

# BIOPESTICIDES MANUFACTURING BY FERMENTATION

Prepared by:

CPL Business Consultants

Milton Park Innovation Centre, Abingdon, OX14 4RY, United Kingdom

Tel: +44 1865 257 252, [info@cplconsult.com](mailto:info@cplconsult.com), [www.cplconsult.com](http://www.cplconsult.com)

STRATEGIES TO GROW YOUR BUSINESS



## TABLE OF CONTENTS

<b>BIOPESTICIDES MANUFACTURING BY FERMENTATION</b> .....	<b>1</b>
BIOPESTICIDES MANUFACTURING BY FERMENTATION .....	1
<i>Biopesticide Fermentation Types</i> .....	1
<i>Production Costs</i> .....	1
<i>Pitfalls</i> .....	1
<i>Suggestions</i> .....	1
<i>Typical Solid State Fermentation</i> .....	2

*In this case study, a crop protection company engaged CPL Business Consultants to review techniques for manufacturing biopesticides by fermentation. CPL produced a concise report outlining production methods, costs involved, and also included recommendations for a go-to-market strategy.*

The objective of this study was to address the issues around manufacturing of bio-pesticides by fermentation. Our client particularly wanted to know which participants have capabilities in submerged and solid-state fermentation and their typical production costs. CPL made strategic recommendations on how to proceed, including selecting an appropriate partner and also the nature of the relationship with the partner. Lastly, we provided a guide to the practicalities of solid-state fermentation

## **BIOPESTICIDES MANUFACTURING BY FERMENTATION**

### **Biopesticide Fermentation Types**

- Submerged Fermentation Biopesticide Players
- Solid State Fermentation Biopesticide Players

### **Production Costs**

- Submerged Fermentation Costs
- Solid State Fermentation Costs

### **Pitfalls**

- Potential Issues with Manufacturing Biopesticides by Fermentation

### **Suggestions**

- Strategic Recommendations

## Typical Solid State Fermentation

- The Critical Nature Of Production
- Solid Fermentation (SSF)
- Steps in Solid Fermentation *e.g.*
  - Chose a Method
  - Select a Medium
  - Maintain Sterility
  - Transfer Oxygen and Heat
  - Recover the Product
  - Scale-Up the System

*CPL Business Consultants has completed several other projects on manufacturing biopesticides by fermentation, one [example can be found here](#) and [another here](#). You can find further examples of our work on [biopesticides on this site](#). Please look at our [PowerPoint Introduction](#) and [Brochure](#) describing deliverables and differentiators. You can also review [eight case studies](#).*