



Natural Organic Fertiliser

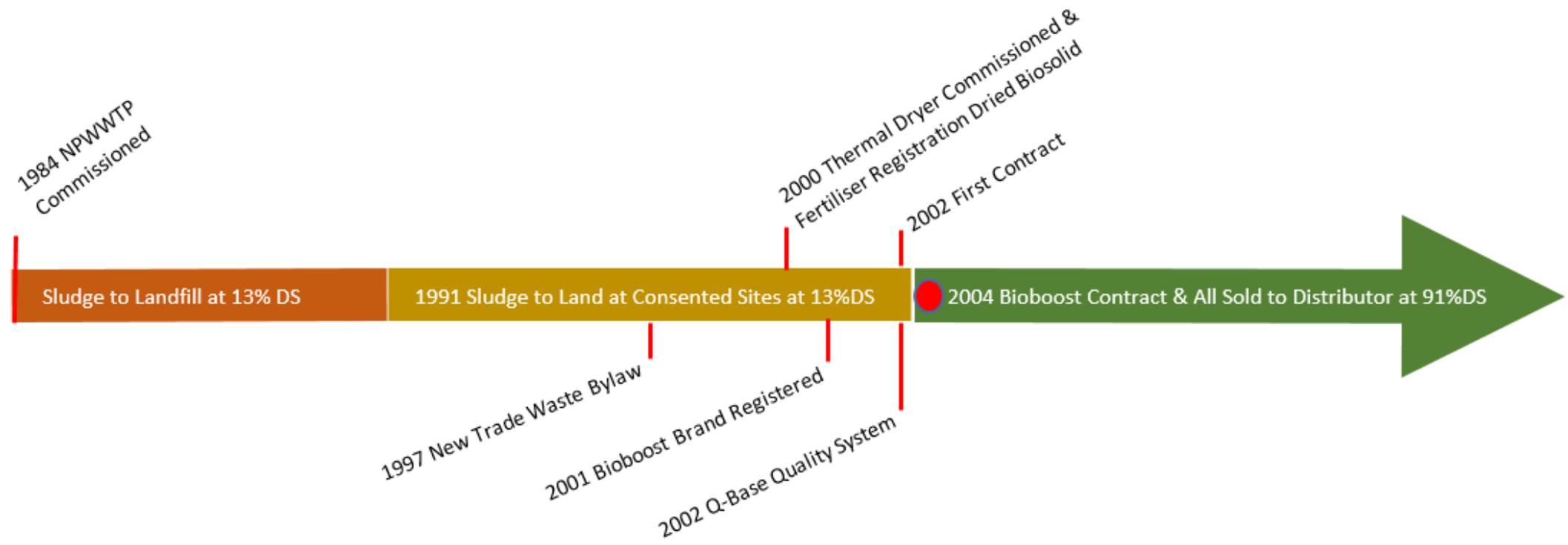
THE BIOBOOST® FERTILISER STORY – SUCCESSFUL BIOSOLID BENEFICIAL REUSE





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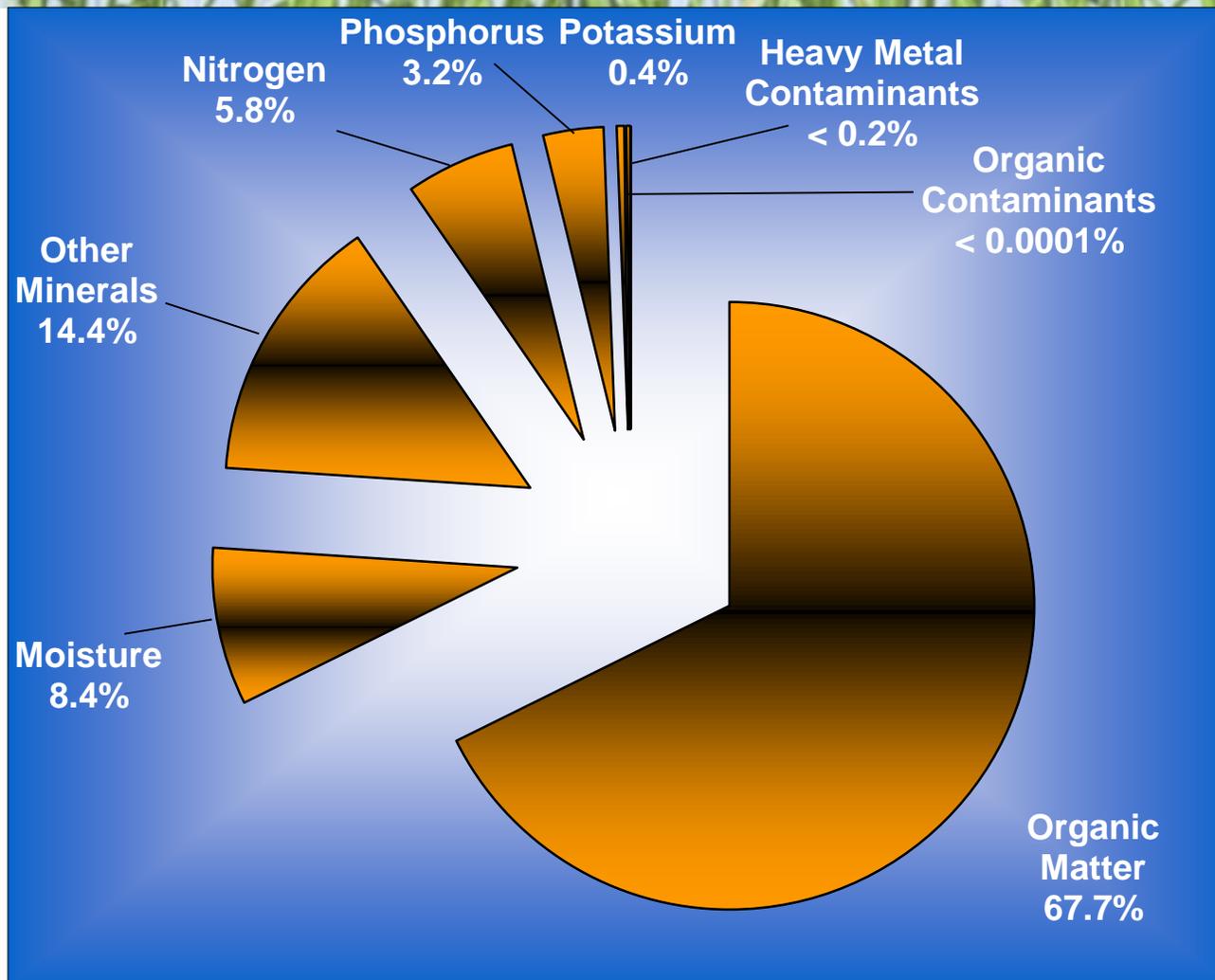
A Brief History NPWWTP Sludge/Biosolids



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Components of Bioboost[®]

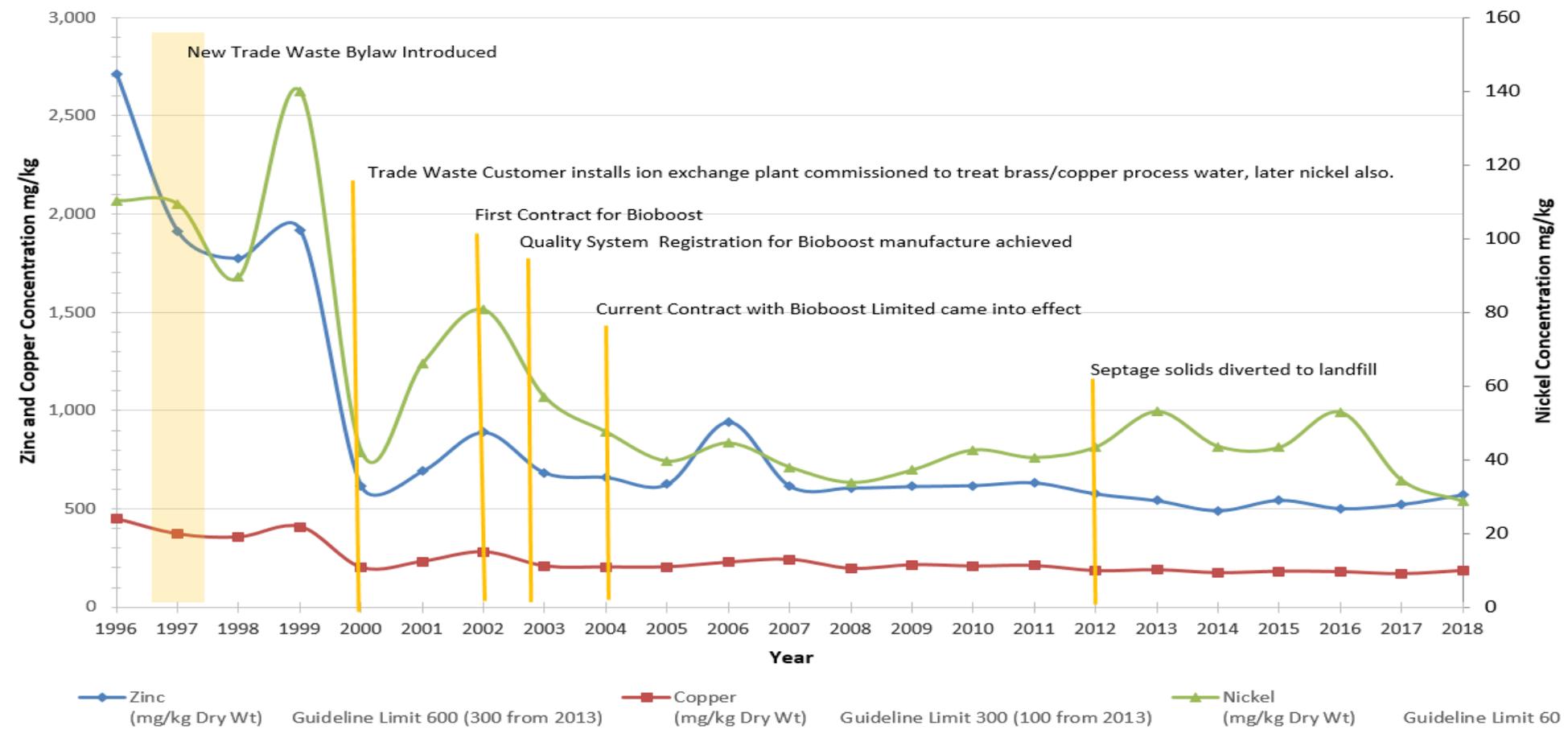




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Metal Reduction in Sludge/Biosolids Produced at NPWWTP Since 1996

Reduction in Zinc, Copper & Nickel Concentration in Sludge Cake/Bioboost From 1996 to 2018



Note. Peaks in metal levels represent average concentration from quarterly composite samples from 2003 onwards. Out of specification product is landfilled.

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Comparison of Different Metal Limits Applied or Proposed in NZ

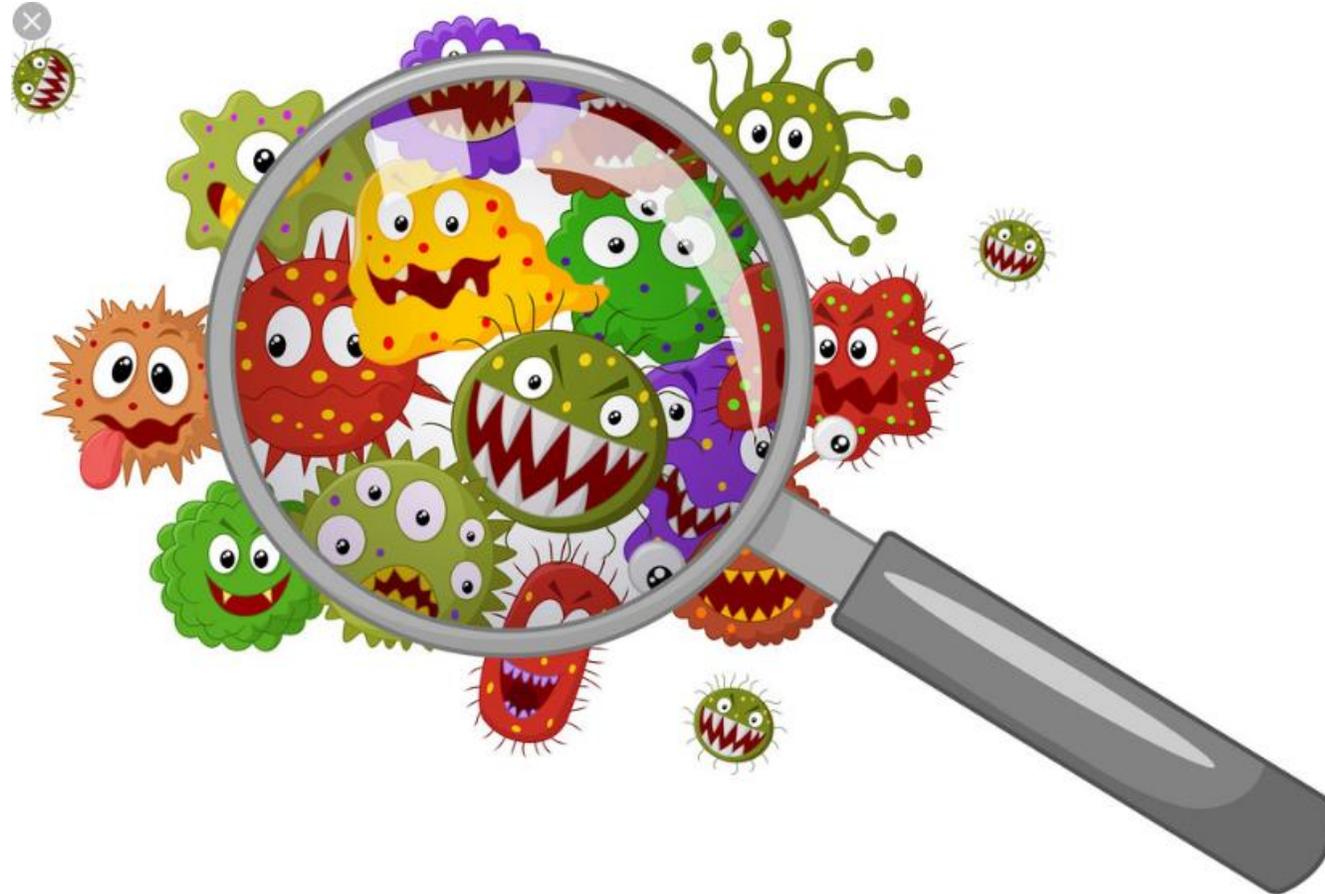


Document	Grade a, max. conc. Zinc mg/kg DS	Grade a, max. conc. Copper mg/kg DS	Grade a, max. conc. Nickel mg/kg DS
Guidelines for the Safe Application of Biosolids to Land in NZ, August 2003 Until 31/12/12	600	300	60
Guidelines for the Safe Application of Biosolids to Land in NZ, August 2003 From 31/12/12	300	100	60
Draft – Beneficial Use of Organic Materials on Productive Land (December 2017)	1500	1250	135
Historic range for Bioboost® over last 5 years	490-635	170-215	25-55

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Pathogens

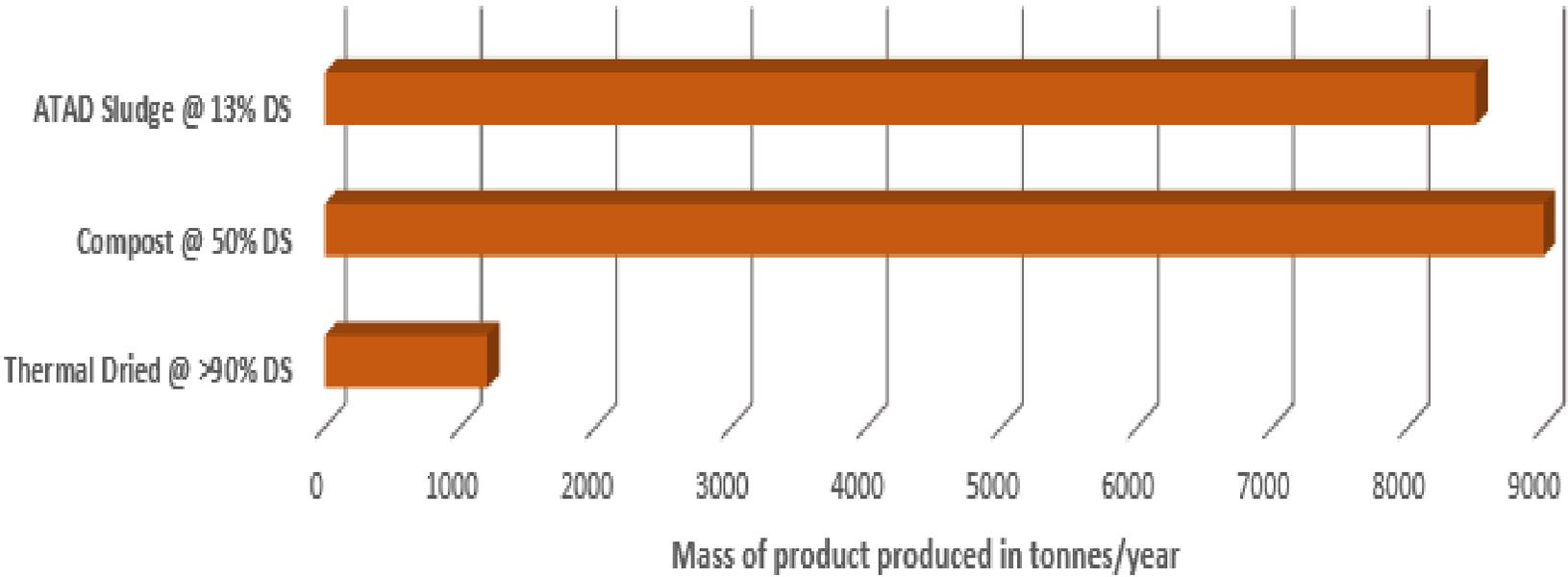
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Mass of Product Produced by Different Pathogen Reduction Technologies *(based on 1,100 tonnes of dry sludge per year)*

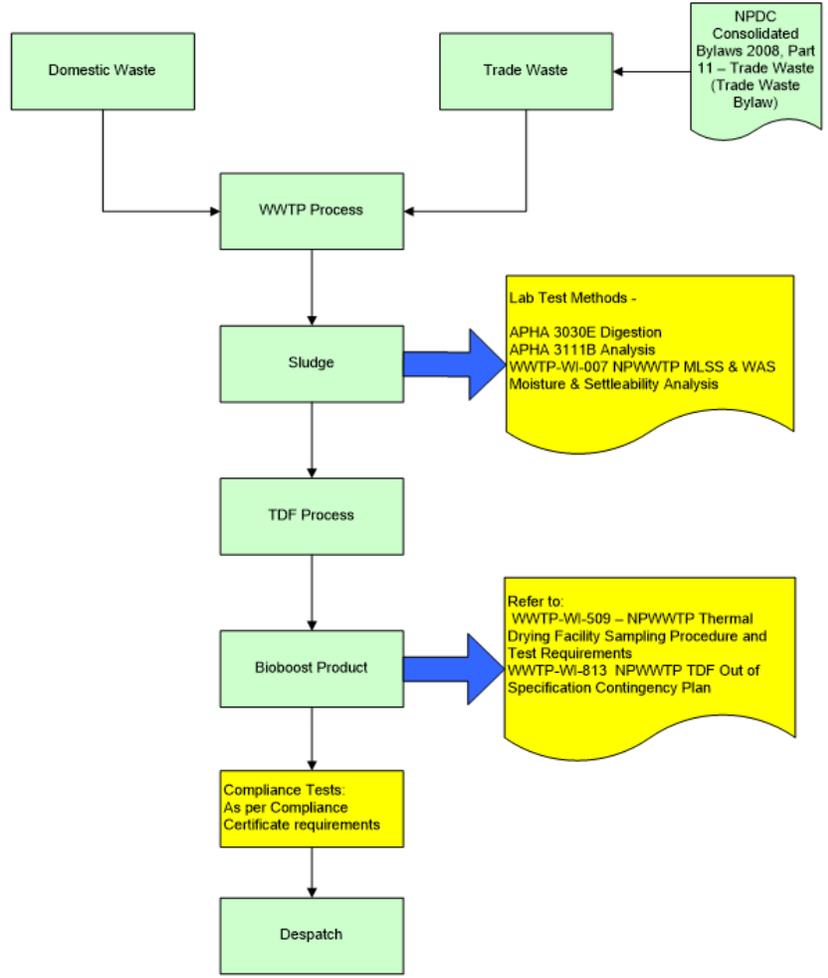




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Quality Management Flow Chart for Bioboost®

Bioboost® 6-2-0 Process



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Regulations

Meeting Regulatory Requirements - ACVM, HSNO, RMA, Regional Plans, Biosolid Guidelines

Compliance Department



"I'll be honest ... there are books by James Joyce that are easier to follow than these bad boys."

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The logo for bioboost features a red square with a white stylized leaf or swirl design inside. Below the square, the word "bioboost" is written in a bold, green, sans-serif font, with a registered trademark symbol (®) to its upper right. Underneath "bioboost", the words "natural organic fertiliser" are written in a smaller, green, sans-serif font.

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Creating a Successful Brand and Market

Its no use creating a fantastic
product that meets all the rules if no
one wants to buy it

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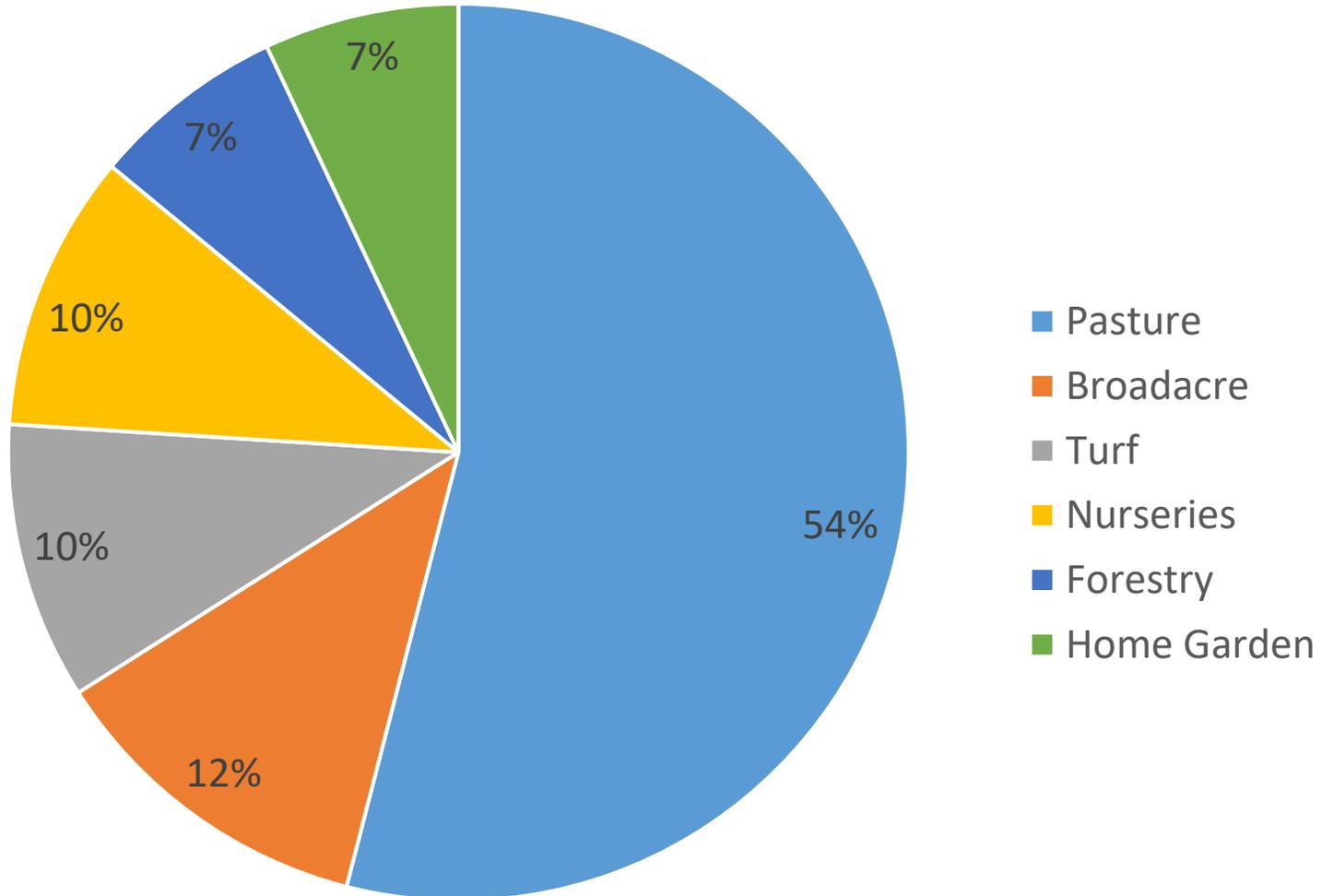
Creating a Successful Brand and Market

Tell the Story
Watch your language
Build brand equity
Never give it away
Be honest
Find a champion

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Bioboost's[®] Market





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Next Step for Bioboost

Treatment Process	MCA Score	Beneficial Reuse	Whole of Life Cost	Commercial Risk	Secondary Disposal routes	Process Redundancy
Vermi Compost	84%	Yes	\$15m - \$20m	High	None	Good
Solar Drying	77%	Yes	\$15m - \$20m	Moderate	Landfill or Land application	Good
Thermal Drying	67%	Yes	\$15m - \$20m	Moderate	Landfill or Land application	Poor
Windrow Composting	67%	Yes	\$20m - \$25m	Very high	None	Good
Landfill	55%	No	\$20m - \$25m	Low	None	Good
Incineration	32%	Partial	\$25m - \$30m	Moderate	Landfill	Poor

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Next Steps for Bioboost

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