



"PROBLEMS OF BOREWELLS FOR FARMING OF FARMERS IN BABHULGAON AND IMPLICATIONS OF DEEPENING WATER TABLE".

Agriculture

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ABSTRACT

Summary:- Hingoli district of Maharashtra is divided into Marathwada regions and you can see that this region always receives less than average rainfall. Therefore, farmers have to depend on nature's water for farming. Still farmers face a lot of difficulties to grow horticultural crops or irrigated crops. Such as, rainwater harvesting, dam capacity, search for water due to depletion of water in rivers, streams and wells. This is a serious problem for the farmer. Many times the crops get dried up due to lack of water and the farmers become desperate. In that case, the next option is to either dig a well or borewell in the field. So, in which place and in what form borewell can be done? Researching this involves both scientific and non-scientific methods. German technology is used according to the scientific method. But using that technology on the farm is expensive for the farmer, so the farmers bore wells according to Gavran method or unscientific method on the advice of a Panadi man. Panadi means person who seeks water by talking and seeking water from them. Or water is sought by a devotee or a Maharaja or a person asking for water. Alternatively, many times farmers bore wells in their fields on the basis of God's trust. And in such cases most of the time their bore wells require very little water making farming impossible. Or because no water is needed, farming becomes impossible. In such a case, the loss to the farmers is money and time wasted. So how will farmers save maximum. And what works can be done in agriculture and what crops can be cultivated. Farmers are surrounded by the question of which place to bore well for boring. Therefore, in these articles, the problems caused by the deepening of the water level during boring have been studied in these articles.

KEYWORDS

Difficulties faced by farmers in Babhulgaon in borewell and sustainable sustainable measures in farming.

Study Method :-

Data collection was done by observation and interview and discussion method.

Objective of the study objective :-

To study about borewells of farmers in rural areas and farming based on them.

Hypothesis :-

Farmers in rural areas are wasting their money as borewell points are not checked scientifically.

Data Collection Method:-

The researcher has done the data collection through direct observation and interview method.

Detailed article-

Babhulgaon village is located in Sengaoon taluka of Hingoli district. The total population of this village is 4146 according to the census report 2011, out of which 2278 are males and 1868 are females.

In village Babhulgaon, out of total population 2112 people are dependent on agriculture, farm labor and other agriculture. Out of these 92.14 % people are mainly engaged in agriculture and farm labor and dependent on agriculture. Agricultural works are generally good for up to 6 months. As there are no jobs at hand, some people migrate outside the village to do work. People mainly go to big cities like Mumbai, Pune, Aurangabad for work. Some people are out of the village for work. The main occupation of this village is agriculture. And agricultural labor is the occupation of the non-farmers. The number of job seekers is very less.

In the villages of Babhulgaon, before 1980, sugarcane production, cotton production, sorghum production were used in agriculture. But in the current period, due to insufficient availability of water during agriculture, the production of sugarcane in agriculture has decreased by hundred percent from this village. That is, sugarcane is not grown at all from this village in the current period. Obviously, the only reason for this is the availability of water in sufficient quantity.

Source of water:-

If you look at the source of water in the village of Babhulgaon, you will find two seepage ponds. During the construction of this lake, the land has gone to Babhulgaon and it benefits the three villages of Umra, Kadati and Naiba. But very few farmers of Babhulgaon benefit from the water of this lake for agriculture. This lake is on the south side of the village. And its slope will flow towards the south. Due to this, the agriculture in the North, East and West direction does not benefit this

lake at all.

Another lake is north of the village. But since it is a small lake, its storage capacity is less. Obviously, they do not store enough water for agriculture. Due to this, agricultural water is not available there.

Some people have dug wells on their farms but due to the deep water level, there is no water in those wells during the months of March, April, May, June. So naturally agriculture requires water. Agriculture here is largely dependent on natural water. That is why we call it dryland farming. That quantity is seen more.

Water problem for agriculture-

Water search for agriculture:-

In the current period, everyone feels it necessary to find water for farming. And it is also necessary. Because of this, every farmer wants to have a well in his farm to have water on his farm. Also, this village does not have a large water source or dam, nor does the dam have a canal. And even a big river is not available to this village. So it is not possible to get water from outside. The only option left is to drill wells and borewells in your fields.

Difficulty in drilling a well:-

Every farmer wants to have a well on his farm. But as the water level has gone deep, they are afraid that they will not get water from the well or not. At the same time, the water level has deepened. Due to this, a huge amount of money is spent in drilling the well. At least one well costs Rs 4 to 5 lakh in the current period. So it is expensive. It is not possible to invest so much money to farmers. Therefore, some people have dug wells while farming through various schemes implemented by the government. But due to deep water table, even they are not getting enough water for farming.

Another way is to make a borewell -

Farmers can deepen the well to a maximum of 50 or 60 feet. A lot of time is spent on well digging and construction work. And the cost is at least 4 to 5 lakhs. They cannot afford this cost. So farmers cannot afford it due to low income. So people look for alternative arrangements at lower cost. Naturally, the alternative to this is to borewell at a lower cost and in a shorter time. It also looks very cheap and saves time. If possible, by drilling 300 feet borewell in three hours, it may be possible to take water to agriculture on the same day. This is a very short and good option they get.

Difficulties faced in making borewells:-

First problem The biggest problem in borewell is where the farmer has to get the borewell in his farm. How much water will be required at the place where the borewell is to be taken? Which point should be fixed

for borewell? It is to find out. If they want to build a borewell, the farmers themselves cannot tell where the water is in the soil. So they call some expert to find the underground water. This includes old traditional methods and classical German technology. Old traditional methods include saying that a Maharaja is displeased with the water in the field or some other traditional basis and people predict that there is water in the field. He tells the farmers. And the farmer trusts what the other man has told him and he borewells in the same place. To a large extent, there is no certainty as to how accurate these predictions can be. Therefore, the hard-earned money of the farmers is likely to be wasted.

Another method is scientific method but they either do not have time to get expert person or they cannot afford the cost of huge water test to detect ground water according to scientific method. So they give first preference to old and traditional methods. And borewells do so there is a high chance of miscalculation and some farmers are losing money.

A bore well-constructed in the year 2023 at Babbhulgaon-

In the three months of March, April and May of 2023, the farmers of this village suddenly got a fear that Hingoli district is drought prone and no well or borewell will be constructed anywhere in the district in the coming years. Such information has been disseminated and the decision in this regard is affected by drought. Due to that decision, the farmers have made borewells in places where they are not required.

A total of 120 borewells have been dug in Babbhulgaon in the three month period of March to April and May in the year 2023. Three of these people have had enough water. At three places good quality water has been received by borewells. The rest of the people received at least two inches to three inches of water and 20% percent received less than two inches of water. The proportion of such people is 50 percent. And completely dry borewell belongs to 30 percent people. If more than three to five inches of water are needed to soak at least three acres of land, the farmers can grow wheat, gram, or similar crops. Therefore, if the water is less than three inches, the water is not completely beneficial for the farmers. That is, nearly 80 percent of people are likely to waste money on borewells on their farms.

Along with doing borewell, other money is spent. To buy that electric pump, if they go to buy at least an electric pump, they have to spend fifty thousand to 80 thousand and even more. Therefore, the possibility of wasting that expenditure cannot be ruled out.

Distance between two borewells :-

Another problem is that the farmers of the village of Babbhulgaon do not know the rule about the distance between two bores while taking borewells on the farm, so some farmers have installed borewells at the places they want. There are some farmers who have done 20 to 25 borewells since last few years.

Power Availability Issues :-

The third problem is the availability of electricity to farmers in rural areas for farming. Unless electricity is available, they cannot pump water from their borewells. Alternatively, if whatever he sows in the field does not receive water on time, the farmer's efforts are wasted.

In the current period, as electricity supply has gone to private institutions, many farmers are not getting poles and wires on their farms even after demanding electricity for agriculture. Hence they are problematic for electricity. Figures are widely used in this method. Not only this, load shedding i.e. load regulation method is applied for the place from where they get electricity. Therefore, the farmers do not get full capacity electricity to pump water on the farm in the time they want. Due to this, their agricultural crops wither.

Not everyone has access to solar panels for farmers. So this plan has not reached everyone. So they cannot get electricity to draw water from borewells and cannot afford to install individual solar panels. Because it costs a lot. The farmer is stuck in such a problem.

Borewell and well records -

A farmer should follow the rules laid down by some government while drilling a borewell on his farm. Just as while approving a well, it is given in different plans, how much the distance of the well should be and in which area the well should be taken, similarly in the case of borewell, how much should be the distance between two borewells. If some farmer has a borewell, another farmer has a borewell nearby. So whoever has water. Its water is insufficient for its agriculture. That will

not happen, at least at the government level, how many borewells have each farmer taken from Talathi. How is the water system on his farm? Keep detailed records in this regard and update them every time. Also the rule should be applied to people who have taken bore wells. The talath should implement the rules so that the water is not pumped in large quantities.

Methods of water storage:-

Farming requires a lot of water. However, there have been many changes in the irrigation system in the current period. This change should be used for farming. At the same time, farmers should create a large reservoir like a water tank on their farm. When electricity is available, a large amount of water should be stored and when needed, even when electricity is not available, pipelines should be made to water the agriculture with the help of those pipes.

Farmers whose agriculture is hilly or downhill or sloping. According to this, arrangements should be made to provide water according to the drip method and drip method by planting fruit orchards or orchards which will cost less to the agriculture. Therefore, less water will be required and if necessary, they should try to make farming profitable even by drip method.

Increasing water storage capacity:-

How farmers can store maximum amount of water in their agriculture so that the rain water does not flow on the farm. For this it is necessary to refill the well in the farm, refill the borewell. Therefore, more water will be stored in the soil. Therefore, agriculture will also get plenty of water. Farmers need to be trained on how to save farm water. Not only this, it is necessary to build good quality ponds in the farms as well as in the next place at the government level.

Continuous and Sustainable Crop Cultivation:-

Commercial crops and cash crops that require less water for agriculture in the current period must be taken up. A crop in which a crop once planted does not need to be replanted for twenty five years is called a continuous crop. For example, planting fruit trees such as sitafal, mango, tamarind, tamarind, etc. with low water consumption is necessary because it will also require less water and there will be no need for re-planting after the fruit trees grow. Many fruits like Mango, Sitafal, Jambhul, Tamarind are in huge demand in the market. So farmers have the possibility to get more money with less cost, so farmers need to turn to sustainable and continuous crops.

While planting orchards on the field, the distance between two trees should be at least eight feet and the distance between two rows should be at least 15 feet. And if possible, a large water tank should be created for water storage. And water from borewell should be stored in it. It should be provided with PVC pipe and durable half-inch pipe or drip irrigation system to deliver water to each plant. And arrangements should be made to provide minimum amount of water as per the requirement i.e. should be prepared in advance to the place where the water stored in the tank will come according to the occasion.

This will also save water and even when there is no power supply, they will be able to feed the water from the tank to the plants. And the harvest of fruit trees of the farmers on the fields will be abundant.

Summary :-

Even if the farmers cannot afford borewells, agriculture is a must. Without agriculture, crops are not available anywhere and no person can live without crops, so agriculture is the support of the farmer and also the support of all other human species who depend on agriculture. It is obvious that even though less water is required by using advanced technology in agriculture, farmers need to try to maximize its use by adopting sustainable and sustainable farming practices and providing them with alternative systems of minimum water availability and electricity. Farmers will be able to cultivate. Otherwise it will cost the farmers a lot of money and time too. Sustainable and continuous farming will bring money in the hands of the farmer and they will be able to create a production system even against inflation.

REFERENCES-

1. Population Census Report 2011.