

UDC 634.83338.109.733.38.109.84

Development Model of Winemaking Regions in Ukraine

V. V. Vlasov, I. V. Belous, L. V. Dzhaburiya, Yu. Yu. Bulayeva

*NSC Tairov Viticulture and Enology Institute
27a, 40-richchia Peremohy Str., Tairove,
Ovidiopol District, Odessa Region, Ukraine, 65496*

e-mail: IVB_iviv@ukr.net

Received on Feb 12, 2014

Aim. Analysis of the main causes of destabilization in the Ukrainian viticulture and winemaking and ways to eliminate them. Development of the integration model for the industry effective functioning. **Methods.** The data were processed involving the statistical groupings, graphic and sampling methods. **Results.** The main components of the innovative development of the Ukrainian agricultural sector and, in particular, its viticulture and winemaking industry are research and implementation of the obtained results in the production processes. Scientific and technical development provides the potential and innovation growth, also defines the ability of transition to sustainable development of the industry. The experts from the National Scientific Center Tairov Viticulture and Enology Institute have analyzed the major destabilization causes of the Ukrainian viticulture and winemaking and ways to eliminate them, as well as offered the integration model for the industry effective functioning in the region (by the example of the Odessa Region) in accordance with regional development programs for next 12 years. **Conclusions.** Cooperation and integration processes on the basis of innovations in the viticulture development within the wine sector regional development programs will contribute to guaranteed volumes of production, increase efficiency and productivity, innovation development and modernization of production, competitiveness of manufacturers, also stabilize the social environment that leads to the sustainable development of industry in the Odessa Region and Ukraine.

Keywords: viticulture and winemaking industry, innovative development, research and development, factor model of development.

INTRODUCTION

The basic task of the steady development in the viticulture is providing of conditions for the wide use of innovative scientific and technical developments [1–9]. Unfortunately, the majority of viticulture enterprises, especially the small ones, do not have the necessary level of production technical development, nor access to the financial, information and material and technical resources. The problem could be solved by means of the grapes and wine producers' participation in the cooperative and integrated enterprises, what will allow taking advantages of large production for the effective implementation of innovations, without losing individuality, ownership and management rights of own enterprise at the same time. First of all, attention should be focused at support of the innovative activity, innovation infrastructure forming, improvement of the legal base, and also in the creation of the vitivinicultural clusters.

MATERIALS AND METHODS

The data were processed applying the statistical grouping method, correlation-regression analysis, charting and sampling techniques.

RESULTS AND DISCUSSION

The strategic course of Ukraine for its world economic integration is based on the governmental policy directed toward the introduction of the innovation model of economic reconstruction and assertion of Ukraine as a high-tech state. Therefore, for increasing of the viticulture-winemaking branch's competitive ability in our country, the issues of innovation technologies implementation with a constant scientific supervising should be of special attention. However, a whole range of the unresolved problems (Fig. 1) prevents an increase in the competitive ability of viticulture branch and its integration into the world economic space, hereupon the productivity of the Ukrainian grapevine plantings comprises in average 55–60 dt/ha, while in the developed

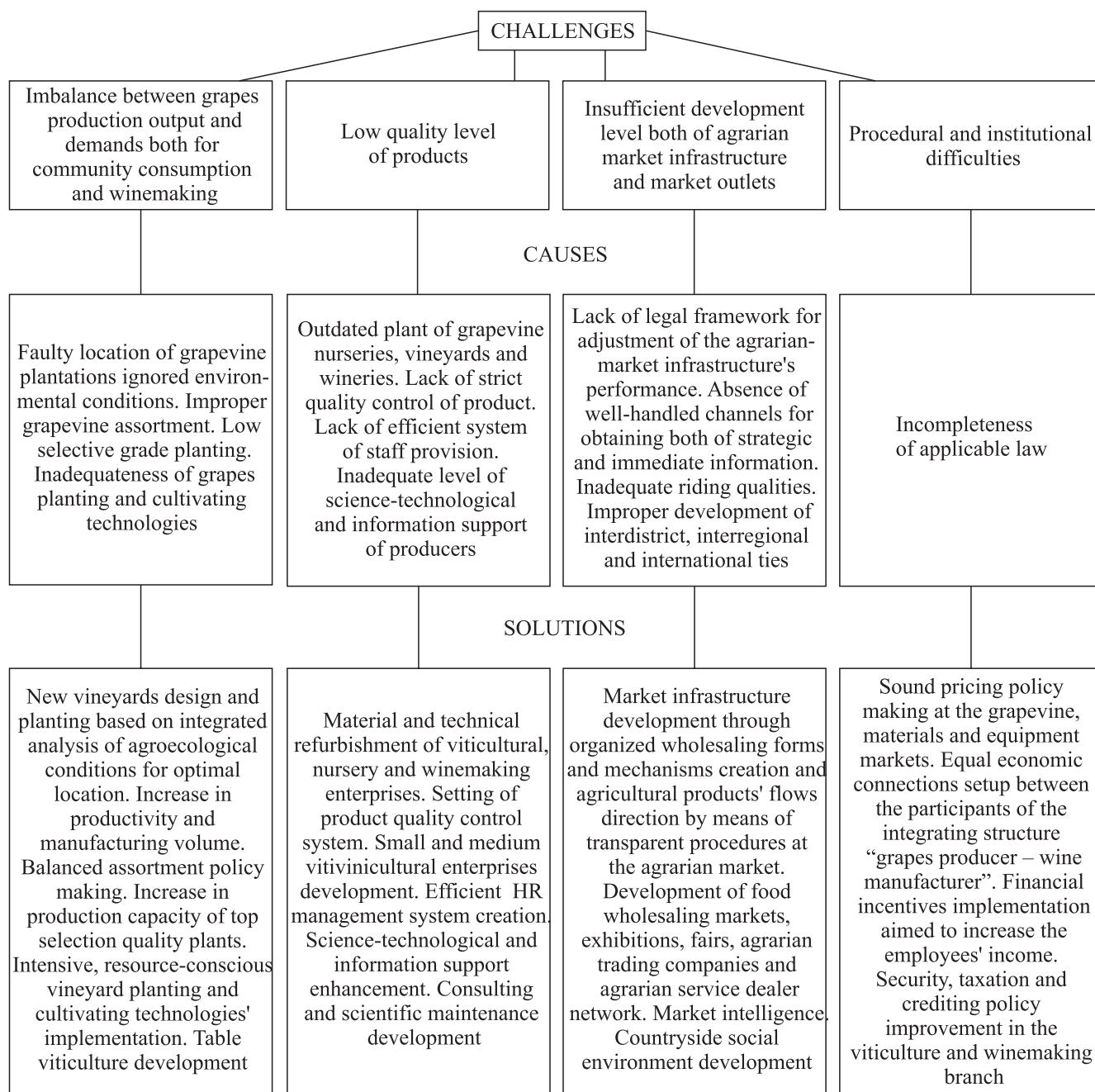


Fig. 1. The branch's challenges: the causes for occurrence and ways of elimination

European viticultural countries – 100 dt/ha in general [10–15]. It should be noted that today the key value until acquires not only the ability to solve problems, but also to overcome the negative manifestations of the objective and specific for the agrarian sector factors, such as:

- Territorial dispersion and organizational dissociation of the grapes producers, what adversely affects on the opportunity of the interest protection, as compared to the processing and trading enterprises.
- Economic inequality of various in size producers.

- Insolvency of the producers' prompt response to the demand changes in volume due to the seasonal and long-time process of agrarian production.
- Discrepancy between producers' economic interests and users' social interests.

At this stage of the development of the Ukrainian agrarian sector, including its viticulture-winemaking branch, it is necessary to ensure changes in the cooperation of the public, private and state institutions of the agrarian sector for the balance on the economic, social and ecological criteria of development due to the part-

DEVELOPMENT MODEL OF WINEMAKING REGIONS IN UKRAINE

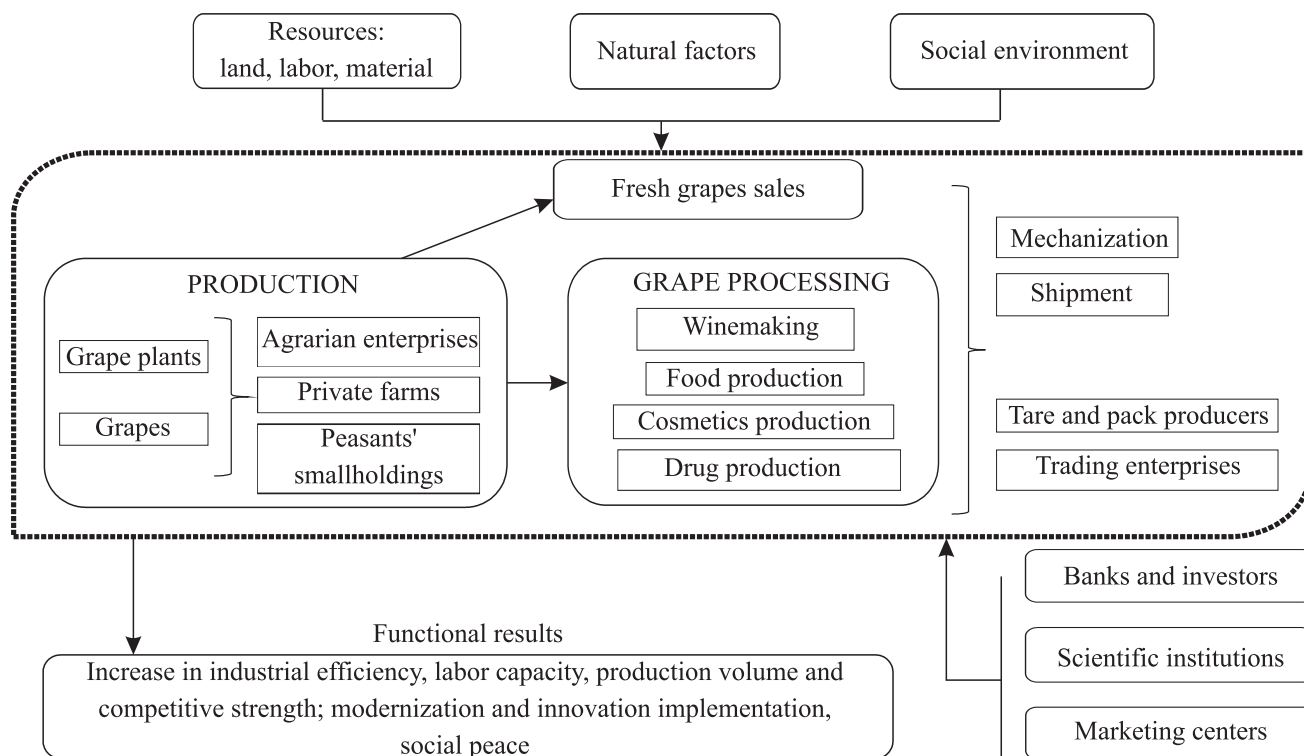


Fig. 2. Developmental model of the Ukrainian viticulture-winemaking branch

nership between the state, business and society. Only then the results of functioning will directly depend on the activity of the participants.

The experts of NSC Tairov Viticulture and Enology Institute have developed the design of the development factor model of the viticulture-winemaking branch on the basis of the integration between the viticulture producers, processing enterprises and those ensuring sale and market promotion, taking into account the need for the innovation development of the branch (Fig. 2).

Let us examine the designed model based on the example of viticulture winemaking sub-complex of the Odessa Region.

The viticulture-winemaking branch of the Odessa Region occupies a significant place in the regional economy. Therefore, its development is of top priority. However, the creation of the regional association of enterprises (the vitivinicultural cluster) will be able to grant significant advantages both to the enterprises and the region in whole for overcoming the current negative phenomena of economic development. The prerequisites for the vitivinicultural cluster creation in the Odessa Region are:

- Specific location (desired geographical and natural climatic conditions, and also proximity to the sale and capital markets).
- Crucial composition of participants (specialized enterprises for grapes cultivation and processing, scientific and excellence centers, educational institu-

tions providing the market with qualified personnel, specialized banks, and others).

- Sufficient provision with the labor resources historically possessing the sufficient vitivinicultural experience.
- Scientific-coordinating center – NSC Tairov Viticulture and Enology Institute, together with availability of all types of transportation.
- Resort-recreational zone providing the additional market for products due to the vacationers.

All above mentioned makes the Odessa Region a very promising region for creating the vitivinicultural cluster that will allow materializing the most important relationships in the information, technologies, marketing and users' needs. The cluster organization of production will influence on the innovations' implementation rates, competitive ability of the end product, also increase the cooperation of private sector, the state, trade representatives, and research establishments.

The basic link (nucleus) of the vitivinicultural cluster is the enterprises – the producers of grapes and wine – in the aggregate. In the region 235 agricultural enterprises of various proprietary forms deal with the industrial cultivation of grapes (Table 1). Their principal functions as the participants in the integrated association are the grapes delivery, manufacturing ramp up, products' quality and production efficiency improvement, approval of contemporary scientific developments. 57 specialized enterprises are involved in grapes process-

ing, winemaking, store maturation and bottling, 16 of which deal with secondary vinification. The efficient processing management, increase in total production efficiency, scientific developments implementation, positive image promotion are among their major tasks.

About 40 per cent of the Ukrainian grapes and wine volume is produced in the region. The next link is the enterprises providing manufacturing and sales management: farm machinery and processing equipment producers and vendors, carriers, container and pack producers, trading organizations. The principal function of these participants in the integrated association is products timely delivery and distribution, the proper technical support of both the raw material producers and processing enterprises, customer affairs targeted for the positive image forming.

The basic functions of the marketing centers, which also must be an integral part of the association, are market analysis and monitoring, contractor affairs, search for the new market channels, new partners and further ways of development, association's general image forming and its promotion to the national and world markets.

Banks and investors, as participants in the process, must fulfill the function of financial support of both the producers and other participants in the association, allow cheap credit resources for the resource potential forming, act as a financial guarantor, provide the deliberate insurance and crediting policy in the viticulture-winemaking production.

The scientific-educational institutions analyze the activity of association, offer the new ways of the economic efficiency increasing in the production and its management, carry out the scientific research work (i.e., create the new innovative product), and also accomplish the scientific support of development during its implementation providing information-consultative services, granting personnel, studying and disseminating progressive experience.

As follows from the data obtained from Tables 2 and 3, the enterprises in the Odessa Region prefer on the

Table 1. Grape Producers by Type in the Odessa Region (as researched by the Ecology and Viticulture Departments of NSC Tairov Viticulture and Enology Institute, as of Jan 1, 2012)

Producer Type	Amount
State-owned	4
Joint-stock companies	23
Limited liability companies	57
Agricultural production cooperatives	18
Private farms	72
Private enterprises	32
Others	29
Total	235

average the white winemaking grape varieties, which total area is 9,456.9 hectares, compared to 7,853.4 hectares of the red winemaking grape varieties area or, 53.6 per cent and 44.5 per cent of the total plantations area respectively (except for the Biliayivka, Bolhrad, Reni, Tatarbunary and Izmail Districts). The greatest area of the winemaking grape varieties' plantations is in the Tarutyne and Bolhrad Districts – 3,835.3 and 3,459.4 hectares respectively, or 21.75 per cent and 19.6 per cent, and smallest – in the Berezivka and Liu-bashivka Districts – 10.0 and 2.0 hectares respectively, or 0.05 per cent and 0.03 per cent of the winemaking varieties total area [6]. As for the ripening periods, the mid-ripening varieties predominate among the white winemaking varieties – 4,458.7 hectares, early- and late-ripening varieties occupy – 4,237.0 and 761.2 hectares respectively. Concerning the red winemaking varieties, the greatest area is occupied with the late-ripening varieties – 5,139.1 hectares, early- and mid-ripening varieties – 588.7 and 2,125.7 hectares respectively. It should be noted, that the wine dress varieties' plantations feel the clear lack of the early-ripening varieties, while the white winemaking grape varieties are short of the late-ripening ones, on the contrary.

Among the table grape varieties, by the ripening periods, the greatest area is occupied with the late-ripening varieties – 799.3 hectares (36.7 per cent), very early-ripening – 663.7 hectares (30.4 per cent), and early-, mid- and mid-late-ripening varieties in total – 689.7 hectares, or 31.6 per cent. The greatest area of the table grape varieties' plantations is located to the Bolhrad District – 808.0 hectares, or 37 per cent, while the smallest – to the Liubashivka District – 2.0 hectares, or 0.1 per cent of the table grape varieties total area.

The grape assortment is one of the basic factors of stability and productivity of plantations, and also the harvest application sphere. The assortment of the vineyards within the Odessa Region comprises 73 varieties, 30 of which are winemaking and 43 – table ones. 46 varieties are zone recommended and occupy 11,268.29 hectares, or 96.4 per cent of total area.

The portion of the winemaking grape varieties in the total area of vineyards varies from 79.3 per cent in the Bolhrad District to 93.6 per cent in the Tarutyne District. Among them the greatest relative portion accrues to the varieties used for the production of top-quality and vintage wines: Cabernet Sauvignon – 19.2 per cent, Aligote – 12.9 per cent, Merlot – 10.8 per cent, Chardonnay – 9.5 per cent, Odessa Black (Alibernet) – 8.4 per cent. More than half of the winemaking grape varieties plantations' total area falls to the share of these varieties. The producers in the Bolhrad District prefer the red rape varieties (52.1 per cent of the winemaking varieties' total area), while in the Tarutyne, Artsyz and Ovidiopol Districts – to the white varieties.

The table grape varieties occupy 2,156.4 hectares, or 10.5 per cent of plantations' total area. The greatest amount of table varieties, together with their assortment, is observed in the Bolhrad District – 801.7 hec-

Table 2. Winemaking Grape Varieties Plantations Area in the districts of the Odessa Region in 2013, ha (as reported by the Ecology and Viticulture Departments of the NSC Tairov Viticulture and Enology Institute) [16–18]

District	Winemaking Grape Varieties												Total in the district			
	White						Red						Winemaking mixed varieties	Hybrids	ha	%
	Early-ripening	Mid-ripening	Late-ripening	Total		Early-ripening	Mid-ripening	Late-ripening	Total		Winemaking mixed varieties	Hybrids	ha	%		
				ha	%				ha	%						
Artsyz	392.7	198.0	–	590.8	53.5	12.0	140.3	140.3	513.5	46.5	–	–	1,104.2	6.1		
Berezivka	10.0	–	–	10.0	100	–	–	–	–	–	–	–	10.0	0.06		
B.-Dnistrovskiyi	617.7	763.8	180.0	1,561.5	68.4	47.2	206.2	206.2	713.8	31.3	9.0	–	2,284.3	12.6		
Biliayivka	17.0	20.5	–	37.5	30.9	–	30.0	30.0	84.1	69.1	–	–	121.6	0.8		
Bolhrad	546.8	987.1	115.5	1,649.4	47.7	71.1	597.8	597.8	1,801.8	52.1	8.2	–	3,459.4	19.1		
V.-Mykhailivka	12.0	40.0	–	52.0	86.7	–	–	–	8.0	13.3	–	–	60.0	0.3		
Izmayil	110.0	221.4	–	331.4	32.9	54.9	144.3	144.3	653.6	65.0	–	21.0	1,006.0	5.5		
Kiliya	–	–	–	–	–	–	–	–	–	–	500.0	–	500.0	2.7		
Kominternivske	37.7	–	–	37.7	90.6	–	–	–	3.9	9.4	–	–	41.6	0.22		
Liubashivka	4.5	–	–	4.5	100	–	–	–	–	–	–	–	4.5	0.02		
Ovidiopol	364.3	476.9	82.8	924.0	54.2	92.0	136.7	136.7	770.1	45.2	10.1	–	1,704.2	9.4		
Rozdilna	248.4	23.8	26.7	298.9	54.5	68.4	34.7	34.7	249.2	45.5	–	–	548.0	3.0		
Reni	153.5	193.3	28.1	374.9	42.1	1.2	188.3	188.3	516.2	57.9	–	–	891.0	4.9		
Sarata	451.1	544.4	126.9	1,122.4	58.8	88.6	232.2	232.2	674.8	35.4	–	110.0	1,907.2	10.5		
Tarutynе	1,176.6	840.8	201.2	2,218.5	57.8	153.2	368.2	368.2	1,581.8	41.2	–	35.0	3,835.3	21.2		
Tatarbunary	94.8	148.6	–	243.4	37.1	–	46.9	46.9	282.6	43.1	–	129.5	655.5	3.6		
Total in all districts	4,237.0	4,458.7	761.2	9,456.9	53.6	588.7	2,125.7	2,125.7	7,853.4	44.5	527.3	295.5	18,133.1	100		

tares, or 18.38 per cent, while the smallest – in the Artsyz District – 54.8 hectares, or 2.5 per cent. Among the table types the greatest areas are occupied with such varieties: Moldova (32.8 per cent), Arkadia (13.2 per cent), Odessa Souvenir (5.8 per cent), Muscat Yantarnyi (4.4 per cent), Muscat Hamburg (4.1 per cent), Suruchenskyi White (4.0 per cent), Vostorg (3.7 per cent).

Scientific researches and implementation of their results are the fundamental component of the innovative development of the Ukrainian agrarian sector and, in particular, the viticulture-winemaking branch.

Research and technology ensures an increase in the innovation potential and determine the opportunity of proceeding to the steady development in the branch. The propagation of the new selection grape varieties created in the National Scientific Center (NSC) Tairov Viticulture and Enology Institute and the National Institute for Vine and Wine “Magarach” is an example of the innovations transfer into the vitivincultural complex of the Odessa Region (table 4). As follows from the this table, the plantation area of the new winemaking grape varieties composes 13.1 per cent of the wine-making varieties total area. The portion of the varieties produced by the NSC Tairov Viticulture and Enology Institute is 11.9 per cent, while the ones from the National Institute for Vine and Wine “Magarach” – 1.2 per cent. The portion of the table grape varieties composes

31.8 per cent, whereas 28.6 per cent of them are from the NSC Tairov Viticulture and Enology Institute and 3.2 per cent – from the National Institute for Vine and Wine “Magarach”.

The state organizations and institutions play a special role in strengthening of innovation activity, as they form the market mechanism of the innovations implementation due to economic, scientific and technical, and also social policy development. For the negative phenomena elimination in the viticulture-winemaking branch of the Odessa Region (Figure), increase in the promising trends management and development efficiency, the NSC Tairov Viticulture and Enology Institute together with the Agrarian Development Department of the Odessa Regional State Administration and in accordance with “Development Program of Viticulture and Winemaking of Ukraine to 2025” [19] have developed the Regional Program “Viticulture and Winemaking of Odessa Region to 2025” [20]. It substantiates the ways and methods of solution of the actual problems, what must ensure the negative processes discontinuance, the viticulture-winemaking branch stabilization and further development in the region [19, 20].

CONCLUSIONS

Thus, the development of the cooperative and integrative processes on the innovation basis in the agrar-

Table 3. Table Grape Varieties Plantations Area in the districts of the Odessa Region in 2013, ha (as reported by the Ecology and Viticulture Departments of the NSC Tairov Viticulture and Enology Institute) [16–18]

District	Table Grape Varieties						Total in the district	
	Very early-ripening	Early-ripening	Mid-ripening	Mid-late-ripening	Late-ripening	Table mixed varieties	ha	%
Artsyz	13.4	4.0	3.0	–	34.4	–	54.8	2.5
Berezivka	10.0	–	–	–	–	–	10.0	0.5
B.-Dnistrovskiyi	55.2	7.3	3.4	7.2	5.9	–	79.0	3.6
Biliayivka	4.1	3.2	0.1	2.4	4.0	0.4	14.2	0.6
Bolhrad	254.4	95.9	14.4	130.8	300.8	11.7	808.0	37.0
V.-Mykhailivka	–	–	–	–	–	–	–	–
Izmayil	32.5	31.6	5.0	62.6	32.4	–	164.1	7.5
Kiliya	–	–	–	–	–	–	–	–
Kominternivske	9.2	–	–	–	–	–	9.2	0.4
Liubashivka	2.0	–	–	–	–	–	2.0	0.1
Ovidiopol	98.0	11.6	1.5	32.6	107.6	16.8	268.1	12.3
Rozdilna	41.5	5.5	12.3	18.0	13.6	–	90.9	4.2
Reni	22.8	–	6.6	20.2	67.3	–	116.8	5.4
Sarata	29.2	24.1	18.4	31.7	88.1	–	191.5	8.8
Tarutyne	38.2	8.4	58.9	30.2	127.3	–	263.0	12.1
Tatarbunary	53.2	19.9	1.0	18.01	17.8	–	110.0	5.0
Total in all districts	663.7	211.4	124.7	353.6	799.3	28.9	2,181.6	100
% of total area	30.4	9.7	5.7	16.2	36.7	1.3	100	–

Table 4. Grape Assortment in the districts of the Odessa Region in 2012, ha (as reported by the Ecology and Viticulture Departments of the NSC Tairov Viticulture and Enology Institute) [16–18]

Varieties	Districts														Total in the region	
	Artysz	Berezivka	B.-Dnistrovskiyi	Billayivka	Bolhrad	V.-Mykhailivka	Izmayil	Kiliya	Kominternivske	Liubashivka	Ovidiopol	Rozdilna	Reni	Sarata		Tarutynе
Winemaking grape varieties																
NSC Tairov Viticulture and Enology Institute's breeding	191		24	17	520	8	137			5	306	111	97	294	437	2,147
National Institute for Vine and Wine "Magarach"s breeding	5		30	44	44		16	26			17			32	45	215
Introduced grape varieties	908	10	2,230	105	2,895	52	853	500	16		1,381	437	794	1,581	3,353	15,771
Total	1,104	10	2,284	122	3,459	60	1,006	500	42	5	1,704	548	891	1,907	3,835	18,133
Table grape varieties																
NSC Tairov Viticulture and Enology Institute's breeding			38	4	212		28		9		59	29	38	52	42	511
National Institute for Vine and Wine "Magarach"s breeding			1		47						17					65
Introduced grape varieties	55	10	41	10	549	0	136			2	192	62	79	140	221	1,606
Total	55	10	79	14	808	0	164	0	9	2	268	91	117	192	263	2,182
NSC Tairov Viticulture and Enology Institute's breeding	1,159	20	2,363	136	4,267	60	1,170	500	51	7	1,972	639	1,008	2,099	4,098	20,325

ian sphere and, in particular, in the viticulture, will contribute to obtaining the guaranteed volumes of production, increase in effectiveness and productivity of labor, innovative development and modernization of manufacturing, also, to increase in the producers' competitiveness and social environment stabilization. That, in its turn, will lead to the steady development of the branch. Also, the creation of the regional viticulture and winemaking development programs in all vitivini-cultural regions of Ukraine (based on the example of the Odessa Region), including steps specially-designed for each region and directed to an increase in the manufacturing efficiency, modernization of the production capacities, cooperative and integrative connections development, social and marketing policy, will contribute to the deepening of the cooperation and integration processes in the branch.

Модель розвитку виноградарсько-виноробних регіонів України

В. В. Власов, І. В. Белоус,
Л. В. Джабурия, Ю. Ю. Булаєва
e-mail: IVB_iviv@ukr.net

ННЦ «Інститут виноградарства і виноробства
ім. В. С. Таїрова»

Вул. 40-річчя Перемоги, 27а, смт Таїрове,
Одеська обл., Овідіопольський р-н, Україна, 65496

Мета. Аналіз основних причин дестабілізації роботи виноградарсько-виноробної галузі України та шляхів їхнього усунення. Розробка інтеграційної моделі її ефективного функціонування. **Методи.** При обробці матеріалів роботи використано метод статистичних групвань, графічний та вибірковий методи. **Результати.** На основі аналізу основних причин дестабілізації роботи виноградарсько-виноробної галузі України запропоновано шляхи їхнього усунення, а також інтеграційну модель її ефективного функціонування в регіоні (на прикладі Одеської області) згідно з Регіональною програмою розвитку на найближчі 12 років. **Висновки.** Поглиблення процесів кооперації та інтеграції на інноваційній основі в галузі виноградарства та розробка перспективних регіональних програм розвитку виноградарсько-виноробного сектора Одеської області призведе до стійкого розвитку галузі в регіоні та Україні в цілому.

Ключові слова: виноградарсько-виноробна галузь, інноваційний розвиток, науково-технічні розробки, факторна модель розвитку.

Модель развития виноградарско-винодельческих регионов Украины

В. В. Власов, И. В. Белоус,
Л. В. Джабурия, Ю. Ю. Булаева
e-mail: IVB_iviv@ukr.net

ННЦ «Институт виноградарства и виноделия
им. В. Е. Таирова»

Ул. 40-летия Победы, 27а, пгт Таирово,
Одесская обл., Овидиопольский р-н, Украина, 65496

Цель. Анализ основных причин дестабилизации работы виноградарско-винодельческой отрасли Украины и пу-

тей их устранения. Разработка интеграционной модели ее эффективного функционирования. **Методы.** При обработке материалов работы использованы метод статистических группировок, графический и выборочный методы. **Результаты.** На основании анализа основных причин дестабилизации работы виноградарско-винодельческой отрасли Украины предложены пути их устранения, а также интеграционная модель ее эффективного функционирования в регионе (на примере Одесской области) в соответствии с Региональной программой развития на ближайшие 12 лет. **Выводы.** Углубление процессов кооперации и интеграции на инновационной основе в области виноградарства и разработка перспективных региональных программ развития виноградарско-винодельческого сектора региона будут способствовать устойчивому развитию отрасли в Одесской области и Украине в целом.

Ключевые слова: виноградарско-винодельческая отрасль, инновационное развитие, научно-технические разработки, факторная модель развития.

REFERENCES

- Carey V. A., Archer E., Saayman D. Landscape diversity in Stellenbosch: Implications for viticulture // Proc. Colloque Int. Paysages de Vignes et du Vins (July 2003, Fontevraud, France). – Fontevraud, 2003. – P. 112–117.
- Chisili M. Optimizarea ecologica a viticulturii Moldovei. – Chisinau, 2001. – 44 p.
- Hall A., Lamb D. W., Holzapfel B., Louis J. Optical remote sensing applications in viticulture – a review // Austr. J. Grape and Wine Res. – 2002. – 8, N 1. – P. 36–47.
- Johnson H., Robinson J. The World Atlas of Wine // Barnes & Noble Books, 2005. – 352 p.
- Jones G. V., Light S. Site characteristics of vineyards in the Rogue and Applegate Valley American viticultural areas // Open Report to the Oregon Wine Board and the Rogue Chapter of the Oregon Winegrape Growers Association. – Oregon, 2001. – 55 p.
- Jones G. V., Nelson P., Snead N. Geology and Wine 8. Modeling viticultural landscapes: A GIS analysis of the terroir potential in the Umpqua Valley of Oregon // GeoScience Canada. – 2004. – 31, N 4. – P. 167–178.
- Lamb D. W., Bramley R. G. V. Precision viticulture – tools, techniques and benefits // Proc. 11th Australian Wine Industry Technical Conference / Eds R. J. Blair, P. J. Williams, P. B. Hoj. – Adelaide, 2002. – P. 91–97.
- Lamb D. W., Bramley R. G. V. Innovations and technology – managing and monitoring spatial variability in vineyard productivity // Natural Resource Management. – 2001. – 4, N 1. – P. 25–30.
- Olmeda M., Bernabeu R., Diaz M. Landscape culture in the vineyard: challenge or reality in Castilla-la-Mancha // Proc. Colloque Int. Paysages de du Vins (July 2003, Fontevraud, France). – Fontevraud, 2003. – P. 164–170.

CHANGES IN THE POPULATION DENSITY OF PATHOGENIC MICROORGANISMS IN RESPONSE

10. Persuric D., Sladonja B., Milotic A., Staver M., Cargnelo G. Vineyard an Wine in Integral Global Landscape Architecture of Istria, Croatia Vineyard and wine in integral global landscape architecture of Istria, Croatia // Proc. Colloque Int. Paysages de Vignes et du Vins (July 2003, Fontevraud, France). – Fontevraud, 2003. – P. 231–235.
11. Wolf T., Boyer J. D. Vineyard Site Selection : Virginia Cooperative Extension Publication, 2003. – Number 463–020. – 31 p.
12. Vine and wine between tradition and modernity: The XXXVIth World Congr. of Vine and Wine and 11th General Assembly of the Int. Organization of Vine and Wine (OIV) (Bucharest, Romania, 2013). – Bucharest, 2013. – P.17
13. Danneberg O. H., Jaborek Ch., Wande M., Tinke W., Schild A. Bodenkundliche und gelandeklimatische Daten zur Erstellung Eines Einfachen Modells zur Charakterisierung optimaler Weinbaus Standorte // XXVIIIth World Congr. of Vine and Wine 2nd General Assemble of the Int. Organisation of Vine and Wine (OIV): Proc. – Vienna, 2004. – P. 24
14. Hamilton R., Hayes P. Development and adaptation of zonal viticulture to yield and grade targeting // XXVIIIth World Congr. of Vine and Wine 2nd General Assemble of the Int. Organisation of Vine and Wine (OIV): Proc.– Vienna, 2004.–P.29
15. Vlasov V., Vlasova O. Evaluation of agroecological conditions for wine growing with GIS application // XXVIIIth World Congr. of Vine and Wine 2nd General Assemble of the Int. Organisation of Vine and Wine (OIV) : Proc. – Vienna, 2004. – P. 19.
16. Final report of the task 21.00.03.07.P HDPE NAAS “Viticulture” “Organizational-economic mechanism of the effective functioning of viticulture in restructuring the agriculture of Ukraine” // NSC Tairov Viticulture and Enology Institute. – Odessa, 2013. – 61 p.
17. Final report for contract number 58 of the Ministry of Agrarian Policy and Food of Ukraine “Ukraine vineyards inventories based on ampelocological researches” // NSC Tairov Viticulture and Enology Institute. – Odessa, 2012. – 135 p.
18. Vlasov V.V., Busovskaja M. B., Bulaieva Yu. Yu. Modern state of viticulture Tarutino District of Odessa Region // Viticulture and Winemaking: interdepartmental thematic research collection. – Odessa, 2013. – P. 17–24.
19. Program of viticulture and winemaking development in Ukraine to 2025 year. – Kyiv, 2013.
20. Regional program “Viticulture and winemaking of Odesa region on 2013–2025 years”. – Odessa, 2013.