

Fruit, Vegetable and Wine



BIO-SYSTEMS
INTERNATIONAL

DESCRIPTION

BioBug FVW contains a specially-formulated range of adapted, high-performance microorganisms for use in biological wastewater treatment of fruits, vegetable and wine wastes. As well as microorganisms, BioBug FVW contains a micronutrient blend specially selected for wastes. This micronutrient blend provides a complete formulation for maximum biological activity and reacts with fruit, vegetable and wine waste to produce biological enhancers.

When used as directed BioBug FVW is safe and is harmless to people, clothing and the environment and is completely biodegradable.

When applied to effluent treatment facilities, BioBug FVW helps to establish a biomass capable of handling these difficult wastes.

EFFECT

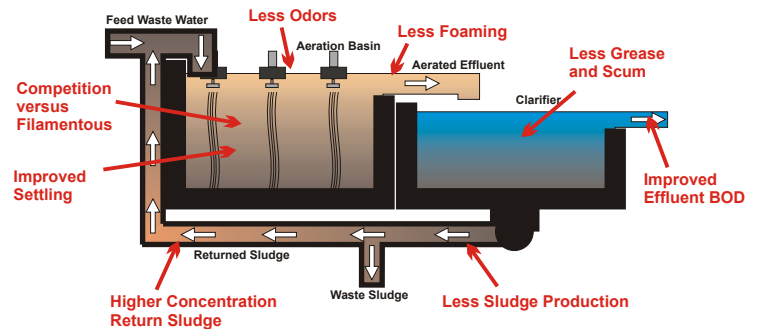
BioBug FVW, with its aerobic and facultative anaerobic microorganisms establishes and maintains a biomass which by providing greater resistance to the effects of organic inhibitors present in fruit, vegetable and wine waste waters, is able to perform more effectively than the naturally occurring biomass. BioBug FVW ensures that the natural mechanism for the selection of the biomass population is presented with a range of selected microorganisms. These aerobic and facultative anaerobic bacteria have been taken from their natural environment and then adapted to give optimum performance.

Benefits of BioBug FVW:

- Helps start-up in new plants
- Improves effluent quality
- Reduces grease buildup
- Increases overall efficiency
- Controls filaments
- Lowers odors and foam

Bacterial Formulation **Plus** **Bio-Enhancer** **Plus** **Micronutrient**

- Enhance organic removal efficiency of biological systems, providing lower effluent BOD, COD, and TSS.
- Enhance solids settling where it has been disturbed by loading fluctuations.



- Accelerate the start-up of new systems and aids recovery after upsets.
- Improve cold weather operation.
- Mitigate effects of fruit, vegetable and wine industry related loadings and toxic shocks.
- Reduce sludge production.
- Lower operating costs by reducing chemical consumption.
- Competes against filaments.



1-800-232-BUGS
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www.BIOBUGS.com

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Specifications

Form: Free-flowing granular powder
 Color: Brown
 Nutrient Content: Biological nutrients & stimulants
 Plate Count: 5 billion per gram

Packaging

250 grams water soluble packages protected by a foil overwrap.
 10 kilos per plastic pail.

Storage

DO NOT FREEZE! Store in a cool dry location. Do not inhale dusts, avoid excessive skin contact. SEE M.S.D.S.

Application Instructions

Treatment Plants

Flow Rate

Initial Dosage

Maintenance**

Up to 1,000 gpd	½ lbs. per day for 3 days	½ lb. per week
Up to 5,000 gpd	½ lbs. per day for 3 days	1lb. per week
Up to 20,000 gpd	5 lbs.*	1½ lb. per week
Up to 50,000 gpd	8 lbs.*	2 lb. per week
Up to 250,000 gpd	15 lbs.*	¼ lb. per day
Up to 500,000 gpd	25 lbs.*	½ lb. per day
Up to 1 mgd	50 lbs.*	1 lb. per day
Up to 5 mgd	50 lbs. per mgd*	1 lb. per mgd per day
Up to 12 mgd	50 lbs. per mgd*	¾ lb. per mgd per day
Up to 100 mgd	30 lbs. per mgd*	½ lb. per mgd per day

* Spread this initial dosage out over the course of 10 days.

** Add as regularly as possible. If it is required to miss one day, add that day's product with the next dosage.

Dosage rate will vary with flow rates, retention times and system variations. The rates above are for a typical, well maintained system.

Activated Sludge Systems

Activated Sludge Systems include various process flow sheets for example: Extended Aeration, Contact Stabilization, Step Aeration, Oxygen Activated Sludge. The application rate for all products is based on the average daily flow rate to the aeration basin, excluding the return sludge stream. For seasonal or widely fluctuating flows, contact your BIO-SYSTEMS technical representative.

Trickling Filter and Rotating Biological Contactors

The application rate for all products is based on the average daily flow rate to the filter or contactor, excluding any recirculating process stream. For seasonal or widely fluctuating flows, contact your BIO-SYSTEMS technical representative.

Lagoon Systems

- For aerated lagoon systems, the application rate based on the average flow to the lagoon.
- For facultive lagoon systems, the application rate is based on the lagoon surface area:

Day 1 through Day 5 20 lbs. per acre per day
 Day 6+ 2 lbs. per acre per week

- For anaerobic lagoons, the application rate is based on the total volume of the anaerobic lagoon.

<100,000 gallons 1 lb. - 2x per week per 5,000 gal.
 >100,000 gallons ½ lb. - 1x per day per 5,000 gal.

- For lagoons in cold climates, commence program when the water temperature is a least 50°F



Case History 1023

A California Winery uses a lagoon treatment system to pretreat wastewater prior to spray irrigation. For the last three years, BIO-SYSTEMS products have been used to seed the lagoon at the start of the processing season. Regular application maintained treatment efficiency throughout the year.



Case History 1027

A Midwest publicly owned treatment works receives 80% of it's load from a juice processing facility. Prior to the use of BIO-SYSTEMS, the treatment plant experienced filamentous growth and frequent upset conditions. The use of BIO-SYSTEMS has stabilized the operation of the plant, improved effluent standard and reduced the impact of spills and other upsets.



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Your local Distributor is:

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