

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

BERKELEY, CALIFORNIA

SOIL CONSERVATION SERVICE

TN - Range - 13

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A COLLAPSIBLE RING FOR PLOT SAMPLING

The heavy wire hoop, 42" in diameter (containing 9.6 square feet, used for determining forage yields, as described in California Technical Note - Range - 2), is very unhandy to carry in a car or on horseback. Kenneth E. Anderson, soil conservationist at Concord, Calif., has solved this problem by making the ring from steel survey chain, which can be collapsed into a size which will fit into your pocket.

Fred Haughton

Soil Conservationist on State Program Staff

The 42" ring is made by joining the ends of 11 feet of discarded steel survey chain with a "tape splice." It is easy to collapse this to a smaller size, if you once learn the knack of it.

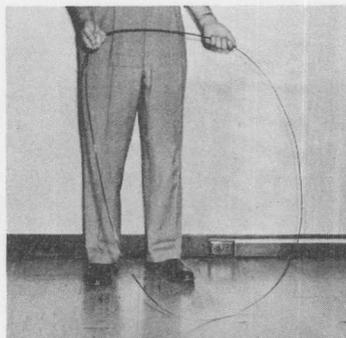


Fig. 1

Pick up the big ring with the palms facing the center of the ring, about 30" apart.

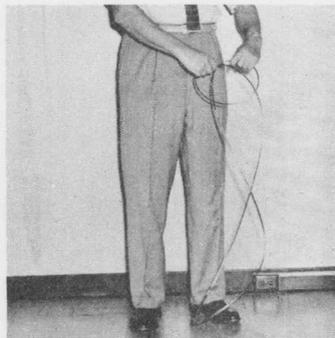


Fig. 2

Bring the hands together, rotating both palms inward. This will form three smaller rings, two in the hands and the third hanging down.

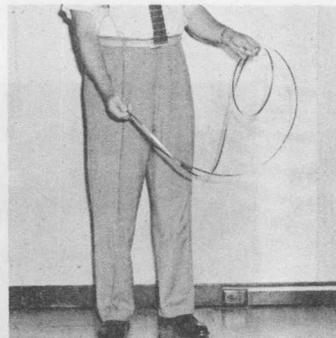


Fig. 3

Hold the two rings in one hand and pick up the third ring.

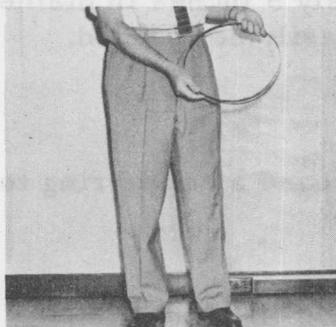


Fig. 4

Adjust these three rings until they are equal in size.

This circle is 14 inches in diameter, which is approximately one ninth ($1/9$) the area of the larger circle. In uniform, dense vegetation, it may be advantageous to use this ring size, and replicate it 9 times to get a 9.6 square foot sample. Or, the small plot which contains 1.17 sq. ft., can be converted to approximate pounds per acre by multiplying the gram weight of forage times 82.

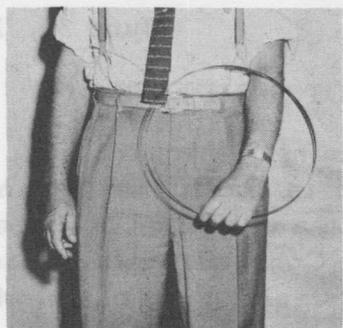


Fig. 5

Hold in the left hand, palm down, with the rings resting on top of the forearm.

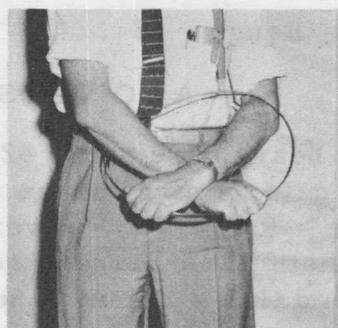


Fig. 6

With the right hand, reach over the right side of rings, under the left arm, and with the palm down, grasp the left side of the rings about 6 inches away from your right hand.

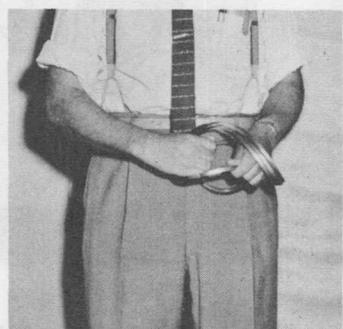


Fig. 7

Hold securely in both hands. Press down with the right forearm as you pull back the right arm and twist the right hand slightly clockwise.



Fig. 8

The nine rings now form a circle approximately 5 inches in diameter which can easily be carried.

A short piece of soft copper wire is useful to wrap around a coiled ring to prevent it from expanding.