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Chairman's Report

Welcome to *Progress* Issue 4. Our vision is to become a leading Australian - southeast Asian aquaculture business. Our goal is to market high-quality fish throughout the region, supported by our own integrated agri-business and aquafeed operations and research & development into new aquaculture products.

From small beginnings we are making significant progress in establishing our operational footprint in the Philippines. Work has advanced on multiple fronts. In this issue we share "hot-off-the-press" updates from our operations chief in the Philippines, Mike McMahon (see *Progress* Issue 1 for Mike's profile).

Suhi integrated agri-business

At Suhi Lot 1, our first selected operations site, Plentex's presence is now firmly established. You may recall from previous updates that Plentex Philippines Inc (PPI) holds a 25 year lease on the land secured by forward payment of 9 years' lease and a security deposit. An existing weighbridge structure (referred to in *Progress* Issue 3) is being significantly extended from the empty shell it was to become a 2 storey, 864 square metre structure which will serve as PPI's on-site administration building (see Fig.1).

The block will comprise a main office on two floors, housing executive offices, meeting rooms up to 15 workstations, plus male and female restrooms complete with shower facilities on the ground floor for staff.

Suhi Lot 1 is intended to be the site for Stage 1 of Plentex's integrated agri-product business, namely the rice and cassava drying and milling plant. Full specifications for the plant's construction are complete, with recent upgrades to the proposed rice milling component in order to deliver strongly competitive, very high grade rice.

Site preparation is now underway and progressively approximately 5,000 cubic metres of clean fill is being trucked to the site. This is being spread at an average depth of half a metre over a one hectare area prior to compaction (see Fig. 2).

At Suhi Lot 2, largely occupied by a purpose-constructed dam (see *Progress* Issue 2), tilapia production and offtake are exceeding expectations. From original stocking with fry in mid-2016, the dam is now home to a self-sustaining population of tilapia. An estimated half a million fish or more appear to be thriving in the clean natural environment that the dam provides.

Supply of our local tilapia received an enthusiastic response from the buying public (reported in *Progress* Issue 2) and the product has steadily developed a reputation for premium quality. In response to market demand, the Company has regulated its harvesting methods to produce optimally sized fish averaging 400 grams. Young at 100g are segregated in hopper nets from brood stock in the dam and given supplementary feed until harvest at 400g. Volumes are expected to plateau at an estimated 2 tonne per month by June 2017. While this business is regarded as small-scale, the premium quality product has attracted the attention of food outlets and the Company is now regularly supplying tilapia to the local Gerry's Grill franchise in addition to the Company's fish market outlet.

Procedures are now well advanced for the acquisition of Suhi Lot 3. With a Deed of Absolute Sale expected to be signed in the next few weeks, with full title likely to be granted later in the year. The 2.07 hectare wedge-shaped block adjoins Suhi Lot 2 and will increase the available building footprint for production of coir matting in the planned coconut processing plant.

Fig 1 Below Left: Conversion of existing weighbridge into a two storey administration block is progressing well at Suhi Lot 1.



Fig 2 Below Right: Site preparation.





Fig. 3: Panoramic view of the Villareal hatchery site. The large white roofed structure top centre is the hatchery itself. To the left are the blower room and Manager's house (blue roof). To the right are the laboratory, generator room and large breeder tank. Algal and larvae tanks are arrayed in the foreground.



Fig 4: The blower and generator rooms were engulfed in vegetation before refurbishment.

Villareal hatchery

The base for our fledgling aquaculture business is on nearby Samar island. The former Bureau of Fisheries and Aquatic Resources (BFAR) facility has been reclaimed from the jungle and readied for hatchery operations once more (see Figures 3-5). All the buildings have now been refurbished and the tanks painted on the outside and scrubbed out in readiness for operation. The generator and blower for air circulation throughout the hatchery (see Fig.4) are being recommissioned for service as has the laboratory, now complete with a clean room. The infrastructure also includes comfortable housing for a facility manager.



Spotlight on Research

The Company's exciting research programs have been outlined previously in *Progress Issues 1 and 3*. A licence agreement to grow and process *Halymenia durvillei*, a commercially valuable red seaweed, is under negotiation. Researchers have discovered that the desirable pigmentation varies with the depth at which the seaweed is grown. A twelve month field trial at Villareal is in the planning stages to test optimum growth depth for pigmentation enhancement.

The ProEn-K program has turned up some unexpected results which could be a game-changer. ProEn-K is being developed as a low cost substitute protein in commercial feeds. Fish feeding trials in a number of aquatic animal species have already shown that ProEn-K can be included up to 50% of the total weight of fish feed, reducing the amount of fishmeal required. The results show comparable growth and survival rates between fish fed with ProEn-K and fish fed with commercial feed containing full fish meal formulation. In contrast, alternative protein substitutes such as plant proteins can only be included up to 25-40% of the total fish feed weight. Higher inclusion rates of plant proteins often lead to reduced growth rates and mortality.

New data show that ProEn-K has some unique properties of promoting the growth and health and at the same time improving the nutritional profile of the aquatic animal. This discovery has implications to other livestock that are fed with ProEn-K. Clearly more work will be required to investigate these effects but it appears that ProEn-K has far more potential value than as a simple protein substitute. Meanwhile, the company is in the process of filing a patent application on these newly discovered properties of ProEn-K.

Fig 5: Renovated three bedroom Manager's house at Villareal hatchery.