



Received: 16-07-2024
Accepted: 26-08-2024

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Quality and Required Quantities of Water for Watering Donkeys

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DOI: <https://doi.org/10.62225/2583049X.2024.4.5.3193>

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Abstract

Water is one of the most crucial factors for enabling the normal functioning of physiological and biochemical processes in the body. An animal's body contains 40-75% water, depending on its age. The domestic donkey originates from the arid, dry regions of Eastern Africa. Such conditions do not allow for easy daily access to water sources. Except for pregnant females and mothers with young foals, other categories of donkeys do not go to drink water every day if the water sources are far away. Due to their high water

needs, females with foals and pregnant donkeys go to water sources daily. A donkey can drink up to 25 liters of water in one session. In this way, they create water reserves and do not have to travel to distant water sources every day. For donkeys to drink water, it must be fresh and organoleptically clean. They will remain thirsty and refuse to drink stagnant or dirty water. A donkey needs 8-10 liters of water per 100 kg of body weight every day.

Keywords: Water, Donkeys, Watering

1. Introduction

Apart from air, water is the most essential element for sustaining life. As early as ancient Greece, based on the teachings of Empedocles (circa 490-430 BCE), who lived in a Greek colony in Sicily, the importance of water was acknowledged and respected. He defined the "cosmological theory," which posited that the world is composed of four elements: earth, air, fire, and water.

Water is one of the most crucial factors for enabling the normal functioning of physiological and biochemical processes in the body. An animal's body contains 40-75% water, depending on its age (Nusschag, 1957).

The importance of water was also defined at the conference in Dublin in 1992. when water is defined as a "limited resource and economic good".

As age increases, the amount of water in the tissues decreases. Loss of 10% of body water leads to restlessness, tremors and general weakness. If 20-22% of body water is lost, death occurs (Šterk, 1963)^[6]. They need water at the level of 5-10% of their own body weight per day. The lack of food can be endured for a significantly longer period.

The domestic donkey originates from the arid, dry regions of Eastern Africa (Urošević *et al.*, 2022)^[9]. Such conditions do not allow for easy daily access to water sources. Except for pregnant females and mothers with young foals, other categories of donkeys do not go to drink water every day if the water sources are far away. Due to their high water needs, females with foals and pregnant donkeys go to water sources daily. A donkey can drink up to 25 liters of water in one session. In this way, they create water reserves and do not have to travel to distant water sources every day.

For donkeys to drink water, it must be fresh and organoleptically clean. They will remain thirsty and refuse to drink stagnant or dirty water. A donkey needs 8-10 liters of water per 100 kg of body weight every day.



Picture 1: Donkeys in the desert in Israel, as in other deserts, do not have the opportunity to drink water every day (Foto: M.Urošević)

Water quality

The water that donkeys drink (as well as other domestic animals) must be clear, colorless, odorless and tasteless.

In addition to these properties, drinking water must also have an appropriate temperature. The temperature variation interval of drinking water is 10-20°C. For pregnant females, water should be 12-15°C, and for cubs 15-25°C (Жарпеня и сар. 2022)^[11].

It is absolutely not recommended for donkeys to drink excessively cold water. Insufficient water temperature can cause a range of problems, primarily colds, diarrhea, intestinal colic, aseptic pododermatitis, and abortion. Additionally, cold water takes energy from the body to warm the water to the desired temperature. This energy loss must be compensated by increasing food consumption.

It is also not recommended to give warm water. Such water loses free carbon dioxide and, therefore, is not palata.

Water Sources

Water in nature originates in three forms: a) atmospheric, b) surface, and it can be liquid or standing and c) underground water. In areas where there are no surface or underground sources, water supply is provided by collecting atmospheric water after rainfall.

1. Atmospheric Water

In regions where there are no natural water sources and no other means of supplying water, animals, including donkeys, are forced to drink atmospheric water. This water can come from rain or snow. Its use is considered in areas with extensive livestock farming, which are often in karst regions that are poor in or completely lack deep and surface water sources. Atmospheric water originates from rain, snow, and ice.

The quality of such water varies significantly and depends on many factors. One potential problem is the occurrence of "acid rain." Acid rain is a consequence of air pollution from industrial emissions. A real danger arises from the emission of sulfur dioxide and nitrogen oxides. When these gases react with water in the atmosphere, they create acidic precipitation.

Atmospheric water usually has a pH value between 5-6, due to the presence of carbonic acid. It can also be more acidic

and then it is called acid rain. Very alkaline water, pH above 8.5 can be the cause of many digestive problems. On the other hand, too much acidic water can cause direct and indirect problems. Direct problems are related to conditioning changes in the digestive system, and indirect problems are related to the consequences of drinking such water, which can cause corrosion of the metal pipes through which it passes. The introduction of corrosion products can cause certain problems in the metabolism as well as in the digestive tract.

Atmospheric water is soft. As it falls and passes through the atmosphere, water collects dust particles, organic compounds, and microorganisms. Additionally, it gathers inorganic substances, primarily oxygen, hydrogen, superoxide, calcium salts, table salt, various forms of ammonia, compounds of nitric and nitrous acid, as well as sulfuric and sulfurous acids. Interestingly, the amount of dry matter in one liter of water is 20-50 mg. When it comes to snow, during its fall, since snowflakes have a larger surface area than water droplets, the level of dry matter increases. Snowflakes collect significantly more impurities than water as they pass through the atmosphere.

Atmospheric water can contain dissolved gases, primarily nitrogen (N₂), oxygen (O₂), carbon dioxide (CO₂), and ozone (O₃). In addition, this water can contain dissolved salts and ions, especially sodium (Na⁺), chloride (Cl⁻), sulfates (SO₄), and nitrates (NO₃). Furthermore, atmospheric water can also contain certain levels of heavy metals, such as lead and cadmium. Bicarbonates are formed from carbonic acid, and sulfates originate from sulfur dioxide found in the atmosphere.

The amount of chloride increases especially near the sea, sea salt is deposited on the seashore, and the wind carries chloride molecules that are incorporated into the water mass and return to the surface as an integral part of atmospheric water (rain). The presence of organic substances, primarily formic and acetic acid, is possible. They occur as a result of either biological activities or pollution.

For such water to be used, it must be collected. In karst areas, there are natural karst depressions, large or small, where water accumulates in the event of precipitation.



Picture 2: A karst depression on Velebit (CRO), where livestock farmers have secured the edges with stones. (Photo: M. Urošević)

A major problem with water in karst valleys is that it heats up when it stands, reaching a temperature that is not suitable for drinking. Additionally, dust particles accumulate, and other forms of contamination are possible. Simply put, the water becomes unusable.

Atmospheric water has a low level of carbon dioxide and mineral substances. As a result of this composition, it has an unpleasant taste. Due to the possible presence of organic matter in such water, unwanted putrefactive processes can occur.

It must be emphasized that the quality of water collected in this way lags significantly behind the quality of deep water.

Donkeys often do not drink such water while in the field; they remain thirsty but wait until they return to the farm where they will get clean, high-quality water. Donkeys, unlike horses, tolerate thirst much more easily and do not lose their appetite.

It must be noted that in many parts of the world, even people do not have access to quality water at home, so donkeys cannot get it either.

2. Surface Water

a) Running Water

Water from canals and streams can be used to watering donkeys that work in hilly or mountainous terrain. Every flowing water is partially underground water that, somewhere, reaches the surface again via a source. Such waters are, most often, organoleptically correct. A temperature problem is possible, that is, they are too cold. Donkeys do not drink water that, for some reason, does not suit them. In this case it could be a low temperature.

The chemical composition of flowing water is not uniform. Significant differences in the composition of such water are possible. The lack of a uniform chemical composition of flowing water arises due to the influence of various factors, primarily geographical, geological, and climatic. A very important influence on the chemical composition is human activity (anthropogenic factor), through conscious or unconscious actions or inactions.

River water contains dissolved gases, primarily oxygen (O_2) and carbon dioxide (CO_2). In addition to gases, it also contains a variety of dissolved minerals, most commonly sodium (Na^+), potassium (K^+), calcium (Ca^{2+}), magnesium (Mg^{2+}), chloride (Cl^-), sulfate (SO_4^{2-}), and bicarbonate (HCO_3^-). Besides these components, river water can also contain humic and fulvic acids, which are natural organic substances.

Flowing (river) water is often found near agricultural areas that are treated with various chemical components. As a result, river water can contain nitrates (NO_3^-), phosphates (PO_4^{3-}), and ammonia (NH_4^+). In addition, heavy metals such as lead, cadmium, and mercury can also be found in the water. Pollutants such as herbicides and pesticides may be present as well. Depending on geological conditions and the type of soil through which the river flows, suspended particles of clay, sand, and other substances can be found in the water. Certainly, the presence of various microorganisms such as bacteria and protozoa should not be excluded.

Underground water, passing through certain layers of the earth, going to the surface, loses free carbon dioxide. In addition, bicarbonates are converted into monocarbonates, and they are deposited. Coming to the surface, through the source, the underground water becomes liquid, and the quality changes and it becomes soft.

In contrast to hilly areas, running water in lowland areas is more or less polluted with particles of organic or inorganic origin (Puhač *et al.* 1985)^[4].



Picture 3: A shallow stream, but there is always water (Kazakhstan) (Foto:M.Urošević)

Pollution of running water is possible. It should be remembered that flowing water has the ability to self-precipitate. It takes a certain amount of time, that is, a certain length of time for the water to flow. If the place where the water pollution occurred is known, then donkeys and other livestock are watering only 15 km downstream from the place of pollution. Of course, the power supply upstream of the point of pollution does not pose a danger.



Picture 4: Donkeys drink river water (RO) (Foto:M.Urošević)

The main natural source of water pollution is atmospheric precipitation. Those from larger or smaller surface areas flow into rivers and streams. Along the way, they can collect various wastes of animal or plant origin (Puhač, Katić, 1962)^[5].

The greatest pollution of rivers is near their confluence with another river. This should be taken into account and donkeys should not be watering near river mouths.

When, in some way, waste materials reach the river water, a whole series of processes takes place. First, there is the deposition of larger, heavier particles. The deposition of particles of organic origin is especially pronounced. These particles, on the one hand, represent food for fish, and on the other, they decompose.

Decomposition processes are carried out under the influence of various factors, sunlight, oxygen. The most intensive

decomposition takes place under the influence of water bacteria as well as other plant and animal aquatic microorganisms.

Proteins are broken down into ammonia compounds, nitrites and nitrates. These are processes of nitrification and mineralization of organic matter in water. During these processes, ammonia, carbonic acid and hydrogen sulphide are formed.

These processes are very essential and represent a natural mechanism of water purification. The result of this is that the turbidity of the river water is significantly reduced, the unpleasant smell of rot disappears. The water acquires a pleasant natural smell.

b) Standing water

The basic type of freshwater standing waters are lakes. In most cases, such waters meet zoohygienic conditions if they originate from underground sources or clean running waters. When it comes to transparency, lake water is clearer than river water. The reason for this is that lake water is significantly calmer compared to river water, which allows for faster and greater sedimentation of particles. The process of self-purification in lake water is similar to that in flowing river water and significantly depends on the depth and surface area of the water.



Picture 5: Clean lake water, Stara planina (SRB) (Foto: M.Urošević)

Generally, lake water is good for watering donkeys. When it comes to smaller bodies of water, there can be greater temperature fluctuations. This is particularly noticeable during winter when this water cannot be used for watering because it is too cold. During hot summers, the temperature of lake water can significantly increase, exceeding 20 degrees Celsius, making donkeys reluctant to drink it.

When it comes to small standing waters, such as ponds, they often do not have water of adequate quality. They contain many organic materials and can be a source of various infectious and parasitic diseases.

3. Groundwater

The term groundwater refers to water that accumulates in the deeper layers of the Earth. This water is found on an impermeable layer and can accumulate in varying quantities. The depth at which this water layer is found depends on the terrain's configuration.

Such waters are of the highest quality. They have the best organoleptic, physical, and chemical properties. These waters are ideal for watering all livestock, including donkeys. Atmospheric water, as it passes through the ground, is freed from many substances and becomes clean. Unlike surface waters, which are soft, groundwater is somewhat harder. This is because, as it flows through various layers, it dissolves different minerals (calcium, magnesium) to a greater or lesser extent. Groundwater has a refreshing taste due to its carbonation. In addition, groundwater maintains a consistent temperature throughout the year, typically ranging from 7 to 11 degrees Celsius at sufficient depths.

Due to the geothermal gradient, the temperature of such water increases with the increase in the depth at which the water is located. At a depth of about 1 km, the water has a temperature of 25-30 degree.

Groundwater can also be polluted, of course if there is a possibility of a communication route for pollutants to reach it. If the water is between two impermeable layers, there is no possibility of pollution.

Utilization, i.e. bringing underground water to the surface, so that donkeys can drink it, is done through wells and springs. Wells can be dug or drilled. If the water is at higher levels, digging is done, and if the water is at deeper layers, then drilling is done.

When digging wells, it is important to ensure that there are no trees nearby. Tree roots are strong and, as they penetrate the ground, they can create pathways for atmospheric water and cause surface water contamination, leading it to enter the well. Additionally, tree roots can undermine the stability of the well by breaking through its walls.



Picture 6: Water at a depth of 8 m, digging done (Foto:N.Urošević)

The walls of the well must be secured, bricked or put in ready-made concrete elements. This prevents the soil from collapsing into the well.



Picture 7: Placing precast concrete elements is a lot a faster and simpler way of securing the well wall (Foto. N.Urošević)

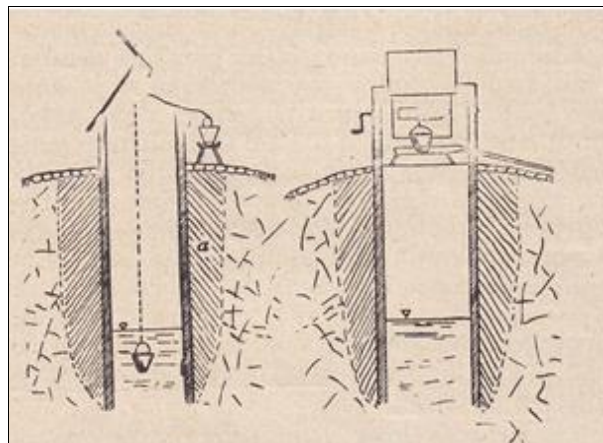
The diameter of the well should not be less than 1 m and not more than 2 m. When choosing a place to dig a well, it of course depends on the place where water is found. In addition, the well must be at least 15-20 m away from potential known contaminants.

If the wall of the well is secured by placing a brick wall, then, on the outside, in a depth of 2 m and a width of 1 m, loam should be placed (compacted) as an impermeable layer. In this way, the entry of water is prevented, as a result of atmospheric precipitation or other liquids from the external environment.

If there is a well, donkeys, like other livestock, drink water from the waves. They must be 4-5 m away from the well.



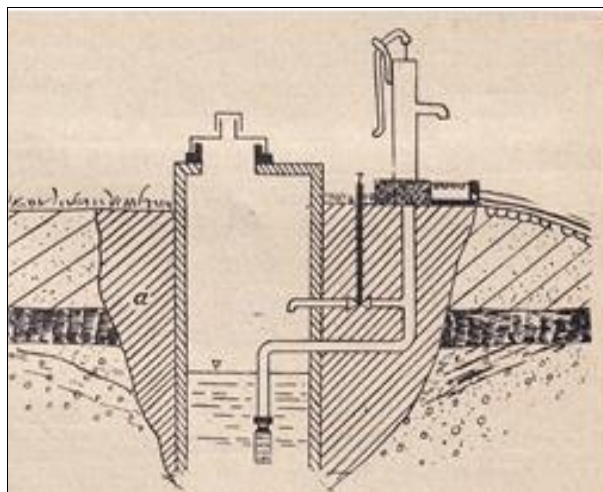
Picture 8: Wave for watering donkeys and other large livestock (Foto:M.Urošević)



Picture 9: The correct way to build a well when the wall is brick a-loam (Puhač, Katić, 1962) [5]

Apart from drawing water by lowering the water container, filling it up, and pulling it out, the process involves lowering it again after emptying it. This cycle continues until the trough is full or until the donkeys have had enough to drink. This method of drawing water from the well requires considerable strength and takes a long time.

A faster method of drawing water is by using a pump. The pump can be installed on the well's cover surface. However, this setup poses a real risk of contaminating the well water, as water from the surrounding environment can flow directly along the pump's pipe. To prevent this, the pump should be installed to the side, not directly above the well opening. It should be placed on a part that is packed with clay. This way, the passage of dirty water and other liquids is prevented.



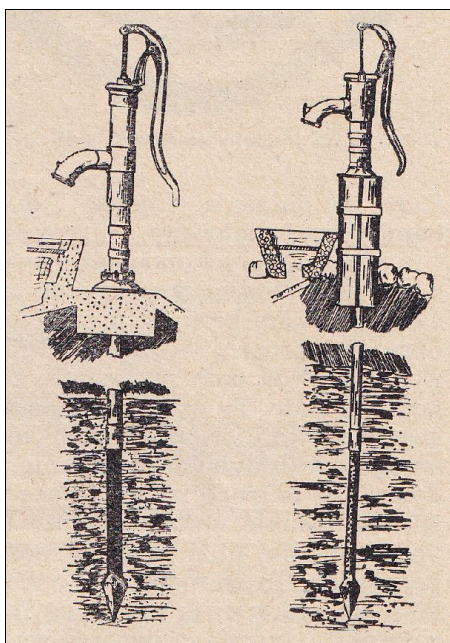
Picture 10: A well with a properly installed pump a-loam (Puhač, Katić, 1962) [5]

In addition to dug wells, there are also drilled wells, where water is accessed by penetrating the ground using pipes. These wells have a significant advantage over dug wells. They are completely sealed. The metal pipes prevent contamination, and they can also be disinfected. Water is extracted from such wells to a depth of 10 meters.



Picture 11: Improperly placed watering trough, right next to the pump (Šterk, 1963) [6]

In lowland areas, water is usually found at a depth of no more than 8 meters. Reaching it by drilling does not require special techniques. The well pipe, which has a spike at the end and consists of segments, is pushed into the ground until it reaches water. As each segment of the well pipe is almost entirely driven into the ground, a new segment is attached, and the machine. Such wells are called "Abyssinian" wells, and there is also the name Norton's wells for them.



Picture 12: Abyssinian wells (Puhač, Katić, 1962) [5]

When discussing drilled wells, artesian wells can also be included. For water to be obtained from them, it must be under pressure at depth. The result of this pressure is that the water comes to the surface.

The layers where the water is located are usually not flat but form depressions in some places. Water accumulates in such depressions, and the surrounding layers exert pressure on it. As a result of this pressure, the water has the ability to rise to the surface.



Picture 13: The water from the artesian well comes from a depth of 160 meters. Nature Park "Zasavica," Serbia. (Foto:M.Urošević)

The quality of the water, both organoleptic and chemical, from such wells is very good, and donkeys are very eager to drink this water. Since, in this case, the water flows continuously and constantly fills the troughs, it is necessary to allow for its drainage. As seen in the previous photograph (near end), a pipe carries the water away from the trough. This way, a constant water level is maintained in the trough, and the water is always fresh.

The chemical composition of artesian water is not unique and depends on the structure of the soil through which it passes, the depth at which it is located. It may contain dissolved gases such as: oxygen (O_2), carbon dioxide (CO_2). If the water is in deeper layers, where anaerobic conditions prevail, dissolved methane (CH_4) can also be found in it. In addition to gases, this type of water can also contain certain minerals: Sodium (Na^+), potassium (K^+), calcium (Ca^{2+}), magnesium (Mg^{2+}), chloride (Cl^-), sulfate (SO_4^{2-}), bicarbonate (HCO_3^-), as well as nitrates (NO_3^-). In addition to minerals, artesian water can also contain, depending on the composition of the soil layers, heavy metals: iron (Fe), manganese (Mn), arsenic (As), lead (Pb), zinc (Zn). It should be noted that the pH of such water is usually neutral. Although the pH can range from slightly acidic to slightly basic (6-8). It should be noted that this type of water practically does not contain microorganisms.

Donkeys can also be watering with spring water. A spring is a place where water comes out of the ground by itself. This happens because of the terrain configuration. The impermeable layer, on which the water is located, is much shallower than usual. Since the water is under pressure, it makes its own way through existing cracks in the layers and comes to the surface. With its organoleptic, chemical and physical properties, this kind of water meets the requirements for drinking water and can be drunk.

In case the water originates from secondary sources, which are those sources in which, in addition to deep water, there is also surface water from rivers and lakes, then a significant change in water quality is possible. There is a significantly greater possibility of water pollution. In order to obtain

quality spring water, it is necessary to arrange the spring. First of all, it is about arranging the terrain around the spring, accepting the incoming water, that is, capturing the spring. Water troughs should be built to feed the donkeys. Donkeys, and other livestock, do not have the possibility of contaminating the water they drink while drinking.



Picture 14: Captured mountain spring (Foto:S.Ličanin)

Parameters for water quality control

Despite all assumptions about water quality, it is necessary to perform quality control. All standards for water quality are based on the recommendations of the World Health Organization (WHO). Each country should adopt its own standards, according to specific conditions and possibilities. In those countries that, possibly, have not adopted their water quality standards, the UNICEF office, in cooperation and consultation with the World Health Organization, considers and provides logistical and technical assistance to countries to adopt standards. In addition, they also define a water quality monitoring system.

Water quality testing involves several parts:

1. inspection of the place where there is water (collected atmospheric, flowing, stagnant, well, spring)
2. orientation testing of water
3. chemical analysis of water
4. bacteriological analysis of water

1. When it comes to the inspection (observation) of the place and origin of water, it is primarily necessary to determine whether there are real or possible conditions for water pollution for feeding donkeys or other livestock. The types of pollution can be quite different and there must not be any possibility of any pollution.

2. The term water orientation test means determination of water temperature, degree of turbidity, transparency, color, smell, taste.

Water turbidity can be caused by organic or inorganic factors. Not a single type of turbidity is good, especially that which originates from an organic factor (microorganisms).

The transparency of the feed water is determined by comparing the tested water with distilled water. The tested water is clear if, through it, visibility is complete through a column of water 60 cm high or more. If the transparency of the water column is less than 30 cm, the water is very cloudy.

The color of the tested water is determined by filtering the water into a glass cylinder, 40 cm high, 2-2.5 cm wide, with black walls. It is viewed from the top down towards the

white background.

The smell of water can be determined if it is heated for half an hour at 40-60°C. The origin of the smell can be different. The most unfavorable are waters that smell of human or animal excrement. The smell of sulfur indicates that there may be organic matter in the water. This smell can also come from mineral substances in the water. The smell coming from the soil is not particularly important.

The taste of water depends on many factors, first of all on the temperature, then on the level of mineral substances found in it, on the amount of free carbon dioxide and oxygen. It should be remembered that if there is iron in the water, it tastes like ink. The tested water must not taste rotten. One must be very careful when testing the taste. Water can be contaminated with microorganisms so that the taste tester can infect himself. Testing the taste of water is best done after boiling.

3. Chemical analysis shows the composition of the water.

The results of this analysis are not always a complete indicator of the water's safety (non-harmfulness). In cases where metals are present in the water, the results are highly reliable because the presence of metals is detected with maximum certainty.

If ammonia, as well as chlorides and sulfates, are found in the water, it can be reliably stated that the contamination is of organic origin. The presence of organic matter in the water results in a reduction of the oxygen levels in the water. The amount of organic matter in the water is determined based on the consumption of KMnO₄ (potassium permanganate). In the case of safe water, the amount of KMnO₄ used for its oxidation should not exceed 12.0 mg/l of water.

During the analysis, special attention must be paid to the possible presence of nitrates in the water (Plavša, 2021) [3]. Nitrates themselves do not have a harmful effect on the health of donkeys. However, certain bacteria can reduce nitrates to nitrites, which are quite harmful. When nitrites enter the organism, they reach the blood and convert hemoglobin into methemoglobin. This results in a decrease in the oxygen-carrying capacity of the blood until it completely stops carrying oxygen. This condition leads to the death of the animal.

4. Bacteriological analysis determines the presence or absence of microorganisms in water. If there are any, it should be determined how many there are.

It should be emphasized that this examination has difficulty determining pathogenic bacteria. There are two main reasons for this: first, if they are present, they are quite diluted, and second, their lifespan is not long. Therefore, the assessment of the bacteriological safety of the water is carried out using the "coli-titer" method. This is the smallest amount of water in which the presence of *Escherichia coli* can be detected. Water is considered unsafe if the bacterium *Escherichia coli* can still be found in less than 10 ml of water.

To conclude whether anaerobic microorganisms are present in the water, data on the presence of the bacterium *Clostridium perfringens* is used. Based on these requirements, the basic norms and requirements for certain water quality groups were defined.

Table 1: The value of basic parameters, depending on the quality of surface waters (Готовский, Спиридонов, 2017) ^[10]

Parameter	I class	II class	III class
Turbidity, mg/dm ³ , not more than	20	1.500	10.000
pH	6,5-8,5	6,5-8,5	6,5-8,5
Iron, mg/dm ³ , not more than	1	3	5
Manganese, mg/dm ³ , not more than	0,1	1	2
Phytoplankton, mg/dm ³ , not more than	1	5	50
Thermo-tolerant coliforms bacteria, mg/dm ³ , not more than	1.000	10.000	50.000

Table 2: The value of basic parameters, depending on the quality of underground sources (Готовский, Спиридонов, 2017) ^[10]

Parameter	I class	II class	III class
Turbidity, mg/dm ³ , not more than	1,5	1,5	10
pH	6-9	6-9	6-9
Iron, mg/dm ³ , not more than	0,3	10	20
Manganese, mg/dm ³ , not more than	0.1	1	2
Thermo-tolerant coliforms bacteria, mg/dm ³ , not more than	-	100	1.000

Table 3: Value of basic parameters for drinking water (Готовский, Спиридонов, 2017) ^[10]

Parameter	Normative
Breathability (clarity according to the Snellen scale), cm	30
Turbidity, mg/dm ³	1,5
pH	6-9
Dry residue, mg/dm ³	1.000
Iron, mg/dm ³	0,3
Manganese, mg/dm ³	0,1
Phenolic index, mg/dm ³	0,25
Hexavalent chromium, mg/dm ³	0,05
Petroleum products, mg/dm ³	0,1
Chloroform, when chlorinating water, mg/dm ³	0,2
Copper, mg/dm ³	1
Zinc, mg/dm ³	5
Molybdenum, mg/dm ³	0,25
Arsenic, mg/dm ³	0,05
Ammonia (per nitrogen), mg/dm ³	2
Nitrites, mg/dm ³	3
Nitrates, by nitrogen, mg/dm ³	45
Chlorides, mg/dm ³	350
Sulphates, mg/dm ³	500
Ozone, mg/dm ³	0,3
Lead, mg/dm ³	0,03
Cadmium, mg/dm ³	0,001
Mercury, mg/dm ³	0,0005
Selenium, mg/dm ³	0,01
Strontium, mg/dm ³	7
Fluorine, mg/dm ³	0,5-1,5
Polyphosphate residue, mg/dm ³	3,5
Aluminum, mg/dm ³	0,5
Free chlorine, mg/dm ³	0,3-0,5
Bound chlorine, mg/dm ³	0,8-1,2

Physical, chemical, and bacteriological requirements that drinking water must meet (Plavša, 2021) ^[3]:

- It must be odorless.
- It must be colorless.
- It must have a pleasant, refreshing taste and a temperature of 8-12°C.
- It must not contain pathogenic microorganisms and developmental forms of parasites.
- It must not contain organic waste and other harmful substances.
- It must not contain certain harmful chemical substances.

- It must always have consistent quality.
- It must be available in sufficient quantities.
- Its acquisition must be accessible and economical.

Conclusion

Donkeys, like all other animals, should be able to drink, when they want and as much as they want, quality water. The lack of water conditions the appearance of a whole series of disorders, so that in the end the changes result in a fatal outcome. Only correct drinking water does not cause metabolic problems in the body.

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