



## AGRICULTURAL ENGINEERING NEWS LETTER

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# PAINTING FARM BUILDINGS

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### The Value of Paint

The use of paint as a means of improving the durability of farm buildings has been stimulated by the Federal Housing Act, which provided funds for making repairs, remodeling, and painting farm buildings. Private, state, and federal farm loan organizations recognize the value of keeping farm buildings painted in order that the farmstead will present a better appearance and not be subject to excessive depreciation. Good paint on farm buildings and equipment also raises the morale of the owner and encourages as well as aids in maintaining sanitary conditions. Paint forms a moisture resistant coating which prevents checking, warping, and decay of the wood to which it is applied. The cost of keeping farm buildings painted is but a fraction of what it might cost to make repairs and replacements if the painting were neglected.

### When To Paint

On newly constructed buildings the paint should be applied as soon as possible after completion, if the lumber used is sufficiently dry. Repainting should be done as soon as the old paint shows signs of losing its water resistant qualities. High quality paint, under normal conditions, should give suitable protection to the surface for three to five years.

Paint should not be applied when the temperature drops below 40 degrees. Best results will be attained if the temperature is between 50 and 80 degrees. Paint should not be applied when excessive moisture is present, whatever its source. The presence of dust or insects in the air may ruin an otherwise good paint job.

### Selection of Paint and Equipment

Some thought should be given to the selection of appropriate colors for farm buildings. Attractive farmsteads frequently result from choosing the same color scheme for all the buildings. However, pleasing results are obtained also when the house is painted a different color from that of the other buildings. Buildings surrounded by trees or shrubbery should be painted a light color such as white, cream, buff, or light gray, in order to bring out a contrast.

The few dollars difference between the cost of good and poor paint is not a saving, for this difference will be offset by the lack of durability, lack of hiding power, and by the extra labor and ex-

pense in preparing the surface the next time the building is painted. Many cheap paints contain excessive amounts of transparent pigments, such as calcium carbonate, calcium sulphate, barium sulphate, and various silicates. High quality outside white paints contain opaque pigments such as pure white lead, zinc oxide, titanium dioxide, and zinc sulphide. Basic carbonate or basic sulphate white leads are the chief ingredients in most good paints. Zinc oxide is used with the white lead in order to retard early chalking.

The best vehicle for outside paint is pure raw linseed oil. A small quantity of turpentine can be used as a thinner in order to make the paint handle properly under the brush. When raw linseed oil is used a pint of drier should be added for every 100 pounds of pigment. Soybean oil has been used, but because of its slow drying qualities it is not as satisfactory as linseed oil. Corn oil and cottonseed oil have been tried without success.

Whether to buy ready mixed paints or to do one's own mixing is a question that must be decided by each individual. One objection to the ready mixed paints is that the paint already contains too much oil for the second coat of paint on three-coat work. On the other hand it takes some experience to do a good job of mixing paints by hand. Where colors are used it is necessary to mix enough for the entire job at one time, as it is difficult to get the same color a second time.

In order to know how much paint to buy for a particular job it is necessary to estimate the area to be covered. The total area in square feet when divided by 500 will give the approximate number of gallons of paint required for one coat. If the paint is to be mixed on the job it can be estimated that 100 pounds of white lead, combined with the vehicle and drier, will make approximately seven gallons of paint, which will be about the quantity needed for two coats on a six- or seven-room house.

Two flat bristle brushes, one 2½" or 3", and the other 4" or 4½", and a 1" sash tool will suffice for most of the painting to be done. It does not pay to buy cheap brushes as they do not hold sufficient paint, and they do not distribute the paint evenly over the surface. A wire brush, a duster, a scraper, a safety hook for holding the paint bucket, and a good extension ladder will complete the equipment for most paint jobs. The paint brushes should be cleaned in turpentine or gasoline if they are not to be used for some time.

### How To Paint

Careful preparation of the surface is an important part of painting. On repaint jobs the old paint should be gone over with a wire brush and duster, and in some cases, where the old surface is in very bad condition, it is necessary to soften the old paint with a blow torch and remove it with a scraper. All surfaces to be painted should be dry and free of dust, dirt, oil or grease. The best surface for repainting is one where the old surface has failed by chalking, and that is the type of failure to be found when good paints are used. On new work the knots should be given a thin coat of shellac before applying the priming coat. Nail holes and cracks should be filled with putty after the priming coat is dry.

It is best to follow the directions on the can for mixing and thinning paints. If no directions are given it is usually good practice to thin the priming coat with one quart of linseed oil and one quart of turpentine for each gallon of paint. The second coat can be thinned with one pint of turpentine, and the finish coat applied without thinning. When paint is mixed on the job from paste pigments, the linseed oil should be added gradually while stirring. When the paint is thin enough to pour add the coloring, if desired, then add the drier, the balance of the oil, and finally the turpentine. Just previous to using, the paint should be strained through cheesecloth or a wire screen.

The paint can be applied by hand brushing or by spraying. The spraying method is much faster, and when done by experienced workers gives satisfactory results. When applying the paint with a brush always start on the unpainted surface and brush into the painted surface. Use the heel of the brush as much as possible. On bevel siding always paint the joints and lower edges of the boards first. To avoid laps in the paint, stop at natural divisions of the surface being painted. New work should receive three coats of paint. The first coat should be brushed on rather thin so that the paint will penetrate the wood. The second coat should not have as much oil as the final coat, since the finish coat must be flexible enough to adjust itself to any expansion or contraction of the surface below. On repaint jobs two coats are usually applied, but occasionally one coat will be sufficient. From three to seven days should be allowed for drying between coats. The drying time depends upon the composition of the paint and climatic conditions.