

Born in the USA



Kloubec Koi Farm, Where Koi Health Comes First



Aerial view of the Kloubec Koi Farm's 80-acre Amana location

by **Karen Pattist**

The Kloubec Koi Farm (pronounced Kloh' bek) is the largest fish farm in the Midwest! Myron Kloubec runs the farm with his wife Ellen and son Nick, who have a combined 75 years of fish farming experience. Nick is a 3rd generation fish farmer. Their property is spread throughout Amana, Iowa and nearby Missouri. The Amana location is a century farm and has been in the family for over 100 years. They employ as many as 25 workers during the year.

The Kloubec Koi Farm has never had KHV or SVC, and they take extraordinary steps to ensure that its perfect record will continue. Regardless of where the koi raised on the farm ultimately go, whether it is to a high-end hobbyist's pond who likes to show koi, or to a backyard

garden pond, Myron feels that the most important thing for him to do is to concentrate on the health of the fish. His goal is to provide the healthiest and the hardiest koi in the world!

Myron learned his fish farming skills by raising 10 different species of sport fish. He even ran a high-production tilapia operation using a closed-loop recirculating system for several years, producing over 1 million pounds of fish annually. The Kloubecs became interested in koi about 11 years ago, and now most of the farm's production is in koi. They found koi reproduction relatively easy compared to the much more sensitive game fish. Their skills in the use of artificial spawning became quickly apparent the first year. They already knew how to handle the koi in ways that did not stress them and which provided

maximum egg production. Then, they started to learn about the intricacies of koi culling and koi marketing. The Kloubecs continued to improve their bloodlines as their experience grew, and they realized that they needed help in the selection of their koi breeding pairs. They discovered that some of the large koi farms in Japan have a person who is dedicated to doing nothing more than charting the koi's genetics and planning the breeding pairs for spawning. They knew then that they needed expert Japanese help to achieve their goals of producing hardy, healthy, and beautiful koi.

The Kloubecs formed an alliance with Mr. Momaru Kodama in Japan, who is the well-known author of *Kokugyo 1* and *Kokugyo 2*. While the Kloubecs had already become experienced in evaluating koi in terms of their value for sale and in koi shows, they knew that it would take years to understand the complexities of matching individuals to maximize the benefits of each koi's strengths for breeding. Mr. Kodama assisted Ellen with suggestions on how best to improve their existing blood stock. They then asked Mr. Kodama to use his lifetime of experience to help them select specially matched breeding pairs of koi in many varieties. The new blood stock was selected for line-breeding. While in Japan, the Kloubecs purchased multiple matched pairs of nearly every variety for their extensive breeding program. Each female has one to four males that match her strengths and weaknesses exactly! This is the first year of production for many of those pairings, and "the results are phenomenal," according to Ellen. "The number of high-quality babies has more than tripled, and many

more pairs won't be producing for another year or two!" "The Kloubec Koi Farm is the only farm in the USA breeding for Kin Kikokuryu and Ginga," says Nick. Their Kin Kikokuryu have won major awards at every koi show the Kloubecs have attended in the last several years. They have also earned accolades for other Kloubec-bred varieties, and their koi have won several championships. Ellen claims that there will be more exclusive varieties produced in the next few years.

But, Myron adds, that success really is not much more than just good parent koi. The most important factor to producing really good koi is to understand their genetic and physiological requirements. Luckily, Myron has gained that knowledge from more than 40 years of Aquaculture experience. Because koi were developed in Niigata, Japan, and wild carp live in similar temperate regions all over the world, those who produce koi must do their best to imitate the original environment to have healthy and hardy koi. "That is why the Amana farm is so perfect," says Nick. It is nearly the exact same latitude as Niigata, Japan. "We started with our mud pond clays as close to Japanese soil as possible, and we amend them continually to keep them at optimal production."

First, the cold winters of Amana, Iowa are the hardest natural conditions of any koi farm in the USA. The jet stream brings cold Canadian air over the farm locations. Even New England has warmer winters! While

they don't get the same snow loads as Niigata, they can get up to 22" of ice on the ponds in winter! Because of that, and also to best mimic the Japanese growth ponds, the Kloubec ponds are much deeper than the average Koi pond. Even *tosai* ponds are 8 to 10' deep. The depth has been proven, both in Japan and in the USA, to produce better hardiness, better strength, and better body shape. It does require additional aeration, and it is more costly. Ice and snow are good insulators, and snow or ice cover actually keeps the deep ponds warmer than open

surface area. Kloubec koi raised in the cold waters of Iowa can easily acclimatize to any hot area of the USA, but fish raised in only warm water can rarely thrive in cold climates.



Nick receiving another award; Born in the USA from the Midwest Pond and Koi Society Show, August 2005. From left; Judge Charles Phelps, Nick Kloubec, Judge Pat Christensen, Judge Larry Christensen



From left: Myron, Mr. Kodama, Ellen and Nick at the MAKC '04 Koi Show

Secondly, the mud on the Kloubec farms is closer to the mud on Japanese koi farms than in any other location in the U.S. It is the scientific results of soil comparisons that convinced the Kloubecs to get



Early December on the koi farm, and an aerator keeps a hole open in the ice. That hole will become much smaller as the ice thickens and winter progresses. A snowmobile is required to get out to the ponds.



Record high temperatures require extra aeration. Nick checks the O₂ level in the Dainichi Kohaku *tosai* pond.

into breeding koi in the first place. "The koi have great color coming out of winter," says Ellen. And like Japan, each area of the farm specializes in producing certain varieties. "There are some ponds that produce fabulous yellows, and some that seem to bring out the blue colors better," says Nick. He continues that "Every pond develops the most phenomenal *sumi* (black) and *shiroji* (white background)!" Take for example, the fry from one of Kloubec's Isa Showa pairs. The Kloubecs have seen the spawns of a sister from the same hatching over in Japan. The Japanese *sumi* does not fully develop until the koi from the sister are nearly six years old. Meanwhile, the Kloubec's sister koi produce fry that often have fully developed *sumi* while they are *tosai*. "This difference can be accounted for only by where the koi are bred and raised," says Myron. He continues, "Our soil may be even better for raising koi than the soil of Niigata!" The early development of Kloubec *sumi* is one of the farm's biggest advantages. The farm also seems to have the right soil to develop amazing *hikari* (shiny) patterns that maintain

beauty and shine as the koi mature past eight years of age.

Myron also believes that his feeding regimen is in part responsible for the health and hardiness of their koi. He has worked with a nutritionist to produce a feed that has an immune stimulant that helps to prevent ulcers. They have tried feed from every major company. All the other feeds have the same problems, and Myron found that other feed doesn't create the same growth or good health. The Kloubec feed is fed to fry over 1 1/2" and it is formulated on many trials. Other feeds may use similar ingredients, but the element Myron feels is most important is keeping to a schedule. The farm uses their immune stimulant feed for a certain period of days, and then they use another of their feeds (without the immune stimulant) for a period of days. The koi continue on that cycle their entire life at the farm. "It is the cycle that makes the immune stimulant effective," says Myron. Myron has examined more than 20 years of data and research from koi studies. He knows that for any system that he develops to be effective, he must keep records and

perform follow up evaluations. What Myron does that is unique is to then provide his customers with the exact formula that they need to use to optimize koi health. Myron feels that many products are not effective simply because they are not being used scientifically. The specially developed Kloubec farm food outgrew every major brand, and it had a much lower incidence of hard fat deposits in koi that had been on the diet for more than 6 months.

One of the advantages of their fish farm is the ability to create experiments that use identical tanks or ponds and then vary one component to study its effects. Myron always has one or more trials going so that he can learn every aspect of the variables in raising koi. He then passes his information on to his customers. "Half the fun of this job is the constant learning in order to create a competitive edge," says Myron. Myron is so intense about the koi that he is constantly waking up in the middle of the night to write down another idea for his testing! He is currently working with a veterinary lab on an exciting method for reducing bacterial disease on the farm. (Look for an article about that work to be published in an upcoming issue of *KOI USA*.)

Another aspect of raising healthy and hardy koi starts in the spawning. To keep the process as sterile as possible, all Kloubec Koi are spawned artificially. Myron and Nick were experienced with 1000s of spawning inductions in Grass Carp, Perch, Bass, Walleye, and other game fish. An experienced handler can produce more eggs while doing little or no damage to the parents. The parents must be healthy to begin with, and they must be handled carefully to reduce the stress of spawning. While only 50% of the Japanese koi farms spawn artificially, Myron has found that artificial induction and stripping is much less stressful to the koi than natural spawning on brushes. "We are still using some original pairs from 11 years ago, and they are as healthy as our younger pairs," says Ellen. Many koi used in natural spawning become too damaged to produce



A sample of 3-day-old fry from Ginga line-breeding. You just don't see this unless you live on a fish farm!



Myron very gently expresses eggs from one of the Jinbei Sanke Females into a sterile bowl held by Nick.

more than a few years. Kloubecs also get an average of over 90% fertility! Because they have more fry than other farms, they can cull for health, rather than just color. Ellen says that, "With a larger group of babies to choose from, we select only the healthiest fry, regardless of patterns!"

When the female koi are stripped, the eggs are separated from the adult water supply. Because the eggs never touch the water that the adults were in, another safeguard is put in place to ensure the health of the fry. The same practice is applied to the milt from the males. The eggs are then incubated in a closed hatchery system to control any possible exposure to infection. UV lights are used extensively to protect the eggs and newly-hatched fry from bacteria. The baby koi are grown for several weeks in carefully filtered water to ensure the best possible start in life. Nick says that they also use natural selection to produce the hardiest koi. When the fry are placed into their mud ponds for growth, the weak and genetically inferior koi are culled by nature. "The ponds are cold in winter and hot in summer, and weak koi do not

survive," says Nick. He continues, "Koi that are more than one-year-old have lived through many natural stresses and have proven to be extremely hardy!" The spawn from each set of parents is placed into a separate pond so that their production can be easily tracked. Each nursery mud pond is drained, cleaned, sterilized, amended, and refilled with fresh water every year!

After about 60 days of growth and natural selection in the nursery ponds, the baby koi are brought in for their first cull. Their size at that point depends on the density of fish in the pond, or how many babies are in how much water. This is exactly how growth is controlled in hobbyist's ponds, although hobbyists have the advantage of being able to do extensive water changes that make it appear as if they have more water. Most fry are 1" to 2" at the first cull, and there are a total of four culls before the first sale. A small proportion of *tosai* are considered *tategoi* and held to be grown out into *nisai*, and a portion of those is held to be *sansai*, and a few are held until they are *yonsai*. The selected fry are then put out into larger summer growth ponds.

After 2 to 3 more culls, the koi for sale will be brought into the Kloubec's quarantine facility. Here, they will be treated for parasites, graded, and subjected to ammonia levels and temperature fluctuations that will harden them off. The koi experience conditions similar to those that they will experience in their home ponds, rather than mud ponds. "The koi are quite wild at that point," says Ellen. They need to be conditioned to the smaller tanks of the facility so that it is easier for the koi to adjust to their next stage of life. This holds true either if the koi are going to a holding facility at a wholesalers or to backyard ponds directly. If there is a problem with the koi, it will normally be seen in the four weeks of quarantine. "No other koi farm," notes Myron, "quarantines their stock from the mud ponds as long as we do before they leave the farm." When the Kloubecs decided to breed koi, the first thing they did was to build their

quarantine facility. It was a huge expenditure, with over 80,000 gal. in use at any one time. Each separate system within the facility has biofiltration and UV sterilization. The quarantine facility is an excellent example of the Kloubec's commitment to koi health. The speed that they can sell koi is directly related to how fast the fish can be moved through the quarantine facility.

Nick states that, "The quarantine facility must be kept clean!" Only trained farm personnel are allowed into the facility, and making sure nets are properly sanitized and stowed after each use helps prevent disease problems. Nick often says that, "Keeping the outside of the tank clean keeps the koi healthy on the inside." While it sounds like a joke, the entire staff is serious about contamination. Any water dripped on the floor is immediately cleaned with a bleach solution. The entire area is bleached after every operation every day. The staff must walk through bleach baths moving from one part of the facility to another. The parent koi from Japan are not even kept on the same farm as the production babies. Fry from one pond are never mixed with fry from another pond, nor do they share the same facilities when they are brought in for culling. The Kloubecs also spend the money to randomly test every group of fry for KHV each time they are handled. The Kloubecs don't import koi for sale, and they don't allow outside people into the restricted areas on the farm. "Bacteria are always present," says Myron, "but bacteria need to be kept under strict control inside our quarantine facility to ensure that each koi is as healthy as it can be before it is shipped." The farm's central location in the US helps to reduce the time the koi must spend in shipment to any purchaser, again helping their koi to arrive in optimal condition.

Ellen wants every koi fancier to know about how much work is involved in raising their beautiful fish! "It is not just buying good blood stock and getting pretty babies," says Ellen. The commitment level of the farm includes a 7-day-a-week,



Myron spraying bleach to sterilize the Kloubec quarantine facility. This is done several times a day when fish are being handled.

365-day-a-year work ethic. The work only begins with the spawning, and then there are the challenges of getting the eggs to hatch, and in feeding the microscopic babies. The amount of work required to put koi out in mud ponds and bring them in for every culling is exhausting. The babies must be watched and are often fed by hand at least once a day to evaluate their progress and catch any problems early before they become disasters. The culling is interesting, but it involves day after day of monotonous work for each mud pond. It is exciting to discover a baby with champion potential, but most people don't appreciate the amount of work it took the koi farmers to get that prized koi to showable size. "Understanding the extremes and requirements of the

farm can help customers understand their backyard ponds," insists Ellen. The bloodstock must be maintained carefully because losing one fish means you lose an entire pairing. Maintaining water quality is paramount to producing healthy koi. The biggest single detriment to koi health is stress, and according to Myron, "We can control it, but not prevent all of it, so every person keeping koi must understand the causes and how best to minimize stress." With the understanding of stress comes our achievement of the goal of koi health" says Myron, and goes back to the Kloubec Koi Farm's commitment to produce koi that not only look beautiful, but that can thrive in YOUR pond for up to 60 years!

