

**Printed Pattern**



9190  
2-10  
by Marian Martin

Printed Pattern 9190 Child's Sizes 2 4 6 8 10 Size 6 takes 2 1/4 yards 3 1/2 inch fabric, 3/4 yard contrast for yoke collar. Send Thirty-five cents in coins for this pattern—add 5 cents for each pattern if you wish 1st class mailing. Send to 179 Newspaper Pattern, Dept. 212 West 15th St., New York, N. Y. Print plainly. GIVE ADDRESS with ZONE, and STYLE NUMBER.

**Calves May Be Wintered Safely On Minimum Amount of Protein**

Beef calves can get by on very little protein—recent research shows just how much—when they must be limited to barely holding their weight on low quality winter forage.

A 400-pound calf on a maintenance ration (not gaining weight) does all right on as little as 0.3 pound of digestible protein daily for as long as six months, according to experiments at USDA's Agricultural Research Center, Beltsville. This cuts in half previous recommended minimum allowances for wintering calves.

Along with the protein, of course, cattle must get enough calories to maintain body weight. This is three pounds of TDN (total digestible nutrients) daily for a 400 pound calf.

Recommended protein allowance set up by the National Research Council for a 400-pound growing calf is 0.9 pound a day for a daily gain 1.6 pounds. Under winter range conditions 0.7 pound of protein a day is suggested for a daily gain of one pound. This

is the lowest protein allowance recommended for calves so far by the Council. ARS research shows that under some conditions, however, calves can get along on less.

Protein supplements are expensive. Beef producers forced to winter calves on skimpy rations need to know exactly how much protein is enough for maintenance. Whether or not a cattleman chooses to feed for winter gains or for maintenance will probably depend on his estimate of profits from each management method.

This study by ARS animal physiologist C. F. Winchester and co-workers follows two other studies using identical twins beef calves. Growth of calves six to 12 months old was interrupted for six months with no ill effects when diets included enough protein, carotene, and minerals. Animals recovered quickly and profitably.

These scientists later showed that animals three to four months old could lose weight temporarily on low-calorie winter forage and still recover to make good gains and good beef.

**Pennsylvania Taxpayers Benefit From Soil Conservation Districts**

The State Department of Agriculture today said all Pennsylvania taxpayers benefit from soil conservation districts.

State Secretary of Agriculture William L. Henning said a highway survey shows maintenance costs were reduced by 12 times where farmers practiced soil and water conservation.

He explained that a Pennsylvania Department of Highways survey conducted in York County shows that it costs \$116 a year to maintain 1,200 feet of highway in an area where farmers don't practice conservation, however costs were only \$9 yearly for 1,200 feet where erosion is reduced through conservation practices.

Road maintenance savings due to conservation are not recognized as much as they should be, according to Edwin Jones, assistant chief highways engineer in charge of maintenance. Costs of

grading berms and cleaning drainage structures and ditches are much lower in areas where farmers "point then plow around the hill," he added.

Roadside development supervisor Ralph Chamberlain says such tax saving advantages have resulted in close cooperation between soil conservation districts and highway personnel.

He cited examples such as prompt stabilization of road banks to prevent soil from washing on farm fields and cooperative work to coordinate state road drainage systems with conservation plans of district cooperators.

Patterns of cooperation are developed by agreements between the highways department and each of the 48 county conservation districts in Pennsylvania, according to the State Soil Conservation Commission.

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