

Sustainability Report

“Boustead Plantations Berhad is committed to establishing sustainable practices across our operations.”



In fulfilling our sustainability goals, we strive to safeguard the environment and positively impact the communities surrounding our operations by implementing Good Agricultural Practices (GAP) and Good Milling Practices (GMP). At the same time, we care for the wellbeing of our employees through stringent Occupational Health, Safety and Environment (OHSE) initiatives.

Merdeka Day celebration at Tadika KEMAS Ladang Sungai Jernih



ECONOMIC

The production of palm oil not only fuels our growth, it fuels the economy and touches the lives of multitudes. We made a concerted effort to create direct and indirect economic benefit to the communities we operate within.

Merdeka Day telematch at Tadika KEMAS Ladang Sungai Jernih



Shared Prosperity

Our presence has spurred the development of the local economy and brought prosperity to the communities in the areas in which we operate. We prioritise the communities surrounding our estates and mills in terms of employment opportunities and contract work. In our Kanowit project, we engaged over 200 landowners as local entrepreneurs who have been awarded various contract works at all six estates in the project.

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Estate access roads



- 5% Administrative Staff
- 16% Executive Staff
- 57% Checkroll Labour
- 22% Contract Labour

In addition, we contribute positively to the growth of small businesses in the community, including sundry shops, canteens at our mills and Pasar Tamu or farmers' markets at our estates in Sabah and Sarawak.

Apart from the spillover effect of our operations in terms of employment and business opportunities created for these communities, we support smallholder development. We purchase approximately 15% of our total crop processed from external parties, including smallholders.

Aerial view of Sungai Jemih Estate and Mill



We have constructed access roads totaling 193 kilometres (km) in rural areas, comprising 36 km in Peninsular Malaysia, 100 km in Sabah and 57 km in Sarawak and continue to undertake the maintenance of these roads. We are conscious of the fact that these roads are critical arteries that enable improved living conditions in rural areas as well as broaden livelihood opportunities for rural communities. Many of these roads are commonly utilised by the locals in these communities.

Economic Sustainability Through Research & Development

Our investment in Research and Development (R&D) opens up various possibilities for us in terms of improving our yields and accessing the latest technology in innovative agricultural practices. R&D efforts for the Group are led by our associate company, Applied Agricultural Resources Sdn Bhd (AAR).

High Conservation Value area in compliance with RSPO requirement at Sungai Jernih Estate



R&D has led to the development of high oil yielding planting materials, integrated pest, disease and weed management as well as efficiency of fertiliser use.

In terms of high yielding planting materials, our AA Hybrida IS and AA Hybrida II have achieved 22% and 57% more oil yield respectively than AA DxP. Some of our re clones boast high oil-to-bunch ratios of 34%. To date, we have approximately 19,000 hectares (ha) of oil palms planted with clonal and semi clonal planting materials.

Utilising our genomic selection process which is a type of molecular marker selection for quantitative attributes including oil yield, we are able to accelerate breeding selection to four cycles in 37 years compared to traditional breeding methods which takes two cycles in 38 years. This saves us time and cost.

We utilise BAARMis™, an integrated Geographical Information System for Plantation Management at all our estates to monitor the performance and productivity of each field, enabling management to swiftly identify low yielding areas for improvement. In addition, the system allows us to pin point the exact problematic area using GPS technology in order for us to undertake site-specific rectifications.



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ENVIRONMENT

According to a United Nations report, global food demand is expected to double by 2030. This clearly means agriculture will need to ramp up productivity while dealing with limited resources to keep up with this need.

We are meeting this demand in a sustainable manner and do not allow unbridled production that negatively affects the environment.

Natural Hot Spring at Segaria Estate, Sabah



Spearheading biodiversity

We have a long history in the conservation of biodiversity and preservation of unique natural eco-systems within our estates.

We have set aside areas with high conservation values throughout our estates in Peninsular Malaysia and Sabah covering 1,100 ha. These include riparian reserves along rivers, streams, ponds and natural hot springs. These nature reserves support a wide range of flora and fauna, as well as helping to minimise pollution of natural waterways and providing corridors for animals to forest reserve.

Along with this, we have allocated areas not suitable for oil palm and planted a variety of timber species in our Sabah and Sarawak estates. Other unplanted areas are left uncleared to allow native species to regenerate and thrive.

Optimising our resources

Our water and soil conservation efforts not only allow us to preserve our natural resources, they also help prevent soil degradation and environmental pollution.

As part of our best agronomic practices (BAP), we construct conservation terraces along the contour of slopes and undertake terrace planting to reduce the length of the slope which minimises soil erosion. This improves field accessibility for movement of workers. We also harvest rainwater in low rainfall areas. In peat areas, we build weirs and floodgates to control the water level in the field.

As part of our efforts to conserve water, we utilise the latest geospatial technology to design site-specific drainage systems for oil palms in addition to flood control. Apart from this, we spread out pruned fronds in an L-shaped pattern along contours, which acts to protect wide soil surfaces from heavy rain and to minimise soil evaporation during drier seasons.

RSPO and MSPO commitment towards sustainability



Reducing our impact on the environment

We believe that sustainable growth that creates stakeholder value cannot be achieved without superior environmental stewardship. To this end, we are committed to reducing our impact on the environment.

We have implemented zero burning policy in all our replants, where we utilise the solid waste produced as fertiliser in the field, which also reduces our carbon footprint. The leftover palms are set aside for natural decomposition. We also utilise organic by-products such as empty fruit bunches, decanter cakes and sludge cakes in the fields as fertiliser replacements to further reduce the use of mineral fertilisers.

In order to minimise soil degradation, we cultivate vigorous leguminous cover-crop at time of replanting resulting in minimum top soil losses, enriching the soil with biological nitrogen fixation and microbial diversity while improving soil structures with better organic matter. Quantified biological nitrogen fixation by the legume system can be as high as 250 kg of nitrogen per hectare enabling the legumes to immobilise nutrients during the replanting period. This also allows us to achieve higher yields.

Keeping fertiliser loss to its barest minimum allows us to reduce wastage and pollution to our waterways. This also benefits the communities that rely on the waterways for their livelihood and everyday needs.

AAR's series of Nutrient Cycling and Balance experiments have allowed us to determine that some fertilisers can be lost through surface runoff, erosion and leaching under different rainfall conditions, palm age, slopes as well as how much and where fertilisers were applied. By knowing where and how losses occur, we are able to minimise these losses, enabling us to use less fertiliser to achieve the same impact.

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AA+ Mulch™ application in immature area



We utilise the AA+Mulch™ system for replants across all our estates, where specially designed modified polythene sheets are placed around the palm circle to protect palm roots from mechanical and chemical damage. This encourages greater retention of fertilisers, thus promoting better and more uniform palm growth. As the majority of the palm circles areas are covered with AA+Mulch™, less herbicides are used for circle weeding.

Utilising AAR's INFERS model which follows the nutrient balance and plant nutrient demand approach, we are able to comprehend these parameters in addition to being able to quantify the amount of nutrients required by individual palm. It goes back to the right rate and right type of fertiliser, right timing and the right place to apply the fertiliser which are BAP tenets. All this allows us to reduce fertiliser use and impact on the environment.

We are committed to ensuring that pesticides are used on an as-needed basis where economic thresholds would have to be met before the need for pesticide applications is considered. Systematic and pest-specific census are required to determine whether these thresholds are breached before pesticides are utilised.

This early detection system will tell us specifically where the pests are located, the size of the area infested and pest life stage. With this early detection system, we are able to ensure that minimal areas are targeted for pesticide use before they spread to a wider area. Under the Integrated Pest Management approach, we aim to reduce pest population by destroying their breeding sites and employing natural biological control agents, such as utilising barn owls to cull rat population. To facilitate this, we established artificial nest boxes for owls at our estates.

AAR has also made substantial inroads in terms of its study into the connection between microorganisms as well as soil and plant health. As a result of this study, we have observed enhanced palm growth and better yields due to these beneficial microbes with concurrent reduction in inorganic fertilisers. Relying on both traditional and advanced omic technologies, AAR has isolated a wide range of microbes from various plants and soils to study their interactions in soil ecosystem processes as well as beneficial plant-microbial interactions. Validation studies for these microbes are still ongoing.

Nature has a way of finding a balance known as equilibrium. Beneficial insects and harmful pests are always adjusting to each other's presence. AAR has formulated novel methods to capture, identify and quantify insects to better comprehend the biological diversity that exists within our oil palm ecosystem in relation to pest outbreaks. Through AAR's

research, we are able to distinguish between potential beneficial insects from pests that can damage our crops, thus affecting yield.

In addition, as part of our efforts to control Ganoderma basal stem rot disease, the most devastating disease of oil palm in Southeast Asia, AAR discovered a new fungus specie which we named *Scytalidium parasiticum*. The patenting of the use of this fungus against Ganoderma is at the final stage of approval. We are also starting to test this biocontrol agent and other potential candidates in the field.

In all our mills, we employ anaerobic ponding digestion followed by facultative degradation system to treat mill effluents. A Tertiary Polishing Plant is installed at some of our mills in Sabah and Sarawak to reduce Biochemical Oxygen Demand (BOD) level before being discharged.

Effluent solids are removed from effluent ponds regularly by desludging or by the use of dewatering machines to help maintain a healthy and stable BOD degradation process. Effluent solids recovered can be utilised as fertiliser supplement to the palms. In line with the Environmental Quality Act 2012, we ensure that trained employees handle the disposal of our Scheduled Waste.

Minimising greenhouse gas emissions & air pollution control

As part of our efforts to reduce our greenhouse gas footprint and utilise sustainable energy sources, we have completed the installation of one unit biogas plant at our Telok Sengat Mill in Kota Tinggi, Johor. The biogas plant targets to capture an estimated 11,000M³ of biogas on a daily basis. We are utilising most of the captured biogas to generate steam in boilers and power a gas engine generating some 300kW electrical power for partial milling utilisation and domestic consumption, while the unused biogas is safely flared into the atmosphere. Other mills are expected to install biogas capture facilities in stages in the near future.

In respect of air pollution control, our mills will be installing appropriate emission reduction devices to reduce dust particulate emissions from boilers to comply with the requirement of the Department of Environment over the next five years. One of our Sabah mills was equipped with a wet scrubber at the boiler chimney stack in 2016.

Roundtable on Sustainable Palm Oil (RSPO)

As a member of RSPO, we are committed to sustainable and good agricultural practices. Two of our business units have RSPO certification with one more business unit on track to obtain certification by mid-2017. Our aim is to certify all our estates and mills by 2022.

In line with our nation's Malaysian Sustainable Palm Oil (MSPO) standards, we have also successfully obtained MSPO certification for an estate and a mill in our Group.

Biogas plant, Telok Sengat Mill



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SOCIAL

As an established upstream oil palm plantation company in Malaysia backed by over 100 years of experience in plantation management, taking responsibility is the bedrock of our business. On this score, we are committed to our corporate social responsibilities which are aimed at positively impacting society in tandem with empowering our human capital.

Our Greatest Assets

We employ close to 9,000 people across our operations. In a sector with strong competition and a shortage of skilled labour, we are conscious of the need to maintain our edge as a preferred and more importantly, fair employer.

We believe that all employees must be treated fairly and with respect. As such, we have in place workplace policies that are anchored in Malaysia's labour legislation including Sexual Harassment Policy, Equal Opportunities of Employment Policy, Child Employment Policy as well as Whistleblowing Policy.

We invest significantly in the upgrading of skills for our people as we firmly believe that our success is founded on their abilities. During the year, we invested in talent development and training sessions for our employees which covered areas such as technical skills, business and human resources, personal development and leadership excellence.

Peninsular Regional Annual Safety Training



We were also participants in various seminars, conventions and workshops that covered pertinent topics including sustainable development of the palm oil industry, mechanisation in oil palm plantations, biodiversity, oil palm pests and disease control management, as well as chemical safety management, amongst others. This provided our employees with opportunities to strengthen industry know-how.

Our training and development programmes boast high employee engagement rates and the Group maintains a policy of 40 hours of training per annum for members of the management team and 20 hours of training for other employees.

The welfare of our people is our primary concern. Apart from our provision of equal opportunities for personal and career development, we are committed to inclusiveness and providing a conducive working and living environment.

We provide subsidised housing for employees in our estates and mills across the country, which are outfitted with modern indoor facilities, electricity and running water. Our integrated housing complexes provide our employees and their families with access to social, spiritual and recreational facilities such as mosques, churches, temples, community halls, canteens, schools, playing fields, clinics, dispensaries as well as day care centres.

We also set aside funds for various sporting and recreational activities as well as festive celebrations throughout the year to promote work-life balance and foster stronger relationships within the Group.

Occupational safety and health is a priority we inculcate among our workforce. On this score, we have a dedicated OHSE team to ensure that the Group fully complies with regulations under the Occupational Health and Safety Act, undertake safety checks at the estates and mills and provide training to staff.



400 underprivileged students benefited from Back to School Programme

As testament to the efficacy of our OHSE initiatives, we recorded a low occurrence of incidents in 2016, with one fatality and zero unsafe conditions reported across all our estates and mills. We are committed to making continuous improvements to ensure a safe working environment for all our employees.

Empowering Young Malaysians

The importance of educating our young cannot be underestimated, especially among rural communities. We firmly believe that the best way to help children lead better lives is through access to education. As a corporate citizen, we have a responsibility to utilise the resources at our disposal to ensure that we are part of the solution.

Over the years we have provided financial assistance and donations in-kind to rural schools nationwide to improve infrastructure and administration. Free school bus services were offered to all school-going children from our estates and mills as well as neighbouring villages to the nearest school.

We also organised Back to School programmes for underprivileged primary school students in Kanowit, Sarawak, and Sugut, Sabah. Over 400 students were recipients of contributions in the form of school uniforms, shoes, bags and stationery as well as monetary support, in order to ease the burden on families and prepare the children for the new school year.

Additionally, we provided financial aid to underprivileged students seeking to further their studies. We also sponsored a tuition programme for Form Five students who sat for their Sijil Pelajaran Malaysia examinations in 2016.

In supporting the government's initiative to enhance employability among graduates, during the year, 10 graduates underwent their internship training at Boustead Plantations Berhad as part of the Skim Latihan 1Malaysia initiative.

Fostering Closer Community Relations

We appreciate the close ties we have with the communities surrounding our estates and mills and as such, we make concerted efforts to engage with community leaders to see what more we can do to contribute to local development and address any concerns they have regarding our operations.

As part of our commitment to reach out to those less fortunate, during the year we offered free access to medical care to local communities, as well as safety, health and environmental workshops in line with our Hospital Assistance programme. This is especially important, given that the nearest alternative may be several hours away.

'Back to School Programme', Kanowit Palm Oil Mill, Sarawak



We appreciate the dedication of our fellow Malaysians in service of our nation. To demonstrate our heartfelt gratitude to members of the Royal Malaysia Police and the Malaysian Armed Forces, we provided contributions for Hari Polis and Hari Pahlawan celebrations.

Other community relations initiatives implemented by the Group included contributions to upgrade places of worship, sports activities, religious and cultural festivals as well as donations in aid of underprivileged members of society.