

terfered with hauling hay, but good for curing. The water supply is being reduced rapidly this warm weather.

Lawrence—This week has been favorable for all farming pursuits. On the night of the first of July the temperature came near going as low as the freezing point. Water is getting scarce. There is fear that the late crops will suffer for water.

Coyoto—The weather has been dry and extremely warm. Crops are growing nicely. The frost of the 1st did some damage to the grain. We have a fair crop of lucern.

Tropic—The past week was warm. All garden and field crops are doing well. Cherries are ripe. Potatoes are large enough for use.

Parowan—Crops are better than they have been for years. A good crop of lucern has been cut. There will be a good crop of apples.

Levan—A warm, drying week, with heavy winds, which relieved the fruit trees of much fruit. Small fruit is ripening. Grain needs all the water it can get.

Ranch—Grain is making rapid progress to maturity.

Scipio—The weather has been warm, dry and windy. We have a good yield of lucern. Grain, potatoes and corn look well.

Holdeen—We have had much heavy wind. The nights have been cold.

Deseret—We have had high winds and clouds of dust, making it very disagreeable for hauling hay. Crops are still growing well.

Fillmore—The weather has been unusually windy. Some nights were cold.

Hinckley—The weather has been favorable for the development of crops. Wheat is heading and looking well.

Kingston—The crops are growing and giving promise of good yields of hay and grain.

Greenwich—Weeds are growing rapidly in the grain and lucern. Water is still plentiful.

Meadowville—The past week has been clear and warm, with cool, frosty nights, but no damage resulting. All winter wheat is in the head. Spring grain and potatoes are doing well. Lucern is being harvested.

Spring City—Lucern is in full bloom and the click of the mower is heard everywhere. Some light frost occurred Thursday and Friday nights.

Manti—We have had a good week, most excellent for haying. All crops are doing well.

Chester—The past week was very warm. Farmers are busy cutting lucern. Crops are looking well. Water is low.

Halliday—The lucern crop is heavy. Wheat is changing color. Spring wheat is in bloom. Corn, potatoes and other crops are progressing. Apples, peaches and plums are getting large; apricots are scarce.

Mill Creek—The weather has been all that could be desired. All crops have a healthy look. The first crop of lucern is nearly secure.

Miller—In some places water is becoming scarce. Harvest of the first crop of lucern is nearly complete.

Taylorville—Harvesting of dry farm grain has begun. The grain is plump and well filled. Winter wheat is maturing rapidly.

Coalville—A frost Friday night turned some potatoes black.

Peoa—Frost on July 2nd damaged corn, beans, potatoes and tender plants.

Santaquin—Haying is progressing. Much fruit was knocked off by the wind on Thursday. Pears suffered the most.

Lake Shore—The weather has been good for crops. Wheat, barley and oats are heading. Corn and potatoes are doing well. Peas are ripe. Early potatoes are in bloom.

Lehi—The wind has done some damage to trees, plants and fruit.

Payson—Heavy wind on Thursday damaged shade trees also blew down heavy grain. Strawberries are gone. Sugar beets are growing rapidly.

American Fork—Corn, potatoes, raspberries and peas are looking well.

Loa—We are watering our crops the second time.

Uintah—Harvesting will commence in about a week. The grain is plump.

Harrisville—The week has been fairly good for haying.

Charleston—First crop of lucern is harvested; the yield is heavy. All crops are growing well.

Heber—Grain promises good yields. A heavy crop of hay has been secured. Garden truck has a rank and heavy growth.

Kaysville—Most of the hay is in the stack with the yield above the average. Dry land wheat is maturing. Will commence harvesting next week.

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ADDRESS TO WOOL GROWERS.

The State board of horticulture has issued the following address to the fruit growers of Utah:

"The State board of horticulture now in session has many reports from county inspectors and individual orchard owners as to the prevalence of the pear slug and black aphids in fruit trees. These reports are confirmed by observations by the several members of the board of horticulture. It is desired at this time to call attention to the pests named and to urge the importance of applying the known insecticides to either prevent or stop the ravages of the insects. Experience proves conclusively that remedies applied in time will entirely circumvent the pear slug and speedily kill the aphids in every form.

"For the pear slug, as a reception, nothing is more effective than a thorough coating of the foliage with paris green and lime in the proportions recommended for leaf-eating insects, i. e., one pound of paris green to 150 gallons of water with four pounds of lime. After the insect appears, if the above solution has not been used, a thorough spraying with kerosene emulsion will kill all slugs while young. However, it is especially advised that the presence of the paris green and lime at the time the slug may be hatched will most effectually eradicate every single specimen.

"For the aphids (either black or green) the cheapest effective spray is found to be the tobacco wash. This solution is formed by boiling tobacco stems (obtained at cigar factories) in the proportion of ten pounds of tobacco to fifteen gallons of water. After boiling until all leaves settle to the bottom, strain the liquid, double the amount of water and apply the same by means of spray pump.

"The depredations of the slug and aphids at this season of the year can not be over-estimated and the State board of horticulture especially urges that steps be taken to apply the preventions that have been so thoroughly tried.

"The codling moth is now abroad on its second trip and the remarks by the board of horticulture at this season of last year will bear repetition at this time. Experience proves that the early spraying can not possibly kill all worms. Such as escaped the first spray have by this time fully matured and are now transforming into flying moth. Within the next three weeks the eggs now being laid by the moth will be developed into worms that will render the late apples unsalable. The spraying during July and August is as im-

portant and effective as at any time of the year.

"In this connection it is opportune to mention the warning published in April by this board to the effect that all wormy fruit shipped from Utah to Idaho is sure to be condemned. In the light of the above it would seem that the only rational plan is to adopt means that have been tested to eradicate pests from our orchards."

SCIENTIFIC MISCELLANY.

The list of double and multiple stars, now exceeding 1,000, is increasing with such a rapidity as to suggest that single stars like our sun, which has no large satellite or companion, are exceptions to the rule. The double stars are of two kinds. The telescopic binaries are systems whose two components are both seen revolving around a common center, while in the spectroscopic binary the existence of the second sun is known only by the evidence of the spectroscopic, having never been seen by man. The well-established methods of the former range from many centuries down to twenty-five years, while spectroscopic binaries may have periods of only a few weeks. Among the new discoveries are those of a telescopic binary whose revolution is completed in five and a half years, and a spectroscopic binary which has the astonishingly short period of three days, and itself revolves about the large star Castor in 1,000 years. Sirius, estimated to be four times as bright as any other star in the northern heavens, is a remarkable telescope binary, with a period of a little less than fifty-two years. Its companion, long expected to exist, was first seen in 1862, by Alvin G. Clark, and a few months ago it was picked up by the Lick telescope after having been out of range for six and a half years.

A bare iron wire and an insulated copper wire wound helically on an iron core, constitute the novel primary battery of Mr. N. B. Stubblefield, of Murray, Ky., and the electrolyte may be simply water or moisture. It is claimed the form increases the output of current, while yielding inductive effect that may be utilized in a secondary coil. The cell may serve as a self-generating electromagnet, and is said to be adapted for telephone, telegraph and electric bell purposes, and especially valuable in electro-therapeutics.

The question of placing electrical conductors in or near powder magazines has been submitted to a committee of the French Academy of Sciences, who make these recommendations: All underground electrical conductors, as well as gas and water pipes, must be kept at least 30 feet from the magazines. Aerial lines should not be allowed within 60 feet, and must be arranged so that no broken wire can fall upon the magazine. If light is required inside the magazine, all wires are to be in strong metallic pipes and all switches, fuses, etc., are to be on the outside of the building. Only fixed lamps, protected by a second envelope of glass, may be used, and no current should have a voltage higher than 110. Electric bells, only those using a very small current to be allowed, should be at least 12 feet from the powder. As all wires are liable to be struck by lightning, no distinction is made between telegraphic conductors and those carrying the powerful currents needed for light and power.

Of about fifty species of electric fishes, only three are of especial importance—the torpedo, a kind of skate of the Mediterranean; the gymnotus or