

PROSPECTS OF CIDER PRODUCTION DEVELOPMENT IN UKRAINE

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Introduction. Cider is a low-alcohol beverage (3-8% alcohol), formed as a result of fermentation of apple juice, saturated with oxygen, which has a golden color and light aroma. Today cider is one of the most popular drinks in Ukraine.

According to the online magazine Beer Technologies Innovations, cider "won" 12% of sales only in the brewing industry. Large breweries are already setting up some of their equipment to make this delicious and healthy drink, which is even considered a healthy eating trend.

The trend is clearly reflected in the International Tasting Competition East European Beer Award, the only one in Ukraine, in which the Cider category has appeared. Ciders were first presented at the competition in 2019. Then the gold award went to "Apple Cidre Royal" cider from "Royal Fruit Garden", silver - blended light semi-sweet effervescent cider "Miller", bronze - "Ice Sweet Sweet Cider" from BERRYLAND.

Aim. Analysis of the state of cider production in Ukraine, trends in the development of technologies for its production and expansion of the range of ciders with functional properties to confirm the relevance of increasing its production.

Materials and methods. Descriptive research method, literature and Internet sources that are publicly available were used.

Results and discussion. The technology of making cider has changed little since its inception. It is also obtained by fermentation of apple juice. As a result, the drink has a rich smell of apples, golden color, and its strength varies from 5% to 7% alcohol. According to the sugar content, the drink is dry, semi-dry, semi-sweet, sweet and traditional.

The whole process can be divided into 5 main stages: harvesting and grinding the fruit, squeezing apple juice, its further processing, fermentation, bottling.

To make cider, apples of late autumn or early winter varieties are traditionally used in the following proportions: 10% bitter varieties, 70% sweet and bitter-sweet and 20% sour. The harvested crop is thoroughly washed, crushed and the juice is squeezed with a press. The finished juice is separated from the cake and sediment, subjected to heat treatment, add yeast, fructose-glucose syrup and allow to infuse. In order to make sure that the future drink is harmless, it is important to check a number of microbiological indicators of the juice in time. In the presence of foreign microorganisms, the fermentation process may begin incorrectly. After fermentation, the cider is cleaned again and the indicators of the fermented juice are evaluated in the laboratory: the level of acidity, sugar content, alcohol content, calculate the amount of water or juice concentrate needed for dilution.

The filtered blend lasts from 2 to 12 days, during which time the cider acquires its unique aroma and taste. The next stage is cooling the cider to a temperature of 0 to 14 oC and saturating it with carbon dioxide, and then - the obligatory aging for 12-24 hours. And then it is bottled or kegs.

Cider production remains almost the only segment in the Ukrainian alcoholic beverage market that is growing dynamically and is ready to accommodate new players. Entrepreneurs with a strong raw material base began to develop a niche that remained empty since 1988 (until 1985, many enterprises in the Soviet Union, including canneries, produced cider, and the production of beverages began to develop since the nineteenth century). After the "pioneers", other companies, including international ones, began to explore the market. Newcomers to the Ukrainian cider market are increasing sales of their products, expanding the range, "formats" of packaging and blending.

Analysis of the reasons for the popularity of cider from both producers and consumers, leads to the following results. The reason is that, in addition to its taste, cider has a number of useful indicators.

- Cider is low in calories compared to other alcoholic beverages: 100 grams of dry cider contains 40 kcal.
- In moderation, cider is good for digestion. It stimulates the stomach and intestines, normalizes peristalsis, blood pressure, and increases appetite and mood.
- Does not leave an unpleasant aftertaste, is not very intoxicating and does not cause a hangover. This is the difference between high-quality and low-quality drink.
- Contains substances that normalize metabolism. Thanks to them, a person loses extra pounds.

And the reason for the popularity of producers is the high demand for cider products.

Conclusions. Thus, the revival of cider production in Ukraine and bringing it to the current level is relevant in terms of saturating the market with delicious and healthy natural drinks, of course, with their conscious consumption.

PROSPECTS OF BASIDIOMYCETES IN THE FIGHT AGAINST INFECTIOUS DISEASES

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Introduction. There is a constant need for new biologically active compounds with medicinal properties. Only a relatively low amount of biologically active compounds is used in prescription drugs. Biologically active compounds with a therapeutic effect are often chemically linked. Therefore, it is important to discover new biologically active molecules that can potentially be processed into drugs. Mushrooms have proved to be an excellent, although insufficiently studied, source of biologically active compounds with therapeutic potential.

Mushrooms present a rich source of biologically active natural compounds. Besides, mushroom extract is considered an important tool for the prevention and treatment of many diseases for millennia in some countries. Fungi are known to contain immunomodulatory compounds that help improve the immune function of cancer patients during radiotherapy and chemotherapy. The main bioactive compounds extracted from fungi are known for their antioxidant, antitumor, and antimicrobial properties. Many studies are aimed at determining biologically active compounds of basidiomycete origin with antibacterial properties.

Aim. The study aims at characterizing biologically active compounds of basidiomycetes with antibacterial properties.

Materials and methods. We used the descriptive research method: literary and Internet sources that are freely available were analyzed.

Results and discussion. Many Basidiomycetes mushrooms contain biologically active polysaccharides, some of which exhibiting hematological, antiviral, antitumor, antibiotic, antibacterial, and immunomodulating activities. *Flammulina velutipes* one of the most popular mushrooms, with high nutrition levels of vitamins, amino acids, polysaccharides, and fiber, has been widely cultivated and consumed all over the world. The polysaccharides of *F. velutipes* (FVP and FVP2) are the major active component in *F. velutipes* that have a lot of biological activities