Water Bagging & Sachet Plants

A High Demand, Profitable Business Opportunity

Water packaged in bags, also referred to as water sachets or bagged water, can be a very profitable business model when they are set up and operated properly. The most important considerations with bagged water are the cost to produce the water sachets and the selling price. Bagged water is the lowest cost method to package water because it requires very little plastic and much less plastic to package the water than traditional packaging such as bottles. The average cost to produce a water bag with a size of 250-500 ml is less than $0.01 (USD) with a wholesale price of about $0.02 to $0.04. This allows for a very high profit margin (over 100%) that can be very profitable when selling large wholesale quantities.

In many of the poorer countries worldwide there is very high demand for safe drinking water, and bagged water is the best solution to providing safe drinking water to these populations. The key to having a successful water bagging plant is to be located in an area containing a population of over 25,000-30,000 people that lack safe drinking water. Water sachets typically contain a smaller amount of water than most bottled water, so people will need to buy more bags. The low cost of the product makes it affordable to the average person allowing for repeated purchase of multiple bags per day. Setting up the proper distribution channels will allow you to sell bags profitably in retail outlets as well as wholesale channels. In areas with larger populations that sell bagged water, it is common for larger plants to profit over $50,000.00 USD per month.

Most water bagging or sachet plants are located in developing countries that have a very large percentage of poorer people that lack of clean water. While these areas typically have the highest demands, there are additional considerations that need to be addressed early in the project planning stages. The conditions in these countries are generally very poor with little to no infrastructure, and lack an adequate supply of electricity and water. In areas like these, electricity can easily be supplied by a generator but, in most cases, you will need a deep well or even have water trucked to site. While establishing projects in these poorer areas may have additional points to address, they are often the most profitable because it is the most affordable way for people to access safe drinking water.

Benefits Of Bagged Or Sachet Water

Bagged water presents many benefits to both the consumer and manufacturer because of its low cost and affordability. Some of the main benefits are:

1. The only affordable way to package water in poorer countries.
2. Can be very profitable when sold in high volume.
3. Much lower initial investment and startup for bagging than bottles.
4. The rolls plastic can be shipped at a very low cost compared to bottles.
5. Can have printed bags to easily build a brand awareness and product recognition for marketing.
6. Much better use of plant space as the units are compact and bags require less storage space.
7. More environmentally friendly because bags use less plastic than bottles.
8. Allows for both wholesale and retail distribution channels.
9. Street sellers will sell to create jobs.

To give you a better understanding of the cost and profitability we will use the following example of a small bagging plant. The plant consists of the following:

1. 5 bagger units producing 60,000 bags per shift (8 hours).
2. The cost to produce each bag is under $0.01 USD and total cost of the shift is $600.00.
3. Each bag is sold for $0.02 USD (100% markup) in wholesale quantities.
4. The total sales from 1 shift are $1,200.00 (60,000 bags x $0.02 = $1,200).
5. The total profit from the shift is $600.00 ($1,200 sales – $600 cost = $600)
6. One month's profit is $18,000 USD ($600 profit x 30 days = $18,000).
7. One year's profit is $216,000 USD ($18,000 x 12 months).

As you can see, this can be a very profitable business even when operating a small plant. Many large plants will have over 10-20 baggers allowing for more profit. Also many bagging plants operate multiple shits per day to increase production and profitability, because the demand is so high in many areas. Also many plants commonly sell bags between $0.02-0.04, and selling the water above $0.02 will be even more profitable if it can be affordable to the local market. The affordability of the product to the local market is very influential in pricing and success, so you must price the product to be affordable and profitable. Aside from affordability, the demand will have an influence on the price the bags are sold for.

Demand for pure water

The demand for pure water and safe drinking water is constantly growing, as pure water sources are constantly being depleted and further contaminated from pollution. According to the Centers for Disease Control and Prevention (CDC) about 2.5 billion people of the world's population does not have access to improved drinking water or sanitation. Unsafe water is a significant contributor to the 1.8 million deaths per year from diarrheal diseases, with a large percentage being children under 5, according to the World Health Organization (WHO).

The demand for access to clean drinking water is extremely high with little signs of decreasing. Providing safe drinking water in a way that is economically feasible is the biggest issue in trying to meet the demand. This is because many packaging methods, such as water bottling, cost more to produce than the local economy can afford to purchase. This issue is solved by bagged water because the packaging cost is low enough that the product can be priced low enough to be affordable to many of the third world and poorer populations.

The Product

The final product that you will be selling is bagged water or water sachets, whether it is wholesale or retail qualities and channels. The main characteristics of the product are:

- 200ml – 500ml bags of filtered or purified water.
- The PE plastic bags are 60 to 80 microns in thickness.
    - Uses far less plastic than bottles.
    - Much cheaper to produce than bottles.
    - More environmentally friendly than bottles.
    - More affordable than bottles.
- Bag can be pre-printed with logo of your company to create product and brand awareness.

What is going to make you better than your competitors?

In many countries just have safe drinking water will sell very well. But if you have competition you need to have your product standout. You can do this through marketing and creating a better brand image, but is most effective to simply offer a better product at an equal or lesser price. With bagged water, this is very easy to accomplish in several ways.

If you are just filling water from a well or borehole you will not do well with competition. You need to set your product to be the best on the market. This can be done by first making sure your water is of a very good quality. In areas where they are not using pure water, you can achieve this competitive advantage by filling the bags with purified water. In other areas where there are currently water bags or sachets for sale with purified water, there are several ways you can make your product superior such as selling healthier water by adding minerals back into the water. This can allow you to offer types of healthier waters that are in very high demand, such as alkaline water, which also sell for a higher price while not costing much more to produce.

Also, applying well thought out marketing principles will help with product and brand awareness. An attractive logo will help you create brand recognition. Companies that properly market their product can see additional advantages by creating a better package or bag, such as one that has multi color printing of the logo on the bag to standout in the market.

Also it is important to educate the end user of the product about the benefits of your product. Point of sale signage and advertising illustrating why your water is better will allow people to see the difference with your product.

The Water Bagging Plant Process

A typical water bagging or sachet plant with all of the required equipment and supply for operation is very simple to operate and features a very simple production process. The production process consists of the following steps:

1. Raw water is pumped into a water holding tank. Raw water can come form a well, borehole or water delivery truck depending on availability in your area.
2. Raw water will feed into a water purification system that removes all the contaminants from the water.
3. Water is sent to the bag or sachet filler to be filled into the bags. The water is filled in the bag and the bag is formed, sealed with a heat seal that separates the bags as well. The filled bag will fall into a filled bag bin.
4. The filled bags will then need to be packaged in whatever quantities you want to sell the larger bags in.

A bagged water plant is a simple operation that can be easily run without any problems as long as all the production requirements are supplied and the facility uses reliable and easy to maintain equipment. Many water filtration systems only filter the water and do not include all the components necessary to produce quality water with pre-treatment and a water delivery system, but overall costs can be reduced by installing a complete machine with everything built into it.

How We Can Help & What We Do

We specialize in manufacturing and supplying equipment for water sachet plants. As the leader in the sachet and bagged water industry, we provide the full line of equipment needed to operate a water bag and sachet plant including water purification & filtration systems, bag fillers, water storage tanks, feed water systems, etc. All of our equipment is designed and manufactured to be user friendly, extremely reliable, low maintenance and easy to maintain when needed.

We have over 15 years of experience in setting up water projects worldwide with specializations in areas including Africa, South America / Latin America, Central America, United States, Caribbean, Mexico, Thailand, Malaysia, Philippines, India, Russia, Bangladesh and many more. Regardless of your location, we can help plan and setup your water bagging plant and supply you with reliable, efficient and cost effective equipment for your plant.

We are a direct manufacturer of water filtration systems allowing you to receive quality service and technical support from the equipment engineers. We believe in creating strong relationships with our customers by providing the most comprehensive customer service and planning when helping you establish your bagged water plant. We are experts in this industry, allowing us to provide solutions that have proven to be successful and reliable. We will work with you to help determine the best equipment and planning for your needs and business model.

Water Bagging Plant Options & Packages

Each water-bagging unit will produce about 40 - ½ liter bags per minute and will need about 3-4 gallons of water per minute to fill the bags. When operating 24 hours per day, you would need 5,000 gallons per day for one bagger.

The larger R.O. systems we build come with 10,000 gallons per day membranes. Besides the system you will need pre-treatment to help remove contaminants prior to membrane filtration, which increases membrane life and greatly decreases maintenance & operating costs of the system. Also all systems will need a pure water storage tank and may need a delivery pump to supply the water to the bagger. Each bagger will come with a U.V. and post carbon filter.

Bagging Plant Equipment Packages

Bagging plants can vary in size dramatically depending on each operation, but most plants will start off with anywhere from 1 to 6 bag fillers. The water filtration equipment and delivery system need to be sized according to the number of bag filling machines. Each filler will require about four gallon of water per minute.

Baggers	Bags per day (24 hours)	Pre-treatment	R.O. Unit	Bagger cost	Total
1	36,000	Included	15,995.00	3,400.00	19,395.00
2	72,000	4,750.00	15,340.00	6,800.00	26,890.00
3	108,000	4,750.00	15,340.00	10,200.00	30,390.00
4	144,000	5,650.00	17,950.00	13,600.00	37,200.00
5	180,000	5,650.00	17,950.00	17,000.00	40,600.00
6	216,000	14,650.00	26,400.00	20,400.00	56,450.00

The bags per day are based on 1,500 500ml bags produced per hour during a 24-hour period. The above prices are in US Dollars and do not include a delivery unit, sachet plastic, shipping, importation, installation, extra parts, maintenance costs, and water storage tanks.

Plant Requirements

When putting together a bagging plant there are several required elements that need to be well thought out and addressed for the plant to be as successful as possible. When planning for the project you need to consider the following:

Building Size & Spatial Requirements

Make sure there is enough room for all of the equipment and to store filled bags.

- Two unit bagging plant should be about 1,500 Sq. Ft. or 150 Sq. Meters.
- Three unit bagging plant should be about 2,000 Sq. Ft. or 200 Sq. meters.
- Four unit bagging plant should be about 2,500 Sq. Ft. or 250 Sq. meters.
- Six unit bagging plant should be about 3,000 Sq. Ft. or 300 Sq. meters.

Feed Water Supply

Make sure your water supply flow is well over what is listed above under Feed Water. In many places you will need a well, borehole, or water trucked in.

Electrical Supply

You will need a good electrical supply or a generator. If using a generator, make sure it is large enough for your power demand—when motors start they need about 30-40% more power than they consume when operating normally. If the power goes off, you cannot operate the equipment.

Location

When deciding on a location you need to think about the following:

1. Where are you going to get the water?
2. Is there electrical at this location or are you going to need to run a generator? Running generators will raise operational costs, so you will need to consider whether paying more for a building with an existing electrical supply is most cost effective in the long run. Sometimes electricity can be added at a later date.
3. Is it going to be close to your customers?
4. Do you have room to expand?
5. Will the customers come to me to save cost of delivery?

Equipment

You will need a purification system that is able to provide 4-5 gallons of water per minute for each bag filler as well as water storage tanks capable of meeting your daily needs. You will need bag filling machines, the quantity is dependent on your projected output/production rate.

Plant Profits

Water bagging plants can be very profitable even when the sale price of the product is kept low. Below we will outline the profits of a typical plant with 5 bag filling machines running 1 production cycle per day. Many plants will run multiple production cycles per day to increase productivity. The profitability is as follows:

1. 5 bagger units producing 80,000 bags per shift (8hours).
2. The cost to produce each bag is under $0.01 USD and total cost of the shift is $800.00.
3. Each bag is sold for $0.02 USD (100% markup) in wholesale quantities.
4. The total sales from 1 shift are $1,600.000 (80,000 bags x $0.02 = $1,600).
5. The total profit from the shift is $800.00 ($1,600 sales – $800 cost = $800)
6. One month's profit is $24,000 USD ($800 profit x 30 days = $24,000).
7. One year's profit is $288,000 USD ($24,000 x 12months).

The above figures are based on an average production cost. Keep in mind that some elements, such as labor rates, will influence the production cost of the product and the retail-selling price.

Cost To Setup A Plant With Own Building

Please use the chart below to define cost of plant

System and Bag Fillers, see chart for cost	
Shipping	
Setup office	
Fillers	
Water storage tanks	
Delivery trucks	
Well/Borehole	
Generator	
Build out of plant	
Legal	
Point of sale	
Advertising and Promotions	
Working Capital	
Land and Building	

Total

Planning on growth

You will also need to plan for growth and how you will be able to facilitate the growth of the operation. In many cases, people will underestimate growth and need a larger plant before they expect it because the demand for bagged water can be so high. When planning for this initially, it is best to get a water filtration system capable of supplying more water than required to feed the bag filling machines. This is because it will be more cost effective for you to upgrade to a larger system than purchase an additional system at a later date. This may or may not be financially viable when starting the plant, but it is advised to oversize for future growth if financially capable.

Market

You will need to research your market to find out the demand and competition in the market. This will ultimately affect your production levels, pricing and distribution because you need to develop the most profitable business model for optimal success.

Distribution

When planning for the project you will need to consider the following elements of distribution and plan your pricing, production and additional requirements (i.e. trucks for shipping) accordingly. When planning for distribution you will need to consider the following:

1. How do you plant to distribute your product?
2. In what quantities will you distribute the product?
3. How will distribution affect price?
4. What additional equipment is needed for distribution?

Profits, Loss & Break Even

When planning for this project you will need to calculate your breakeven point, or the point at which sales will cover the cost of production. When doing so you will need to consider sales projections, selling price, cost, initial investment, maintenance costs, and operational costs which can vary greatly by country or region. To help you easily plan for this, use the table below and add in any additional elements of your plant.

Sales Projections And Costs

Bags of water sold per day	+
Cost for bags,(rolled plastic)	-
Labor cost, include taxes and insurance	-
Fuel for trucks and generator	-
Truck maintenance	-
System maintenance	-
Mortgage/ Rent	-
	-
	-
	-
Profit	=

Let Us Help You Today

WB USA has many years of experience in helping plan and providing equipment for water bagging plants worldwide. We will help you plan your project and advise you on our suggestions based on previous experience in establishing successful water bagging plants. Gather as much information as you can about your project and we will help you determine the best solutions for your individual operation.

To see video of machines in operation:

Haiti water bagging plant

http://www.youtube.com/watch?v=BW0edIuR_F0&list=UUh87nKLyfmNlGFurQvJ5FQw&index=1&feature=plcp

Ghana water bag plant

http://www.youtube.com/user/GLOBALWATER#p/a/u/0/DDWEo058UYc