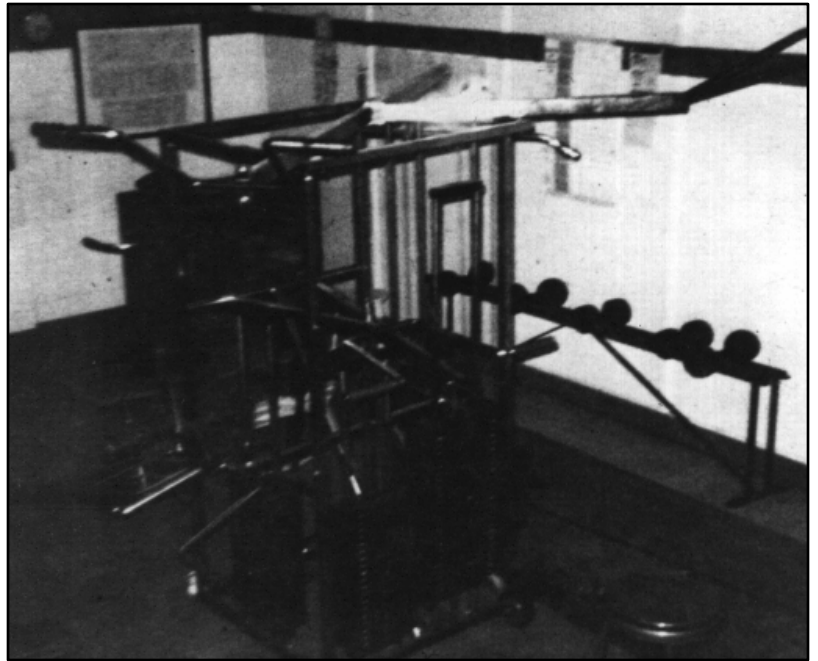


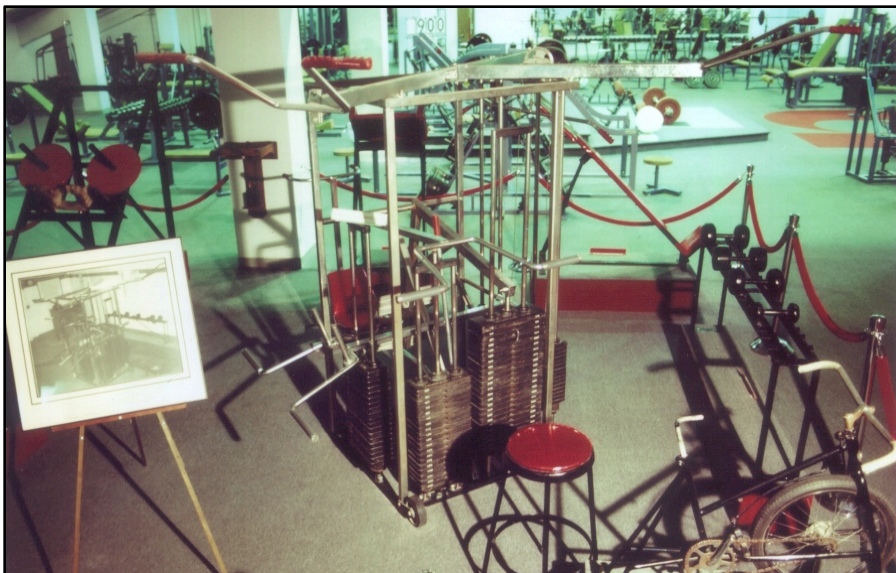
Innovation at Nebraska

The Nebraska strength program known as HUSKER POWER started in this 416 sq. ft. room located in Schulte Fieldhouse under the North Stadium, with one Universal Gym, a few dumbbells, and one 400 lb. Olympic set. This photo (Fig. 1) was taken in 1967 as part of a class project on facilities. It marked the beginning of a growth in strength and conditioning concepts and innovations in lifting equipment that impacted millions worldwide.



(Fig. 1) The Beginning.

Lifting weights for athletes was not recommended by coaches across the country at that time. Nebraska athletes had no stretching program, no winter strength or conditioning program, no summer strength program, no testing of strength, agility or power and no lifting during the season.

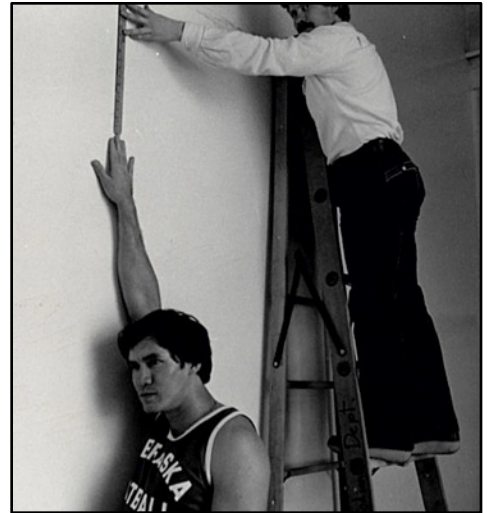


Nebraska Athletic Director, Bob Devaney, changed that August 15, 1969 when he hired the first full-time paid Strength & Conditioning Coach in college history.

(Fig. 2) The original equipment was on display.

1969 - One of the very first tests used to evaluate Nebraska athletes was the jump reach later to be known as the Vertical Jump.

Athletes jumped up against a wall with a yardstick to measure the height of their jump. When I-back Richard Berns jumped over the 36" yardstick a new system or longer yardstick was needed.



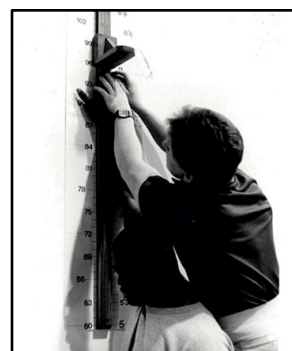
(Fig. 3) Richard Berns setting the yardstick at the top of his reach.



(Fig. 4) Richard was first to jump over 36". Trev Alberts led the Husker Power program with a 41.5 inch jump his senior year.



(Fig. 6) The Vertec replaced the yardstick but athletes had to have their reach subtracted from their jump to calculate the jump. In 2016 the Husker strength staff assisted in the design of the current Jump Station used by the Huskers.



(Fig. 5) A reach system was needed to determine the athletes reach which was then subtracted from the jump to determine the height jumped.

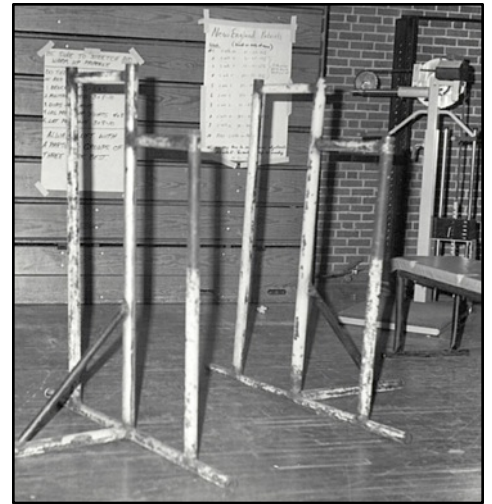
During the next 35 years the Nebraska strength coaches worked with multiple companies to develop the equipment needed.

1972 - The Nebraska football players followed a routine copyrighted in the Strength of Nebraska training manual. Editions of this manual were shared with thousands of high school recruits and established Nebraska as the source for helping coaches develop their athletes physically. A copy of this manual is now in the College Football Hall of Fame in Atlanta.

One of the reasons drawings of plate racks and squat racks were sent to high schools was the poor lifting equipment that was available at the time. Strength equipment companies were only making equipment for health clubs and athletes needed sturdier racks and heavier weight stacks.



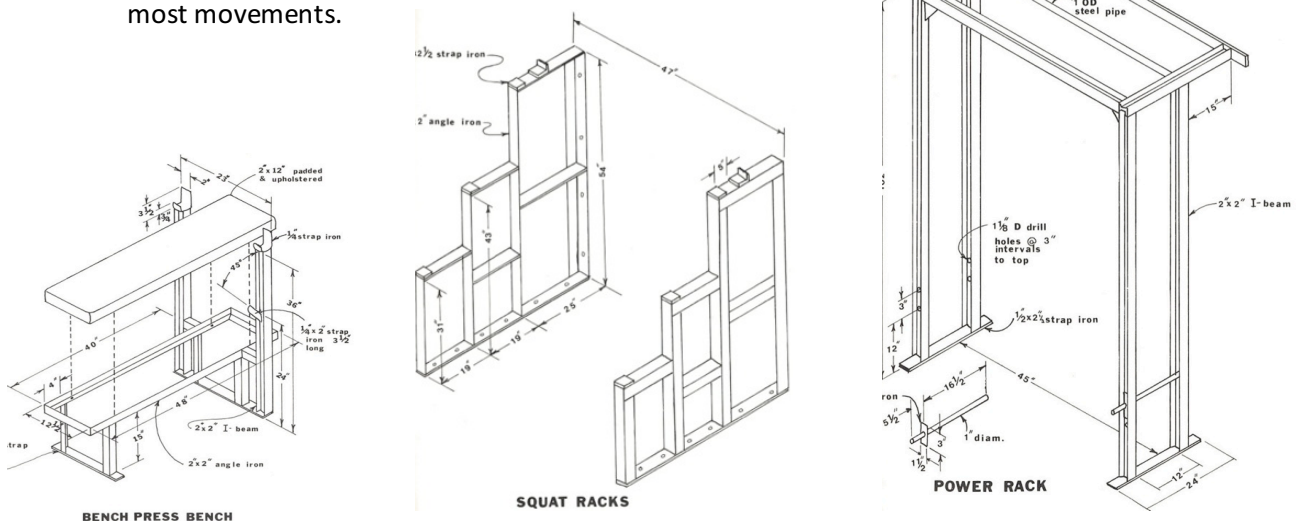
(Fig. 7) Training manuals were made available for coaches and athletes.



(Fig 8) One schools dangerous Squat Rack led to a lawsuit.

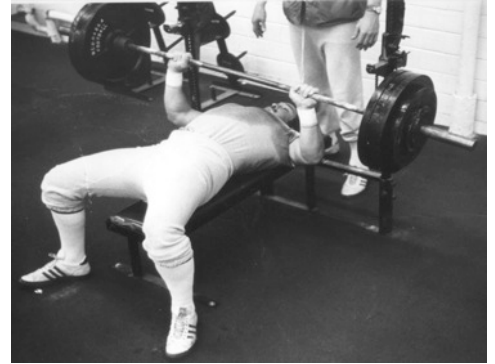


(Fig.9) Nebraska's first power rack was safer but still too confining for most movements.



(Fig. 10) Drawings helped high schools build inexpensive racks in the early seventies

1977 - Offensive Guard Lawrence Cooley became the first Husker football player to bench press 400 lbs. He was using the "Jack Bench". This bench featured an adjustable bar catch to adjust the bar height based on arm length. Two tractor jacks were mounted in the frame. The Jack Bench is now at the Lutcher Stark Museum in Austin, Texas. The search for adjustable bar height led Nebraska to develop several other adjustable products leading to the invention of the Transformer in 2002.



(Fig. 11) Larry Cooley doing Nebraska's first 400 lbs. using Jack Bench .

1980 - Nebraska became the first school to take a portable weightroom to bowl games. The Orange Bowl in 1979 provided the equipment shown in Fig 13. The Huskers were forced to bus to the Miami Dolphins training facility as a result. The next year Assistant Strength Coaches Mike Arthur and Gary Wade drove a van full of equipment to the Cotton Bowl and the year after Lanny Fauss of National Transportation started providing a semi to haul lifting equipment to bowl games for the Huskers. In future years transportation was provided by Seward Motor Freight.



(Fig. 12) The Jack Bench features an adjustable bar catch.



(Fig. 13) The Orange Bowl provided this equipment.

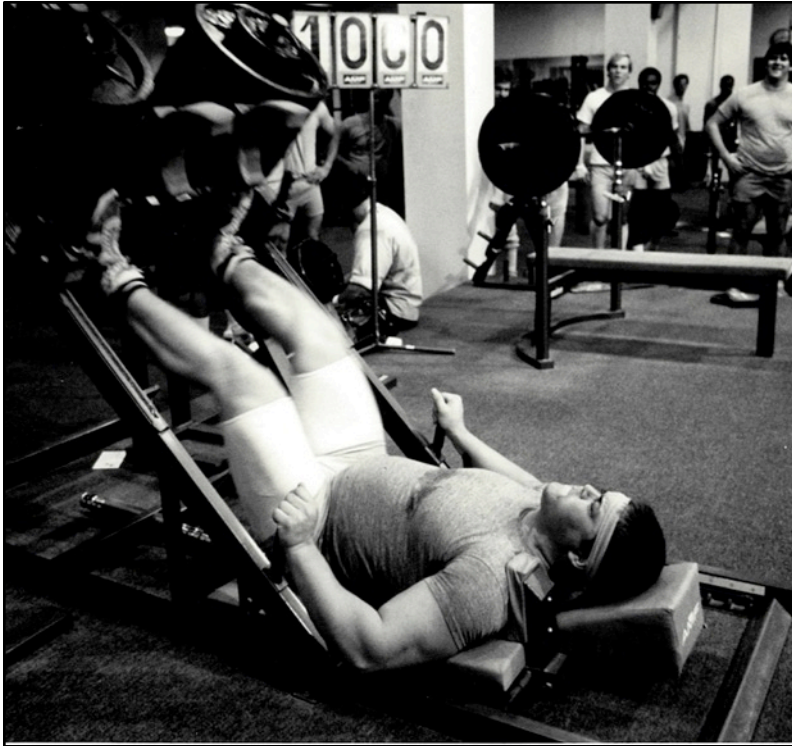


(Fig. 14) Due to the need for portable equipment Nebraska started working with equipment companies to design a full line of equipment which could be taken to bowl games.



(Fig. 15) Portable AMF equipment was designed for use at bowl games such as this set-up at the Orange Bowl.

1980 – The first portable item developed with the help of Joe Gitch at AMF was the Hip Sled which developed the hips and legs.



(Fig. 16) Kevin Lightner shows off his tremendous strength.



(Fig. 17) Hip Press done on a Universal Gym led to the development of the Hip Sled to provide good back support.



(Fig. 18) The Hip Sled is now made by multiple equipment companies.



(Fig. 20) Portable high pulley and low pulley machines allowed the Huskers to set-up their weight room anywhere.

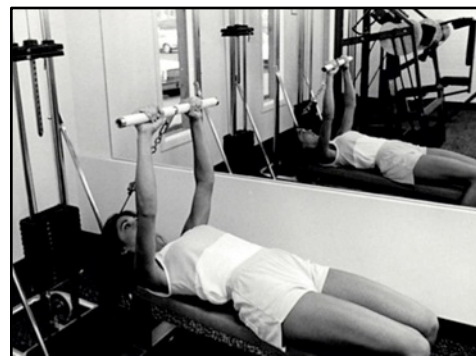


(Fig. 19) Sprinter Merlene Ottey who trained on the hip sled is one of the most decorated athletes in Olympic history.

Adding a third pulley, Fig. 22 and 23, to the two pulley unit, Fig. 21, allowed the cable to move in a more upright angle.



(Fig. 23) Three Pulley Unit and Triceps bench



(Fig. 21) Two Pulley Unit.

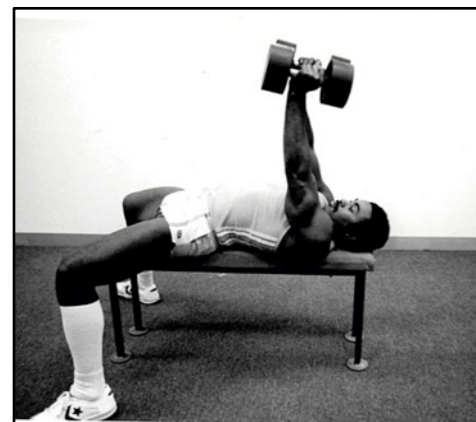


(Fig. 22) Three Pulley Unit.

The development of a triceps bench Fig. 24 allowed for support to the arm during triceps extension exercises with either a bar, dumbbell or pulley.

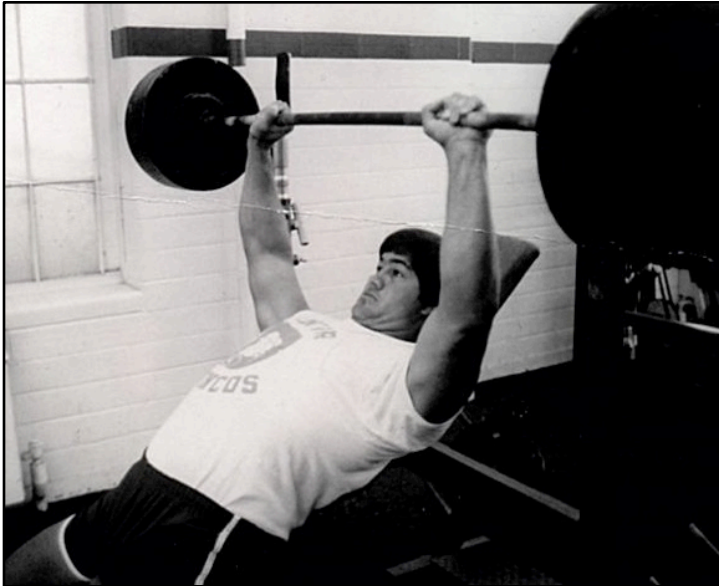


(Fig. 24) Triceps Bench with support for the arms.



(Fig. 25) Triceps Bench without supports.

The development of the adjustable stands for the AMF bench press, incline press and shoulder press allowed athletes with longer arms to train with athletes with shorter arms. This was an improvement but still not the best solution as these uprights were spring loaded creating a potentially dangerous situation for some.



(Fig. 27) All-American Tackle Kelvin Clark did 350 lb. Incline on AMF adjustable Incline Press



(Fig. 26) AMF adjustable Incline Press bench.



(Fig. 28) Free Standing portable AMF adjustable shoulder press.



(Fig. 29) Fixed barbells and portable preacher curl benches were all part of creating portable equipment for bowl games.

Dave Rimington, the most decorated offensive center in history, dominated opponents with a strong chest punch. This portable chest press machine was developed to allowed a close grip chest punch without pressure on the wrists.



(Fig. 30) Portable close grip press.



(Fig. 31) The E-Z Curl Bar took pressure off the wrists.

One interesting innovation was the seated shot put bench to throw an 8 lb. shot, Fig. 32 and 33.



(Fig. 32) Seated Shot Put Bench.



(Fig. 33) Seated Shot Put.

1980 - Nebraska became the first school in the country to have computerized lifting progress charts for each individual athlete. Mike Arthur developed the Strength Disk which helped hundreds of high schools.



(Fig. 34) Mike Arthur developed the Strength Disk to generate lifting programs for athletes.

1981 - The West Stadium Strength Complex opened as the largest weightroom in the nation at 13,300 square feet and it included a tool room for Randy Gobel to help create even more innovative equipment.

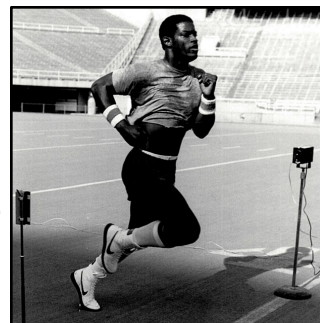


(Fig. 35) Randy Gobel was a key in Nebraska Strength Training facility innovation.



(Fig. 36) Hand-held Timing.

1982 – Coaches averaged two hand held times before Electric timing. It was not possible to time 10 yard dash before electronic timing. Quarterback Turner Gill was one of the first to use the electronic timing system developed by the Nebraska engineer Dr. Mike Reilly.



(Fig. 37) Electronic Timing.

1987 – Nebraska along with AAI, formerly AMF, developed a line of equipment for gymnasts and other smaller athletes.



(Fig 39) The Future Force plates could be filled with water or sand. The user had a choice of 0 to 6 weights. The weights could not fall on the user or pinch their fingers.

1993 - The Hammer Jammer became the first of many ground based pieces of equipment that Gary Jones of Hammer Strength and the Nebraska strength staff developed together to develop strength and power.



(Fig. 38) Future Force proto-type.



(Fig. 40) Danny Noonan demonstrating the Hammer Jammer.

1995 - The Husker Power Rack was made by the Wynmor equipment company in Topeka, Kansas. This multi-purpose rack was the beginning of modular racks being made by companies nationwide and led to Nebraska developing the Half Rack in 1996, which uses two posts instead of the traditional four posts.



1996 - Husker Power Locks were developed at Nebraska to have a durable but fast way to secure Olympic plates. They are guaranteed for life.



(Fig. 41) Husker Power Rack.

(Fig. 42) Husker Power Locks

1996 – Wynmor helped Husker Power develop a Half Rack to use with platform training so the bar could be set at different heights.



(Fig. 43) Nebraska was first to have Half Racks – there are nine shown in this photo.

Power Lift then created Tri-x Rack for Nebraska to focus on hang cleans and full 8' platforms for power cleans.



(Fig. 44) Power Lift Tri-X Half Rack.



(Fig. 45) Power Lift Half Rack with platform.

Hammer Strength/Life Fitness worked with Husker Power to create Ground Based Push/Pull Stations Fig. 46 and a Romanian Deadlift (RDL) unit Fig. 47.



(Fig. 46) Hammer Strength Push Pull.



(Fig. 47) Hammer Strength RDL.

Six Hammer Strength Push Pull machines were developed to provide Ground Based training for Nebraska.

2000 – With the help of the Cormax company Husker Power developed a 12 foot tall machine for our national shot put champion Carl Myerscough, Fig. 48. Carl at 6'10" and 340 lbs. could squat 810 lbs. but wanted to be more explosive. This unit allowed the bar to be thrown overhead and float down safely controlled by a hydraulic valve.



(Fig. 48) Custom 12' high machine made for Big Carl.

2000 – Mike Arthur with the help of Hammer Strength, created a reciprocal leg curl machine, Fig. 49.

2002 - Rivers Metal of Lincoln, NE. developed the Transformers for the Huskers, Fig. 50. No other school in the nation has anything that compares to the Transformer. These machines allow athletes that train with free weights to have unprecedented safety while doing it. The safety levels move electrically which provide the most efficient way to train. The Nebraska athletes have named the machine the “Transformer” since it transforms from a squat machine into a hang clean machine with the touch of a button. These electric machines also allow for the best environment for teaching proper lifting technique for both the explosive Olympic moves and the slower strength lifts.



(Fig. 49) Hammer Strength Reciprocal Leg Curl.



(Fig. 50) Husker Power Transformer.

2009 – Husker Power staff assisted with the development of Elite Form units that track bar speed and much more, Fig 51. All Husker power racks and Transformers have these electronic Elite Form units in all three athletic department weight rooms and the NAPL research lab.

2015 – Mark Phillipp, Head Strength Coach for Football along with Power Systems developed portable and adjustable Pulling Blocks, Fig. 52 for the Suh Training facility.

2016 – Husker Power benefited again by having the Nebraska Engineering Department engineers upgrade the electronic timing system. The Dashr system (Fig. 53) now sends a signal to a coaches telephone.



(Fig. 51) Elite Form units.



(Fig. 52) Husker Power Pulling Blocks.



(Fig. 53) Dashr Timing System.

Boyd Epley, Assistant Athletic Director for the Strength and Conditioning Department credits the tremendous Nebraska strength *coaches* who helped make these innovations possible.

