

DZEBEL BASMA - A NEW GENERATION OF ORIENTAL TOBACCO ECOTYPE

Dimitar Dimanov

*Tobacco and Tobacco Products Institute-Plovdiv 4108 Markovo, Bulgaria
e-mail: d.dimanov@mail.bg*

ABSTRACT

In compliance with tobacco trading and the requirements of cigarette companies, it is necessary to restore the good trade image and commercial properties of the smoking qualities of the ecotype Dzebel basma. The variety structure of Dzebel basma has to be renovated with new genotypes of high quality, flavour and aroma, typical for traditional basma.

In accordance to that, three varieties of oriental tobacco Dzebel basma – Dzebel basma 1, Dzebel basma 2, Basma 13.were created and acknowledged by IASAS and Patent office of Bulgaria (2008-2010).

The genotypes presented here are genuine basma tobaccos. Their biological, morphological, economic and technological characteristics combine the qualities of the old Dzebel tobacco with the new market requirements.

Key words: dzebel basma 1, dzebel basma 2, basma 13, oriental tobacco

ЕКОТИПОТ ЦЕБЕЛ БАСМА - НОВА ГЕНЕРАЦИЈА ОРИЕНТАЛСКИ ТУТУН

Во склоп на трговијата со тутун и потребите на цигарните компании, потребно е да се врати добрата трговска слика и комерцијалните карактеристики на квалитетот на тутунот за пушење од екотипот “Џебел басма”. Различната структура на Џебел басма треба да биде надоградена со нови генотипови тутун со висок квалитет, на вкус и арома, типична за класичната басма.

Трите сорти на ориенталски тутун Џебел басма (Џебел басма 1, Џебел басма 2, и Џебел басма 13) се создадени и признати од IASAS и Patent Office of Bulgaria (2008-2010).

Новите генотипови претставуваат вистински басми. Во нивните биолошки, морфолошки, технолошки и економски својства се комбинирани својствата од стариот тутун џебел со новите трговски барања.

Клучни зборови: џебел басма 1, џебел басма 2, басма 13, ориенталски тутун

INTRODUCTION

The tobacco region of Dzebel covers an area differentiated in the Eastern, Middle and partly Western Rhodopes.

The Dzebel basma tobacco ecotypes produced there are traditional basma. In the past, a

typical representative of Dzebel varieties has been the local ('has') basma, widely distributed in the whole region and - in small quantities – even in some 'Bashibaly' sub-regions. This is the real native Xanti's basma (Baylov D., 1939, A. Timov etc., 1974).

The Dzebel tobaccos are with the smallest possible leaves compared with the other Oriental tobaccos. The medium length of the leaf is 6-14 cm, the shape of the leaf is wide elliptical, oval, with rounded top and short neck. The dried leaves are rich in content, without any thickness shown, but with a tender structure and thin main vein, elasticity, expressive gloss and 'well backed'. The colour is yellow-orange, orange, orange-red for the high-grade fractions. The nicotine content is 0.8 – 1.5%, soluble carbohydrates are 12 – 16%. The leaves have a high cigarettes output, excellent burning capacity and very fine and pleasant aroma. By the natural

fermentation during the summer, the place of preservation of the Dzebel tobaccos is easily discovered thanks to its aroma.

In smoking, the Dzebel tobaccos are distinctive by their low physiological strength, gentle taste without any faults, and by the fine and pleasant aroma.

The purpose of the present study is to create new Dzebel basma Oriental tobacco varieties, combining the classical concepts for this ecotype with the contemporary quality and taste requirements of the market – high nicotine, balanced sugars, taste and flavour.

AGRO-BIOLOGICAL CHARACTERISTICS OF THE VARIETY

Dzebel Basma 1

Certificate №10795/30.09.2008 of Bulgarian Patent office

1. **History of the variety** – Individual breeding of local populations – village of Vodenicharsko, municipality of Dzebel

2. **Botanical affiliation** – *Nicotiana tabacum*, ecotype Dzebel basma.

3. **Shape of the plant** – cone-shaped. Height: 85-100 cm, depending on agrotechnics – up to 105 cm.

4. **Leaves** – counting: 28 – 33 pieces. Position: regular. Angle of aberration: 40 – 45°. Size: 15.3/8.7 cm (length/width) at 14th leaf. Shape of the leaf: elliptical, with an average mucronated top. Lamina: curly and waved, hairy and strongly gummy. Colour: green. Nervation: regular. Neck: above 3.5 cm. Ears: 5.8 – 4.1 cm. Drawers: asymmetric, over 4 cm long

5. **Raceme** – ball-shaped, compact, with size 8.6/7.7 (length/width), with 5-6 lateral nodes and 25-30 blossoms. Colour of the petals: pale rose

6. **Biological characteristics** – the

length of the vegetation period (from the plant-seedlings until the mass flowering) is 53 – 56 days; from the plant-seedlings until the opening of the first blossoms – 50 days; until the ripe of the first leaves: 42 – 44 days. The leaves ripe consecutively. The leaves get overripe if the harvest is late. It dries fast. The quality gets worse when lots of nitrogen fertilizers are used.

7. **Quality** – the dried tobacco leaves have deep orange to orange-red colour with gloss, medium thickness, and thin main vein. It possesses a fine flavour, typical for the basma tobaccos, pleasant taste and very good burning capacity. When smoked, it doesn't saturate.

8. **Chemical indicators** – Nicotine content / average for the three years of testing 1999-2001 / to data from the IASAS – 2,01%, soluble carbohydrates – 14,60%, nitrogen content – 2,02% and ash content -9,57%.

9. **Yield per decare** – according to our data and to the data from the IASAS tests, depending on the agro-climatic conditions strict observing of the agrotechnics, the yields are in the range from 160 to 190 kg per decare.

AGRO-BIOLOGICAL CHARACTERISTICS OF THE VARIETY

Dzebel Basma 2

Certificate №10797/30.09.2008 of Bulgarian Patent office

1. **History of the variety** – Individual

breeding of local populations – village of Dolno Kazatzite, municipality of Dzebel.

2. **Botanical affiliation** – *Nicotiana tabacum*, ecotype Dzebel basma.

3. **Shape of the plant** – cone-shaped. Height: 75-85 cm, depending on agrotechnics – until 100 cm.

4. **Leaves** – counting: 28 – 30 pieces. Position: regular. Angle of aberration: 40 – 45^o. Size: 14.7/8.6 cm (length/width) at 14th leaf. Shape of the leaf: wide-elliptical, with an average mucronated top. Lamina: curly and waved, hairy and strongly gummy. Colour: green. Nervation: regular. Neck: above 3.5 cm. Ears: 3.5 – 4.0 cm. Drawers: asymmetric, long more than 3 cm

5. **Raceme** – ball-shaped, compact, with size 8.6/7.7 (length/width) with 5-6 lateral nodes and 25-30 blossoms. Colour of the petals: pale rose

6. **Biological characteristics** – the length of the vegetation period (from the plant-seedlings until the mass-flowering) is 48 – 52 days; from the plant-seedlings until the opening of the first blossoms – 46 – 48 days; until the

ripe of the first leaves: 40 – 42 days. The leaves ripe consecutively. The leaves get overripe, if the harvest is late. It dries fast. The quality gets worse when lots of nitrogen fertilizers are used.

7. **Quality** – the dried tobacco leaves have orange to orange-red colour with gloss, they are rich in content, gentle, elastic, with a pleasant flavour, medium thickness, good burning capacity and thin main vein.

8. **Chemical indicators** – Nicotine content / average for the three years of testing / to data from the IASAS – 1,83%, soluble carbohydrates – 15,87%, nitrogen content – 2,02% and ash content -11,28%.

9. **Yield per decare** – according to our data and to the data from the IASAS tests, depending on the agro-climatic conditions strict observing of the agrotechnics, the yields are in the range of 160 – 190 kg per decare.

AGRO-BIOLOGICAL CHARACTERISTICS OF THE VARIETY

Basma 13

Certificate №10835/29.01.2010 of Bulgarian Patent office

1. **History of the variety** – Individual breeding of local populations.

2. **Botanical affiliation** – Nicotiana tabacum, ecotype Dzebel basma.

3. **Shape of the plant** – cone-shaped. Height: 80 -85 cm, depending on agrotechnics – until 100 cm.

4. **Leaves** – counting: 28 pieces. Position: regular. Angle of aberration: 25 – 30^o. Size: 14,7 /8.3 cm (length / width) at 14th leaf. Shape of the leaf: widely elliptical. Lamina: curly and waved, hairy and strongly gummy. Colour: green. Neck: above 3.6 cm. Ears: 3.8cm. Drawers: - 2,7cm.

5. **Raceme** – ball-shaped, compact, with diameter 9,8cm, with 25-30 blossoms. Average number of ripe capsules is 23, weight of one capsule 0.120g. Colour of the petals: pale rose

6. **Biological characteristics** – the length of the vegetation period (from the plant-

seedlings until the mass-flowering) is 43 – 45 days; from the plant-seedlings until the opening of the first blossoms – 38-40 days; until the ripe of the first leaves: 32 – 35 days. The leaves ripe consecutively. The leaves get overripe, if the harvest is late. It dries fast. The quality gets worse when lots of nitrogen fertilizers are used.

7. **Quality** – the dried tobacco leaves had yellow to yellow-orange colour and orange colour with gloss, leaves are meaningful, soft, elastic, developed with a pleasant aroma and taste and good burning capacity.

8. **Chemical indicators** – Nicotine content / average for the three years of testing 1999-2001 / to data from the IASAS – 1,8-2%, soluble carbohydrates – 12,8-15%, nitrogen content – 1,6% and ash content - 12%.

9. **Yield per decare** – according to our data and to the data from the IASAS tests, depending on the agro-climatic conditions strict observing of the agrotechnics, the yields are in the range of 160 – 190 kg per decare.



Fig.1 Dzebel basma 1



Fig.2 Dzebel basma 2



Fig.3 Basma 13

CONCLUSION

- The expert committee on IASAS / 19.01.2010 / approved variety Dzebel basma 1 as a standard for the Dzebel basma tobacco ecotype.

- Chemical indicators derived from the three-years testing of varieties in the IASAS system and our data, perfectly satisfy / high nicotine and balanced sugar levels / the contemporary trade requirements for the ecotype Dzebel basma.

- Presented results show the advantages of the new varieties per yield, as well as quality compared to both controls Dzebel basma 576 and Dzebel basma 359. contemporary trade requirements for the ecotype Dzebel basma.

- Presented results show the advantages of the new varieties per yield, as well as quality compared to both controls Dzebel basma 576 and Dzebel basma 359.

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