## "მანავი / MANAVI"

Registered in Georgia as an Appellation of Origin

Registration N788, registration date: 21/08/20061

PRODUCT TYPE FOR WHICH REGISTRATION OF GEOGRAPHICAL INIDCATION IS REQUESTED:

Grape product, category

1. Wine

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1. **NAME:** "მანავი / MANAVI"

## 2. TYPE, COLOR AND MAIN REQUIREMENTS

"მანავი / MANAVI" is white sec (dry) wine, which shall satisfy the following requirements:

- Color light greenish straw;
- Aroma and taste perfect, delicate, soft, harmonic, cheerful, refined, having aroma characterizing the location, with meadow flowers tones, fruit tones are developed with aging;
- Volumetric spirit content no less than 11 %;
- Concentration of finished extract mass no less than 16 g/l;
- Sugar content no more than 4 g/l;
- Titrated/ Volatile acidity no less than 5 g/l;
- Other characteristics shall meet requirements provided by the legislation of Georgia.

## 3. SPECIFIC ZONE AVAILABLE AREAS

<sup>&</sup>lt;sup>1</sup> https://www.sakpatenti.gov.ge/en/state\_registry/#

The micro-zone "Manavi" is located in Outer Kakheti, in administrative district of Sagarejo, on the foothills of Tsiv-Gombori Range Southern slopes and nearby thereof, until railway, and on the coordinates  $-41^{\circ}44'$  of Northern longitude and  $45^{\circ}27'$  of Eastern latitude.

The micro-zone "Manavi" includes the following villages: Tokhliauri, Manavi, Burdiani, Giorgitsminda, Antoki, Mariamjvari, Didi Chailuri, Patara Chailuri, Kakabeti and Verkhviani.

## 4. VINE VARIETIES

Wine "∂ანავo / MANAVI" shall be prepared from the grapes of Kakhuri Mtsvane, usage of other varieties is prohibited.

## 5. VINEYARD CULTIVATION, SHAPE OF PRUNING AND CARE

- The micro-zone Manavi vineyards for wine "∂ანავი / MANAVI" are situated on 450-800 m above sea level.
- Distance between the rows in the vineyards 1-3 m;
- Distance between the vines in the row -0.8-1.5 m;
- Height of stem 60-90 cm;
- Shape of pruning one-sided or Georgian two-sided or free.

Vine cultivation, shape and purring, pests and diseases control, and soil treatment, fertilization, and other operations, shall be provided according to agro-technical activities selected by wine-makers.

## 6. GRAPE MATURITY, VINTAGE, TRANSPORTATION

- "მანავი / MANAVI" shall be produced only with ripe grapes. Sugar content shall be no less than 19%, at the vintage;
- Grapes transportation is permitted only with wooden or plastic boxes, with bodyworks made of stainless steel or painted with special color;
- Usage of polyethylene packages and/or bags is not allowed;
- The grapes shall be protected from dirtying at the transportation.

#### 7. VINTAGE AND WINE PRODUCTION

Vintage on 1 ha vineyard shall be no more than 10 tons.

Wine production shall be no more than:

- 650 liters from 1 ton of grapes;
- 5200 liters from 1 ha vineyard.

## 8. GRAPE PROCESSING, WINEMAKING AND BOTTLING

Grapes for producing wine "∂ანავი / MANAVI" shall be only from the vineyards cultivated in the microzone Manavi.

Grapes processing and winemaking shall be provided exclusively inside of Kakheti, bottling is permitted outside Kakheti, but only on the territory of Georgia.

At the same time, the grapes can be got from the micro-zone Manavi and the wine can be withdrawn from Kakheti viticulture zone only under strict accounting and control.

"მანავი / MANAVI" is made by complete alcoholic fermentation of gravity grape juice.

In the production of wine "მანავი / MANAVI" it is permissible to use only the operations, materials and substances provided by the legislation of Georgia.

"მანავი / MANAVI" shall be represented on consumer market only packed in the consumer vessels.

## 9. LINK BETWEEN EXCLUSIVE QUALITY, REPUTATION AND GEOGRAPHICAL AREA

Physical-geographical individuality of this part of the Iori Plain is determined by its joint of plateau, waved and slightly segmented relief, and gradiation from the continental- into the sea climate.

CLIMATE – The climate in the micro-zone is moderately humid, with mild winter and warm long-term summer. Annual duration of sunlight in the micro-zone Manavi within 2100-2200 hours, and 1650 hours in vegetation period. Sum of annual radiation is 120-130 kcal/cm², and balance – 50-52 kcal/cm².

Average annual air temperature of the micro-zone varies within  $-+9-12^{\circ}$ C. The coldest month is January, when the temperature varies within  $0-2^{\circ}$ C depending on the level. The average temperature of the warmest months – July and August varies within  $+23.5-22^{\circ}$ C, and  $23^{\circ}$ C – on 650 m.

Air temperature average annual absolute minimum is within -12, -14 $^{\circ}$ C and -17, -19 $^{\circ}$ C, once in 10 years. Extreme temperatures are -25 – and +39 $^{\circ}$ C.

Sustainable transition to the average daily temperature of  $10^{\circ}$ C takes place in the I decade of April, and falling down – in the end of October. Vegetation period duration is within 190-200 days. Sum of active temperatures is within  $+3800 - +3400^{\circ}$ C, on 450-800 m levels.

General cloudiness is 55-60% that is more in the winter and spring (60-70%), and less in the summer (34-40%).

Maximum of precipitations (90-130 mm) take place in May, and minimum (25 mm) – in December. Kakhuri Mtsvane and Rkatsiteli buds opening begin from the second half of April (22.IV), flowering – from the first decade of June, and grape maturity – in the second half of August. Kakhuri Mtsvane flowering begins 3 days earlier than Rkatsiteli. In Manavi, Kakhuri Mtsvane gives the best quality winematerial in the end of September, when the active warmth is 3300°C and more, such years are 50%, and in other years there is produced table wine of good quality.

Annual relative air humidity approximately is 69-70%. The air is less humid (60%) in the summer (July, August), and more (76-79%) – in the late autumn and beginning of winter.

Hailing days are 0,9-2,6 per year, depending on the level above the sea. May is the most hailing month – 0,6-1,1 days.

On the Southern foothills of Tsiv-Gombori Range and the valley near the River Iori, the Western – (25%), Eastern and South-Eastern (16-17%) winds are prevailing. The average annual wind speed is 2,2-2,6 m/s, and even 2,8-3,3 m/s in the spring. Amount of strong windy days is no more than 19. Strong wind speed is maximum 40 m/s, and takes place once in 20 years, and can reach 36 m/s, once in 10 years. The microzone belongs to wind impact I group, this is a reason to cultivate windshields in 200-250 m distance from each other.

SOIL – Field morphological and laboratory examination of soils have been executed to study the soil profile from the surface to the mud, as in accordance morphological marks, as laboratory – with physical-chemical characteristics. The cuts were done accordingly relief shapes, soil varieties and sub-varieties in various areas of micro-zone.

On the basis of research, in the micro-zone are distinguished brown soils with sub-varieties and alluvial-proluvials classified as following:

#### I. I. Brown Soils

- 1. Dark brown (black-like) carbonated, very thick, small amount of humus, clay and heavy loam developed on loess-like clays;
- 2. Dark brown (black-like) carbonated, very thick, deep humus, somewhere slightly leptosol with stone, clay and heavy loam developed on loess-like clays and loamy conglomerates;
- 3. Dark brown (black-like) carbonated, moderately thick, small amount of humus, clay and heavy loam, slightly leptosol with stone developed on loess-like clays and loamy conglomerates;

4. Brown ordinary, carbonated, very thick, moderate and small amount of humus, clay and heavy loam, somewhere slightly leptosol with stone developed on loess-like clays and loamy conglomerates.

#### II. II. Meadow-brown Soils

- 1. Meadow-brown (old alluvial-deluvial), carbonated, very thick, moderate and small amount of humus, heavy loam and slightly clay developed on alluvial-proluvial sediments;
- 2. Meadow-brown (old alluvial), carbonated, very thick, small amount of humus, clay and heavy loam developed on alluvial sediments.

## III. Alluvial-proluvial Soils

1. Alluvial-proluvial, carbonated, very thick, moderate amount of humus, very leptosolwith stone, loam developed on alluvial-proluvial sediments.

Dark brown (black-like) soils with thick profile (sub-varieties 1 and 2) are extended mostly on upper part of Chailuri, Kakabeti, Verkhviani, Kandauri, Badiauri and Shibliani, among the villages and Tbilisi-Kakheti railway. Profile thickness varies within 0,8-1,2 m, active humus layer is 35-50 cm. Moderate thickness of soil (sub-variety <sup>1</sup>3) is presented on the territory of Manavi (Plot Zeiani) and Badiauri (Plot Permebtan), profile thickness is 50-70 cm, and 35-40 cm – of active humus layer. First 3 sub-varieties are dark brown to black on upper accumulative (A) layer, on transitional (B) layer it is brown to beige, and bellow – straw to white because of high content of carbonates or particolored with lime dots.

Carbonates accumulation in this layer can be as light micelles. Structure in A-layer is solid-pea-like, slim solid or pea-like in B-layer, and bellow – instructive. Some places (sub-varieties  $2^{nd}$  and  $3^{rd}$ ) are characterized somewhere with leptosol and stony content, above is powdered and lower – slightly and very dense and developed on loess-like clays and loamy conglomerates.

Meadow-brown (old alluvial-deluvial) soils (¹5) are presented on the territory of village Manavi, Plots Zvrebi and Mtsvane. Profile thickness reaches 1,5-2,0 m. Active humus layer is 45-50 cm. Characterized with brown color in (A) accumulation layer, bellow is beige to straw. Genesis horizons are less developed. Structure in upper layers is solid-pea-like, which is less developed bellow or instructive. Fossil layer is disposed in 80-100 cm depth and is darker. Upper layers are powdered, bellow – dense, with heavy mechanical content.

Meadow-brown (old alluvial), carbonated, very thick, heavy loamy and clay (sub-variety II-6) is extended mostly next to village Manavi along railway, bellow. Profile thickness is more than 1,5-2,0 m. Active humus layer is 50-60 cm. Soil is characterized with brown color as in accumulation layer, as bellow, with rust spots in 80-100 cm depth, pea-like to topsoil – in 0-80 cm depth, bellow – instructive or structure is slightly developed. It is dense and powdered. Mechanical content is clay and heavy loamy and moisture.

Alluvial-proluvial soils (sub-variety III-7) are presented in the Northern part of Manavi, Tokhliauri, Chailuri and Sagarejo-Giorgitsminda territories, on convex cones of gorges: Chailuri, Matiantkhevi and Giorgitsminda, characterized with very thick profile and 40-50 cm humus layer, with slim-grainy-solid structure above, and instructive – bellow, powdered, very loamy and stony. It is developed on convex cones stony-rocky and sandy sediments.

In accordance to laboratory researches, it has found that brown and meadow-brown (old alluvial and alluvial) soils (type 5 and 6) are characterized with low humus content, and their number in active layer is mostly within 3,5-1,5%. It is sharply reduced bellow. Exceptional is the second type of soil (plot "Khodabunebi" and "Samkali Mitsa" village Kakabeti), wherein the humus content in the deep layers (100-120 cm) is closer to upper active layer content, and is 2,9-1,6%. General nitrogen content is almost corresponds to humus content, and in active layer (A) it is mainly 0.238-0.070%.

Exceptional is a cut II-6 (village Kakabeti, plot "Samkali Mitsa"), wherein humus amount is high -0.980%, in the 0-20 cm layer. Also, the exceptions are ordinary brown soils (sub-variety I-4), wherein the general nitrogen content is higher than bellow and it reaches 0,980-0,602%, in 50-100 cm depth, which is irregular.

Hydrolyzed nitrogen content is 11,70-5,60 mg in 100 g soil, in the upper layer -0-60 cm depth, which is an average indicator. It decreases regularly bellow.

HUMAN FACTOR – Wine "Manavi" is created by leading specialists of "Samtresti" and has been produced since 1938.

Geographical location of micro-zone, regional climate, which is transient from dry subtropical to moderately humid subtropical, dark brown (black-like) carbonated soils and distinctive properties revealed by Kakhuri Mtsvane vine variety in this micro-zone determines the special quality of wine "05530 / MANAVI".

#### 10. SPECIAL LABELING RULES

With Latin font – MANAVI Protected Designation of Origin and/or PDO

Cyrillic font – MAHABИ Защищённое наименование места происхождения

## 11. ACCOUNTING AND NOTIFICATION

Accounting and notification of production and storage technological processes of "მანავი / MANAVI" is carried out, in accordance with the rules established by the legislation of Georgia.

# 12. MAIN CONTROLLABLE POINTS

During control of the PDO wine ""050530 / MANAVI" production process the producer shall satisfy the requirements established by LEPL National Wine Agency, and shall comply with the following parameters:

Main Controllable Points	Evaluation Methods
1	2
Vineyard location	Cadaster map, control on the place
Area	Vineyard accounting magazine, cadaster
Vine variety	Vineyard accounting journal, control on the place
Cultivation methods	Journal of registration of Agrotechnical Measures, treating journal, control on the place
Vintage and transportation	Vintage journal
1	2
Grape harvest per ha	Vintage journal
Grape harvest in total	Vintage journal
Grape processing and winemaking	Grape receiving journal, grape processing journal, product turnover calculation journal, laboratory analysis journals, notifications, control on the place
Wine bottling, packaging and storage place and conditions	Bottling journal, journal for motion of ready product in the storehouse, laboratory analysis journals
Physico-chemical characteristics of the wine at winemaking, before and after bottling	Laboratory analysis journals
Organoleptic characteristics of the wine	Tasting commission protocols
Traceability	Technological and laboratory records

# 13. CONTROL BODY OF PRODUCTION

State control for observance of production specification and lawful usage of the appellation of origin PDO shall be carried out by LEPL National Wine Agency, according to the rules established by the legislation of Georgia.

