

STRATEGY: RESEARCH AND TECHNOLOGY INNOVATION AND TRANSFER

The core focus of this strategy is the establishment of problem solving, market directed and socially and environmentally responsible technology invention, commercial development and transfer systems.

Programme scope: The long-term global competitiveness of the South African wine industry depends critically on its ability to learn and innovate faster than its competitors. This implies that the industry's research and technology invention and commercial transfer programme should be clearly focused on the kind of activities that hold the best promise in this aspect and be based on four principles, viz.

- A well-designed, well-financed and well-executed programme of research and technology development and transfer is absolutely essential for building innovativeness and international competitiveness in the South African Wine Industry;
- In view of South Africa's relative limited research capacity the motto "adapt – not invent" should partially drive the application of this programme.
- The programme should cover all the links in the wine industry's value chain, from terroir and plant material selection, via viticulture practice, to wine making and cellar practice, logistics, economic analysis, etc.
- The programme must be market-directed, but should also support national policy towards R&TD in agriculture and industry development, in particular appropriate technology systems to integrate new farmers into the wine industry.

This programme should broaden and integrate its almost exclusive focus on the wine farm and the cellar, towards (and with) other value chain activities in the wine industry i.e. brandy and concentrates and also focus on aspects related to human resources development and logistics. It places a strong

emphasis on the operational application of wine industry R&TD. All of this implies enhancing inventiveness and innovation in the wine industry through technology transfer. This will be achieved through initiatives to:

- enhance South Africa's global competitiveness;
- enhance natural resource sustainability in the winelands;
- enhance financial sustainability of producers by developing best practice technologies;
- improve the quality of life of all who are associated with the industry;
- empower resource poor persons in order to increase their effective participation in the industry through improved access to appropriate technology;
- aim at the transfer of appropriate technology in the industry with new entrants from historically disadvantaged groups as a pertinent target group;
- affirm the integrity of the South African "Wines of Origin" system.

A successful outcome in a particular R&TD programme focus area is, nevertheless, also dependent on its potential contribution towards innovation in the other business unit strategies – or, at the very least, that it will not subtract from these other focus areas.

For example, a R&TD programme result that significantly enhances the South African wine industry's global competitiveness while also increasing inequity and destroying water resources through pollution, will not pass the criteria for a successful outcome. Broadly speaking, the sustainable success in a particular programme focus area depends on its contribution towards other programme focus areas and on the contribution of other programme focus areas to it.

Direct interaction with other SA Wine Industry Bodies strategic programmes to enhance and, where possible, develop integration and complementary activity will be implemented. Each activity will require a unique and particular target setting process. However, technical innovation should set the tone for most as technology is viewed as a critical enabler for international competition.

Within the R&TD framework of the wine industry BEE and HRD should also be addressed through objectives which focus on resource limited producers with the aim of broadening access to the industry by:

- the development and transfer of affordable and effective technologies for resource limited producers.
- the identification of training needs and facilitating the training of resource poor producers.

Transformation (exposure, training and research support of previously disadvantaged groups) should be supported by:

- making bursary funds available for PDI students participating in wine industry related research projects.
- funding wine industry related research projects where PDIs are involved as project leaders and/or technicians.

This programme will furthermore find its rationale in a focus on technology which could mitigate risk factors in the wine supply chain. These will include:

- natural factors;
- technology/production factors; and
- trade and retail factors (safety).

Research projects/themes should address the following issues:

- Climate change
 - Global Warming
 - Water use
- Environmental sustainability/sustainability of natural resources
 - Water availability
 - Soil use
 - Cellar effluent
- Disease management and viruses
 - Quality of plant material
- Organic cultivation/production and wine making
- Mechanisation vs labour employment
- Health consciousness
 - Lower alcohol wines
 - Food safety
- Methods of Technology transfer
 - ICT (Information Communication Technology)
 - New entrants

The following research programmes have been identified:

- (i) Vine Virus Programme that focuses on limitation and extermination, etiology, virus resistance and support studies.
- (ii) Optimal grape composition to reach specific wine objectives.
- (iii) Terroir identification and utilisation.
- (iv) Grapevine and Wine Biotechnology: Improvement of viticulture, wine yeasts and bacteria for a quality focused, market directed wine industry.
- (v) Research projects not included in programmes (i) to (iv).
- (vi) Technology transfer.
- (vii) Training

Strategic programmes, activities and tasks: The operational focus of this strategic programme is to become the key co-ordination and facilitating institution in industry innovation through research and technology development and transfer. This programme will create an interactive network of service providers, strategic planners and the users of technology and contribute to the funding of the required technical innovation. Entrants from historically disadvantaged groups will be a particular priority. To this end Winetech should attend to the following:

- To support the wine industry with expertise, enabling it to be cost effective while producing quality wines and other grape based products through the application of environmentally friendly technologies.
- To support relevant training and education of individuals for the R&D sector of the industry – at all levels in terms of skills, knowledge and insight development – in order to ensure the practical implementation of the best knowledge and most advanced technologies in viticulture, wine making and other grape based products.
- To establish a culture of technological innovation, to ensure the ongoing utilisation of the best technology within the industry, and to facilitate its dissemination to all the sectors of the industry.

- To facilitate the development of resource poor and previously disadvantaged producers and to improve their access to the industry by making appropriate cutting edge technology available to such producers.
- To promote sustainable natural resources management practices and product systems.
- To establish world leadership in selected niche areas of the wine industry through a network of scientific and technological expertise.
- To commission relevant and thoroughly planned research, technology development and technology transfer in the promotion of the industry's technological capabilities and in the attainment of the other objectives.
- To support innovation to affirm the integrity of the "wines of origin" programme.
- To interact in the global environment in order to develop a productive network and alliances (i.e. the OIV, etc).

The following strategic programmes will direct these activities:

- (i) **Setting a strategic agenda and operational plan**
 - To develop a wine industry technology innovation strategy and plan in collaboration with the industry stakeholders and service providers and R&D institutions.

- (ii) **Expertise network development**
 - Establish leadership in selected areas of the wine industry through a network of scientific, technological and economical/social expertise.

- (iii) **Commissioning of research and development**
 - Commission relevant (in terms of the strategic plan) and thoroughly planned research, technology development and technology transfer in the promotion of the industry's technological capabilities and in the attainment of its objectives.
 - To develop policy analysis and advice to support the strategic development of the industry in its economic, social, financial, institutional and environmental context and impact.

(iv) **Technical expertise and skills development**

- Support the wine industry with the development of the required expertise at all levels in terms of skills, knowledge and insight development – in order to ensure the practical implementation of the best knowledge and most advanced technologies in viticulture, wine making and other grape based products.
- Facilitate the development of resource poor and previously disadvantaged producers and to improve their access to the industry by making appropriate cutting edge technology available to such producers.
- Promote economic and social analysis skills.

(v) **Business planning**

- An annual business plan will be required from the business unit.
- The operational tasks should be to define a strategic approach and targets, facilitate the necessary opportunities and support activities to achieve these and measure, monitor and evaluate outcomes.

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