

Compost Extractor

User Manual

1. Compost Extractor v2.0

1.1 Product Description

The IBP Farming compost extractor has been developed and field-tested over more than four years to provide fast, gentle, and highly efficient extraction of beneficial microorganisms from compost.

Unlike conventional extraction methods, the IBP Farming extractor is designed to maximize biological extraction while minimizing damage to microorganisms. The simple and robust design ensures reliable operation with minimal maintenance and makes the system suitable for both small and large-scale applications.

Video Manual

<https://youtu.be/F674iUrJduc>

Example Videos

https://www.youtube.com/watch?v=7R_hbsegEq10

<https://www.youtube.com/watch?v=AaXIG2aueEM>



1.2 Components Included

Each compost extractor is supplied complete with:

- Air pump
 - Air hose and fittings
 - Holder for a ¾" (19 mm) or smaller water hose
 - Extraction barrel
 - Filter unit fitted with two nylon mesh filters
0.425 And 0.533 mm mesh openings
 - 2" outlet connection
 - Kitchen strainer for removing spent compost
 - Approximately 4 metres of 2" discharge hose with clamps fitted at both ends
 - An optional ¾" hose for filling knapsack sprayers, and draining of the last extract
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1.3 Key Features

The IBP Farming compost extractor offers several important advantages:

- Simple, robust, and reliable construction
- Gentle extraction process that preserves microbial life
- 0.425 mm filter mesh allows efficient separation of solids while maintaining high biological activity, special filters with smaller or wider openings can be supplied
- Fine sand and silt settle naturally inside the extractor rather than entering the finished extract
- Extraction capacity exceeding 150 kg of compost per hour
- Recommended dilution ratios between 1:10 and 1:20 (compost to water)

Biological Extraction Efficiency

Extraction efficiency depends primarily on the dilution ratio.

Dilution Ratio	Typical Biological Extraction
1:20	Approximately 90%
1:10	Approximately 80–85%

Higher dilutions generally result in greater extraction efficiency because more water passes through the compost.

Seed Coating

For seed coating applications, much stronger concentrations may be used.

Dilution ratios as concentrated as **1:2 to 1:4** is possible.

Typical Applications

Compost extract can be applied using a wide range of agricultural equipment, including:

- In-furrow application during seeding
- Field spraying
- Irrigation systems using a dosing pump
- Soil drench applications
- Seed coating

2. Handling of Solids and Biological Material

The IBP Farming compost extractor is designed to process finished compost without the need for pre-screening. Under normal operating conditions, the extractor will efficiently separate biological material from larger solid particles while maintaining high extraction efficiency.

2.1 Silt and Sand

Fine sand and silt naturally settle at the bottom of the extraction barrel, outside the filter unit.

This sediment contains no higher concentration of beneficial microorganisms than the finished compost extract and should therefore be removed and discarded during routine cleaning.

Compost containing large amounts of sand or silt may require more frequent cleaning of the extractor.

2.2 Stones, Sticks and Other Debris

The extractor is designed to handle the small stones, sticks, and other coarse materials normally found in finished compost.

Pre-screening compost is generally unnecessary.

However, compost with unusually high levels of stones or sand will require the filter to be emptied and cleaned more frequently.

The supplied kitchen strainer removes spent compost efficiently but is not intended to separate stones from the material.

2.3 Worm Survival and Reuse of Spent Compost

The extraction process is intentionally gentle on larger soil organisms.

Under normal conditions:

- Most compost worms survive the extraction process.
- Worm cocoons (eggs) survive extraction.

The spent compost remains biologically active after extraction and can be reused in several ways.

After the thermophilic (heating) phase of a new compost pile has been completed, the spent compost can be added as a biological inoculum to help establish a diverse microbial community including worms.

Alternatively, the spent compost can be left to compost on its own. Over time, the microbial population will naturally recover, allowing the material to be extracted again.

Depending on storage conditions and biological activity, this recovery typically takes **3 months to 1 year**.

3. Operating Instructions

The IBP Farming compost extractor is designed for continuous operation after the initial batch has been prepared. Under normal conditions, the operator only needs to replace the spent compost as extraction continues. An experienced operator can look after 2 extractors at one time, should a larger production be required

3.1 Starting the First Batch

1. Fill the extractor with clean water.
2. When the barrel is approximately half full, switch on the air pump. Starting the airflow before adding compost helps ensure even mixing and efficient extraction.
3. Add:
 - o **25 kg of compost** (approximately **50 litres**).
4. Allow **250–500 litres** of water to pass through the extractor, depending on the desired dilution ratio.

The amount of water used determines both the concentration of the finished extract and the biological extraction efficiency.

3.2 Replacing the Compost

Once the extraction cycle is complete:

1. Leave the air pump running.
2. Using the supplied kitchen strainer, remove as much of the spent compost as possible.

This process normally takes about **one minute** and removes approximately **75% of the spent compost**.

3. Add fresh compost:
 - Approximately **6 shovelfuls**, or
 - **Two well-filled 20-litre buckets** (approximately **50 litres**).

The extractor is then ready for the next extraction cycle.

3.3 Continuous Operation

After the first batch, the extractor operates as a continuous-flow system.

Keep the water supply running continuously while replacing spent compost as required.

The frequency of compost replacement depends on:

- Water flow rate
- Desired dilution ratio
- Compost quality

Under normal operating conditions, one extraction cycle takes approximately **6–15 minutes**.

3.4 Choosing the Dilution Ratio

The dilution ratio determines both the concentration of the finished extract and the percentage of microorganisms extracted from the compost.

As a general guide:

Compost : Water	Typical Extraction Efficiency	Typical Use
1:20	Approximately 90%	Maximum biological extraction
1:10	Approximately 80–85%	Higher concentration with slightly lower extraction efficiency
1:4	Very concentrated extract	Seed coating and specialised applications

There is no single “correct” dilution ratio. The best choice depends on the intended application and the quality of the compost being used.

A microscope assessment of the compost is well spent, if you don’t know what biology and how much is present in your compost, IBP Farming can make microscope assessments of compost, if you farm near Denmark, We recommend using Soil Food Web Schools educated consultants and lab technicians, follow this link:
<https://soilfoodweb.com/certified-listing-directory/>

3.5 Operating Tips

For the best performance:

- Always use mature, biologically active compost.
- Keep the air pump running whenever compost is inside the extractor.
- Empty spent compost when there is a pause in production, and the blower is turned off

Following these recommendations will ensure consistent extract quality and reliable operation.

3.6 Troubleshooting

The compost extractor is designed to operate continuously with very little maintenance. If a problem occurs, it can usually be resolved quickly using the guide below.

Problem 1 – The extractor overflows

Possible cause A – Back pressure in the outlet hose

The most common cause of overflow is back pressure in the 2" outlet hose.

Check the following:

- The outlet hose should slope continuously downhill from the extractor to the receiving tank.
- Avoid loops, or low spots where water can collect inside the hose.
- If the end of the hose is submerged below the liquid level in the receiving tank, back pressure may also develop. Keep the hose outlet above the liquid surface whenever possible.

Once the back pressure has been removed, the extractor should return to normal operation.

Possible cause B – Compost is too dense or sticky

Some composts contain a high proportion of fine organic material and become very compact during extraction.

These composts require slightly more time for the water to pass through.

To correct this:

- Reduce the compost load from approximately **25 kg** to **20 kg** per batch.
- Continue operating as normal.

Problem 2 – Water gushes out of the top of the extractor

This is normally caused by excessive airflow.

Reduce the airflow slightly until the extractor returns to smooth operation.

Only enough air is required to keep the compost well mixed. Excessive airflow does not improve extraction efficiency.

Problem 3 – The airflow suddenly stops after several hours of operation

If the extractor has been operating normally for several hours and the airflow suddenly stops, the compost chamber is most likely filled with sand, gravel, or small stones.

Quick solution

Empty the extractor, take hoses off, and turn it upside down to remove the accumulated stones and gravel.

Then refill the extractor and continue operating.

Complete cleaning

If more thorough cleaning is required:

1. Turn off the water and air supply.
2. Disconnect the hoses.
3. Remove as much spent compost as possible.
4. Remove the air bubbler.
5. Lay the barrel on its side.
6. Carefully pull the filter straight out through the end of the barrel. Avoid scraping the filter against the inside of the barrel, as this may damage the filter mesh.
7. Thoroughly wash the filter, bubbler, and inside of the barrel using clean water.
8. Remove all accumulated sand, gravel, and silt from the bottom of the barrel.
9. Reassemble the extractor.
10. This process can be done in 5 minutes

Important

Do not allow straw, compost, stones, or other debris to enter the clean (filtered) side of the extractor during reassembly.

Debris entering the extract chamber may block hoses, spray nozzles, dosing pumps, or other application equipment.

Best regards

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