6)	3.(7)		
4.(7)	4.(4)	4.(4)	4.(5)	4.(6)	4.(6)	4.(7)		
5.(7)	5.(4)	5.(4)	5.(5)	5.(5)				
	6.(4)		6.(5)					
Total	Total	Total	Total	Total	Total	Total		
(36)	(25)	(22)	(34)	(28)	(27)	(28)		

Evaluation Sheet

III. Water Management 200 Total Points Possible

Section A	Section B	Section C	Section D	Section E	Total Points Earned
1.(10)	1.(6)	1.(8)	1.(8)	1.(6)	
2.(10)	2.(5)	2.(8)	2.(8)	2.(6)	
3.(8)	3.(5)	3.(8)	3.(7)	3.(6)	
	4.(6)	4.(7)	4.(4)	4.(6)	
	5.(6)	5.(7)	5.(4)		
		6.(5)	6.(8)		
		7.(5)	7.(8)		
		8.(8)	8.(7)		
			9.(10)		
Total	Total	Total	Total	Total	
(28)	(28)	(56)	(64)	(24)	

IV. Viticultural Management 200 Total Points Possible

Section A	Section B	Section C	Section D	Total Points Earned	
1.(8)	1.(8)	1.(10)	1.(8)		
2.(12)	2.(7)	2.(10)	2.(8)		
3.(8)	3.(7)	3.(10)	3.(10)		
4.(12)	4.(6)	4.(20)	4.(8)		
5.(5)	5.(6)		5.(10)		
6.(5)	6.(6)		6.(6)		
	7.(10)				
Total	Total	Total	Total		
(50)	(50)	(50)	(50)		

**V. Wine Quality
100 Total Points Possible**

Section A	Section B	Total Points Earned
1.(8)	1.(10)	
2.(8)	2.(10)	
3.(8)	3.(20)	
4.(8)	4.(10)	
5.(5)		
6.(8)		
7.(5)		
Total	Total	
(50)	(50)	

**VI. Continuing Education
100 Possible Points Total**

Section A	Section B	Section C	Total Points Earned
1.(6)	1.(5)	1.(11)	
2.(6)	2.(5)	2.(11)	
3.(6)	3.(5)	3.(10)	
4.(9)	4.(5)		
	5.(5)		
	6.(5)		
	7.(5)		
	8.(6)		
Total	Total	Total	
(27)	(41)	(32)	

Evaluation Sheet

Cumulative Points for all Categories 1000 Total Points Possible

Category	Points Earned	Points Possible
I. Pest Management		200
II. Soil Management		200
III. Water Management		200
IV. Viticultural Management		200
V. Wine Quality		100
VI. Continuing Education		100
Total		1000

Typical Ranges of Points Earned:

- Older Vineyards (10 years +) 500-700 points
 (Present manager did not make pre-plant decisions)

- Newer Vineyards (<10 years) above 700 points
 (Present manager did participate in pre-plant decisions)