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PIECE WORK RATES AND APPLICATIONS IN PLANT PROPAGATION, PRODUCTION, SHIPPING, AND CONSTRUCTION

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We became interested in piece work applications several years ago when we realized our production rates were not as good as some other nurseries around the country. There were, in fact, tremendous differences in efficiencies from one nursery to another. Several nurseries were using piece work rates in preparing and sticking cuttings, filling pots and transplanting liners to larger containers. Our first attempt at piece work was in our propagation department and involved filling 2¼ inch pots and preparing and sticking cuttings. We met with a great deal of resistance from our employees, which could be expected with any change, especially one involving their income. It didn't take long before the better workers realized they could make 1½ times their normal pay if they worked efficiently.

We soon started applying piece work to many other nursery operations. There are advantages and disadvantages; however, the advantages are far greater. Probably the greatest advantage is that we have an established fixed cost for each operation. Other advantages to this system are the following: the jobs require fewer employees, employees make more money, we are able to attract better workers, and most employees prefer piece work. We no longer need be concerned about getting a job

completed. The disadvantages are: there is a tendency to take short cuts on jobs, resulting in poor quality; there is a requirement for greater record keeping; jealousy may develop among workers because of differences in amount of income. The problem of poor quality can be dealt with quite easily by simply not paying for improperly done work. We have found an actual improvement in quality as employees now choose their own liners, grade, containerize and return small liners to the liner bed. We have tried using a potting machine but have found that it takes a much larger crew than we presently use if liners are graded in a way we expect. Conscientious workers soon realize they will be rewarded.

To establish piece work rates, we study the job to be done and determine the current cost. We then must decide if this cost is reasonable and if we are willing to pay that amount for piece work. We have found that if we offer them our current cost, they will usually increase production by 50 to 100% and will not waste time on breaks, lunch or rainy weather. We guarantee them a minimum of their hourly rate. If they cannot make this much, it is better for them to be replaced. Employees are in this way always able to evaluate their own performance. Good employees can make at least 1½ times their hourly rate.

Even after careful calculation and thought we have in some instances set rates too low or too high. They must be high enough to provide an incentive but not so high that the employee is able to make excessively more than on other jobs. We have consistently had trouble finding workers willing to divide liriopé and on occasion have even hired outside help for this. We calculated our cost and set a piece rate of about 5 cents. Employees found they could make 2 or 3 times the hourly wage by dividing liriopé. Unfortunately, it had been costing us that much. We did not change our rate until that crop was completed but did then reduce it and are still able to get plants divided efficiently.

Construction is paid on a piece work basis, and each operation is paid for separately. We have taken each step and figured its cost as a basis for establishing the piece work rate. The first step in building one of our Quonset houses is to cut the sleeves, ream them, and drill the holes. We are presently paying 40 cents per sleeve for this complete operation. The second step is to drive the sleeves in the ground, level and cement them in place. Next, pipes are bent and put into the sleeves. Purlines are put in the top, the fourth step. Ends of houses are completed, with wood used where needed for fastening the plastic. We found that we reduced the cost of building a Quonset house by 50 percent, it took about half the time, and employees made

twice as much when paid on a piece work basis.

We also pay for propagation in this way. Taking, preparing and sticking the cuttings are considered one operation. Filling containers and placing them in a house is another. The containers are watered after they are placed in the house. Seedling propagation is also handled on a piece work basis.

We have designed trailers to help solve the problem of getting containers and soil to the field. We feel the biggest problem is not in getting the soil and plants into containers but in moving them to the field. These trailers are made to hold enough soil for 2500 containers, which is slightly more than two people can fill by their morning break. They tow the trailer in and refill at that time and again at the noon and afternoon breaks. Extra time is not needed to refill the trailer during the day. On the average two people can fill more than 6500 containers each day, which includes obtaining both the containers and the soil. Piece rate also speeds up the process of placing containers in the field. We find that not only are trailers then parked as close as possible to the area being filled but that also more containers are carried each trip from the trailer to the bed.

I would like also to point out that piece rate is especially effective in improving employee performance on jobs not done frequently. Since they do not have an opportunity to develop skill in such cases, it is particularly important to provide an incentive for speed. We do very little staking and tying, and have found paying by piece rate has speeded up the process considerably.

There are some jobs that are difficult to place on a piece work basis, but these can be put on an incentive plan. We have found incentive pay can greatly increase efficiency on jobs such as weeding, for example. We give a cash bonus at the end of 3 months if a worker has kept an assigned area weed free during that time. We have also found it quite effective to give truck drivers a \$5 bonus for each load that is completely delivered. This reduces the necessity of second trips to deliver single orders that might easily have been delivered on the first run if the driver had conscientiously attempted to do so. Spraying, pruning and certain spot jobs are also paid on an incentive basis. Incentives for workers are very important for successful business operation.