

# Aquaponic Demonstration Unit

Last Updated Tuesday, 27 November 2012

This aquaponic unit is a research , demonstration and educational unit growing rainbow trout ( in the first instance) in tanks.

In simple terms:

The fish are fed proprietary feed dependant on their weight.

The fish water is then pumped through clayball growbeds which act as a filter and provides the necessary feed for the growing plants.

The cleansed water is then returned to the fish tanks. This is a circulatory water system with the only top up of water required being through the loss of water due to evaporation.

The plants grown here will be primarily herbs and salad crops and later trialing other vegetables and crops.

Wednesday 21st May 2008 - Work started!

and by... Thursday 10th July 2008 Trying out the layout on the drain outlet for the growbeds: Wood has been glued to underside of growbeds to hold the pipework. The orange bits are part of the B+Q workstands which are supporting the growbeds Trying out the layout of the growbeds and plumbing work First setup of tank and 8 growbeds Wow ! we have water going through the system! First setup settling in - no fish added yet though Working on the second layout working on the second setup Pipework for the recirculatory system Top pipework with water control valve underneath the larger white pipe for returning water to tank First setup Seedlings settling down in the clay ball beds More seedlings and getting the water flow and swirl just right! getting the tank ready before introducing the fish. Monday 15th September 2008 Exciting Day - First fish arriving! .. Victor - Scott and Phil - the fish watchers ( or the 3 wise men) Set up No.1 Set up No.2 The above photos were taken before putting up the trout gazebos- giving shading for the fish tanks. Wednesday 12th November 2008 A few more that were hiding! Our first large fish order - a customer wanting some trout as Christmas gifts! The fish weighed each between 1 - 1 1/2 lbs a Our first \*Official\* Aquaponic Open Day Saturday 2nd May 2009 It was a warm sunny day and many people attended , some from as far away as London! They all were astonished by the luxuriant growth in the Aquadrome as well as in the Hydroponic Unit and were very keen to set up their own units. We wish them well. Following an unfortunate accident on 30th May 2009 Overseer watches progress of fish and plants! Aided by his chum \*Nelson\* New filters added to two of the fish tanks- Winter 2009 and just checking that all is working ok February 2010 Under the lean-to we changed fish from one tank to another in order to clean out the tank ready for a new batch of common and mirror carp Carp and goldfish In the aquadrome -we took delivery of some nice trout fingerlings here are some of them unfortunately you have to be very quick with the camera!

April 2010 Cauliiflowers growing in the aqua system. Summer growth keeps apace! Chervil- watercress and pretty flowers August growth Tomato plants reaching for the roof. Healthy broccolli A rather large trout! 62.55oz And the most important part - record keeping. November 2010 Tasty French Tarragon slowly coming to the end of this years growth. Mustard leaves, Celery and parsley have all done well young Brussel Sprouts just forming - ready for Christmas! November Tomatoes slowly ripening This was just one tomato plant that was taken out of the growbd. and then the cold weather arrived with a vengeance! icicles galore! and the carp tanks-

See under Elevated Aquaponics for recent building

projects!

We had many visitors during the David Hughes, Menai Bridge Smallholders from the Eryri Smallholders Group

Overseas visitors from Australia and Ireland We had a disaster in August when a trip switch went off in the night without our knowledge.

due to lack of oxygen.

we were very grateful.

We have now got a Power Failure Warning Device with flashing lights and a siren. We have since managed to restock our four tanks with rainbow trout and hope that we do not have to go through such a trauma again ! The Swallows came and built a nest high in the roof,

the winter..The swallows were too fast to get a photo!

2012 After a very wet winter - we thought spring had arrived after some lovely warm days - but it was not to be -the cold wet weather came back with a vengeance!The growth in the aquadrome continued all winter.The curled parsley has been cut and cut again and still continues to flourish.We ran a two day course at the end of March 2012 Students came from London, Milton Keys, Lancashire and South Wales.They had theory to study and also had some practical work to do !Setting up a new system so that they could see how easy it was!5 half barrel growbeds and a floating bed in side the netted polytunnel.

WE added some red fin perch to our fish population - having got permission to keep them from CEFAS.Young fingerlings arrived safely and appeared to settle down well.Aquadrome - north side - June 2012A second two day course was run 30th June/ 1st July 2012Unfortunately many folk that wanted to attend were unable and so the two students who did attend had our undivided attention!Here testing water quality.First catch your fish - then despatch humanely.Two lovely rainbow trout -ready to be gutted..

and for one of our lunches - a home produced meal trout fillets with a herby mixed salad and new potatoes (not in the picture ! )And to finish the two days off - presentation of Attendance Certificates Antonio hopes to return home to Brazil with his aquaponic knowledge.and David hopes one day to have a commercial aquaponic unit. and more visitors ....Two gentlemen from Ireland interested in Hydroponics and Aquaponicsthen visitors from Flintshire..hoping to set up a community growing system in North Wales and a student from Aberystwyth University discussing the merits of aquaponics..November 2012 - Special urgent request for two day course by two business entrepreneurs!Desperate to learn more about both hydroponics and aquaponicsBelow showing various aquaponic systemsStudent catches his own rainbow trout !and finally Certificates handed out to two very proud young men! We wish them luck in their endeavours.