

# Cocoa biostimulant for flowering and fruit setting

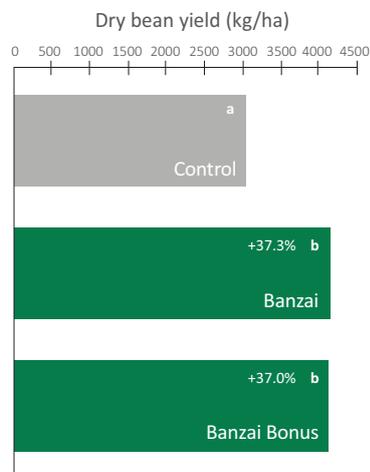
Banzai Bonus™  
is an advanced  
biostimulant  
containing  
Plant Impact's  
patented Alethea™  
technology.  
This increases the  
yield of cacao trees.



## Benefits of Banzai Bonus

- ✓ Average yield uplift of 37% in West Africa and a similar increase in Indonesia
- ✓ Significantly reduces flower abortion and pod drop
- ✓ Increases yield, even when used in high input systems with fertilisers and crop protection products
- ✓ Consistent efficacy with successive use over multiple years

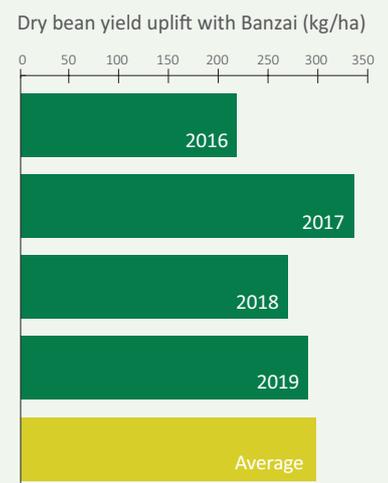
## Statistically significant yield uplifts



Banzai is dual bottle product that has been sold in markets for several years. After extensive formulation work, Banzai Bonus was created. This is a single pack product with all the benefits of Banzai but with the convenience of being in a single bottle. This provides the grower with ease of application, ease of supply chain and reduction in plastic waste. A trial programme was conducted in Ivory Coast, with 16 locations and 3 replications at each location. As expected, the one pack product (Banzai Bonus) demonstrated equal efficacy to the original dual pack product (Banzai). Both products were statistically different from the control ( $P < 0.001$ ) and resulted in a 37% yield increase.

## Consistent yield uplifts over multiple years

Banzai has been tested on over 200 locations in West Africa, with a combination of replicated trials and large demonstration trials. There was a wide range of agronomic practices at the sites, from basic inputs, to high inputs (crop protection products, granular fertiliser, Good Agricultural Practice). Flower and cherrille numbers were increased. As shown in the graph to the right, the average yield uplift over the past four years of testing was 300 kg/ha of dry beans, which equated to 37%. Banzai Bonus has been tested in Indonesia and also demonstrated similar yield uplifts compared to the control.



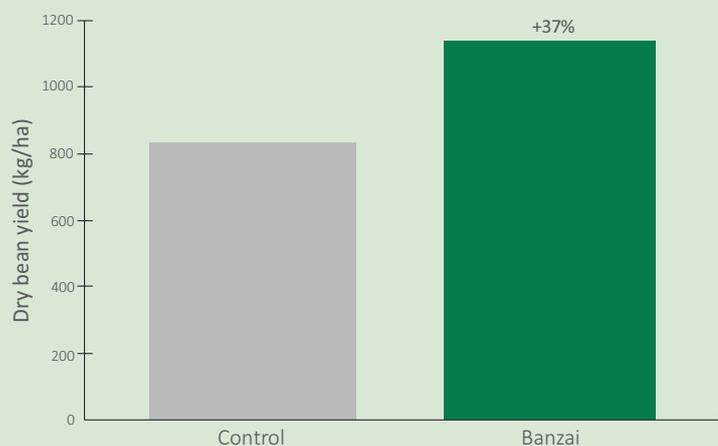
\*Marketed as Banzai™ in Ghana

## Banzai increases yield independently of fertiliser use

An independent, replicated trial was used to demonstrate that Banzai gives additional yield benefits, even in high input growing management systems with fertiliser. Banzai was applied to areas with continuous fertiliser applied (+3 years) and areas without fertiliser applied. Banzai gave a highly significant ( $P < 0.001$ ) increase in pod number of, on average, 47%. This effect was similar, irrespective of whether fertiliser was previously used.

## Consistent efficacy with successive use

Trials were conducted to ensure product efficacy continues with successive use on the same trees over multiple years. Trees were applied annually with Banzai and compared to trees with no Banzai application (control). Banzai gave constantly higher yields than the control in every year. The graph below shows the yield in year four, which demonstrates the continued efficacy of the product.



**Alethea™** 

## Anti-stress technology

Alethea contains a novel (patented) combination of plant signalling analogues that can cause plants to increase antioxidant production. More antioxidant activity combats reactive oxygen species (ROS), and in doing so helps plants to mitigate the effects of abiotic stress. This has been independently verified and published by research done at Lancaster University.

## Nutrient content of Banzai Bonus

Banzai Bonus (one pack formulation)	%w/w	g/L
N	7.5	95
Ca	2.9	36.5
CaO equiv	4.1	51.5
Zn	0.78	9.8
Fe	0.76	9.6
Mn	0.41	5.2
Cu	0.21	2.7
Mg	0.11	1.4
B	0.08	1.0



## Directions for use

Shake well before use. We recommend applying Banzai Bonus in a minimum of 200 litres of water per hectare. The table below indicates the application rate and timing for cacao trees. For more detailed advice, consult your agronomist. The table below indicates the application rate and timing for cacao trees as a foliar spray.

Product	Crop	Rate	Spray timing
Banzai Bonus	Cacao	2 L/ha	Applied from pre-flowering to harvest for a total of 3 applications per season (February, March and June)

### Tank mixing

Banzai Bonus is compatible with most pesticides, adjuvants and foliar fertilisers. Mixing calcium containing products with products containing high levels of sulphate or phosphate may cause precipitation. Always conduct a jar test before use to ensure physical compatibility.



Find more information on our Alethea technology products at: [www.plantimpact.com](http://www.plantimpact.com) e: [contact-wca@upl-ltd.com](mailto:contact-wca@upl-ltd.com)