DESERET EVENING NEWS SATURDAY DECEMBER 14 1907

Intensive Culture, Key to Utah's Agricultural Growth.

TAH'S agricultural growth and | come. evelopment lies not in the dition of increased acreage, or augmented water supply or

their limitations, and in the last named, the limitaa new in sight. semiltural expansion, and by this

with the increase of the rural popthe number of those who th from the soil, will come is through intensive cultureuking of one acre produce as coine as is new obtained from so acres, without lossening the or producing power of the soil. sbillics of intensive culture ver been reached in this state, ably never will be. The land a plant food, the almost conmehlue, the irrigation water maisture when needed, and and climate combine to make ins more ideal for intensive crop In this state than in many

ing where this system flourishes a would be gratuitous information to is man that he was wasting his op-

boets can be had from about the same acreage of land, as averages go in this

ented water supply or dry farming. All nefr limitations, and est named, the limita-teht. single acre and the productiveness of the soil continues for generations. Even to Japan, the farmer gets from the soil from 5 to 25 times as much as the Utah

farmer obtains. Utab tomato growers, who are so fortunate as to be situated near a cannery, can acquire an income of \$1,200 a year from 5 or 6 acres. Straw-berry growers in Weber and Boxelder counties are producing \$200 to \$600 worth of fruit per acre, year after year. Raspberry growers have done even better than this, making as much as \$800 per acre. Where there are shipping facilities there is an almost limitless demand for the excellent qual-ity of small fruits for which this state is becoming noted. Utah tomato growers, who are so is becoming noted.

As factories increase in this and As factories increase in this and heighboring commonwealths, and as the mining and other industries aug-ment the population, the market for garden truck and small fruit will ab-sorb all that Etah irrigated land is capable of producing under the most systematic method of endures that can

a beanel, the acce will yield slow and nually, so long as the trees are duly cultivated and well cared for. That good fruit of all kinds can be grown in nearly every county in the state was abundantly evidenced by the spiendid displays at the recent state fair. Although this was an off year for fair. Although this was an off year for fruits of all kinds, the exhibit was a surprise to all visitors, and excelled all previous efforts, especially as an aug-ury of the possibilities of commercial apple growing.

AN ORCHARD FROM A DESERT. The success of a Salt Lake county rult grower, William Kraack, a native

of Germany, is a striking example of what perseverance and industry can accomplish in the face of adverse con-ditions. About 13 years ago Mr. Kraack traded some city property worth about a thousand dollars for a dry ranch four miles east of Sandy. There was a small spring on the land, which was devel-oped into a water supply to brigate with care some 10 acres of the sandy terraced slope. About 10 years ago Mr. terraced slope. About 10 years ago Mr. Kraack began to set out small fruits.

The same income from sugar an be had from about the same e of land, as averages go in this ifden truck growing as practised really use of apples part tree, even at \$1 a bushel; the acra will yield \$1,000 and you are the details of the author and the details of the author are the larger crops, but at 10 bushels of apples per tree, even at \$1 a bushel; the acra will yield \$1,000 and you are the details of the author are the larger crops of the store are the form and the real of the area the bushel; the acra will yield \$1,000 are you are the details of the author area the bushel; the acra will yield \$1,000 are you are the the area the bushel; the acra will yield \$1,000 are you are the bushel area the the area the bushel the acra will yield \$1,000 are you are the bushel the acra will yield \$1,000 are you are the bushel the acra will yield \$1,000 are you are the bushel the acra will yield \$1,000 are you are the bushel the acra will yield \$1,000 are you are the bushel the acra will yield \$1,000 are you are the bushel the acra will yield \$1,000 are you sult in Tailure. All the details of the work must be done at the right time and in the right way. Given good management, and the proper selection of fruit plants, vines, and trees, well cared for, and the fruit handled in a business-like way, there is every as-surance that fruit growing in Utah can be made a better money-inaking prop-osition than any other line of agricul-tural practise. Five acres in a well cared for orchard or small fruit lot can be made to yield a better income than the average 160 acre general crop farm. This amount of land in apples slone could be made to return to its owner and caretaker, if he has or will de-

and caretaker, if he has or will de-velop by study and application an ap-titude for fruit growing, a salary of \$10 a day for every working day in the year, and tha meome is sure as long as he lives. This is a low estimate, and has been doubled by fruit growers in bis and other states this and other states.

FRUIT GROWING ASSOCIATIONS. Five or six years ago the apple grow-ers of Hood River, Oregon, where the best apples of the world are said to come from-were not using any system or business methods in their work. fruit in any old way and sold it in like manner, for any price they could get. their best apples bringing them 35 centri per bushel box. Then they organized into an apple growers' union or asso-clation, and adouted stole to association, and adopted strict business methods. They sprayed their trees thoroughly and took especially good care of their orchards during the grow-ing season. When the fruit was fully ing season. When the fruit was fully mature the growers gathered the crop. but the packing in neat and attractive-ly labeled boxes was done by the as-sociation itself, to insure an honest and guaranteed uniform pack. The sales were effected through the association, which, as soon as the crop was well in hand, wrote the big fruit buyers of the country, told them what they had and asked for bids. Prices of their orchacked for bids. Prices of their orch-ard products rose in leaps and bounds, so anxious were buyers to get their guaranteed fruit. This senson's apple crop brought the growers of Hoed River \$3.27% per bushel box, at their railroad station, and the growers did bot have apples chough to supply the demand. The annua producers there grow but

demand. The apple producers there grow but two varieties principally-Spitzenberg and Newtown Pippin, with a sprinkling of Whiter Bananas, Baldwins and Ben Davis. The growers specialize on the first two maned and bend every effort to grow these to perfection, and as a consequence, aided by goed advertising, the Oregon apple is famed as the best grown in the world. Utah's climats and other conditions are as favorable to the growing of fine fruits as can be desired, and were the same care and attention given to their culture as obtain in Oregon, as fat-

culture as obtain in Oregon, as flat-tering results could be attained. Utah is \$00 miles nearer the eastern fruit market thun Oregon, and the shipping facilities are all that can be desired if growers will unite in getting fair rates over the railroads, all of which will militate to the advantage of los

The farmers of Utah are lamentably backward in the knowledge of business methods, especially in methods of com-bination. Only by the formation and stand 15 or 15% feet from each of the four around it. There will thus be about 200 trees to each acre. In minoperation of co-operative societies can the farmers and fruit growers compete riout 200 trees to each acre. In man-ging variaties, preserve the position of the long-lived trees for the orchard of after years, when three-fourths of the trees will have to be cut down. "I would divide the history of this with commercial industries, force surplus middiemen, compel railroads to provide better facilties for transportation and dictate more favorable legis-lation. By working together, as the Oregon fruit growers do, the growers here can consign in bulk and distribute their goods in the market and get all that is coming to them in the way of profits. orchard into three periods, viz. 1. The period up to removing the first trees. 2. From then to the removing of the second lot. 8. The period after that. "Now, let us consider results by first

"Do you expect people to believe any such stories" Yes, and very likely you would eny that the half had not been told if you could go to these exchards and mee for yourself! Realize what it means to a man of middle years to have such an orchard at his back. There isn't any \$50,000 block of stock in Wall street that can match it. An-other thing-if you could study these orchards you would also realize, par-haps for the first time, what it means in the way of skill and energy to hanin the way of skill and energy to han-dle a good commercial orchard." PROFITS OF AN APPLE ORCHARD.

The following extracts are taken from a paper read before the Mills county, Iowa, horticultural society by Judge John Y. Stone, an experienced

suits of his own experience. He says

"This paper may be taken as a busi ness suggestion to the man who can plant 20 acres in apple trees. Having broken the land as he would break it for corn, he should plant heavy-bearing, winter varieties, tested and proven to be valuable. Plant the long-live varieties 23 (or 24) feet by 25 feet apart



58,000

\$144,000

chard) must now be removed, and the present productive capacity of the or-chard reduced one-half, with the following results

10Wing results: 16Lh year 12 bu.each 24.000 at 40c-4 9,600 17th year 13 bu.each 26,000 at 40c., 10,400 18th year 14 bu.each 28,000 at 40c., 11,200 19th year 15 bu.each 20,000 at 40c., 12,000 19th year 15 bu.each 20,000 at 40c., 12,000 20th year 16 bu each 32,000 at 40c., 12,800

Total 2nd period.140,000 \$ 56,000 -

Cotal Ist and "

"It is now time that half the remaining trees-all the short-lived varieties new get along with 50 trees to the acro-the number which nine-tenths of east-ern horticulturists start with. Up to this time the trees that have been re-moved will have yisided 255,000 bush-els and netted in cash \$24,000, or \$4,760 per year profit. The advocates of wide planting say these 50 trees to the acro-will not be as fine in form or quite as fine in vigor as if no other frees had been planted among them. This may be true, but what figure will it cut when standing ogainst the unassailable logic of ninety-four. when standing against the unassallable logic of ninety-four thousand dollars? The object of a commercial ovenard is symmetrical growth of indl-

"If the foregoing figures are start-ling, it is because they are large and not because the processes by which they are reached are wild, unreasonable or improbable. It is with processes as well as results that we are dealing. For the productive variaties sdapted to this elimate the foregoing estimate of the product is not extravagant nor oven large. If the estimate is cut in half the income per year from the 20 acres, each year of the 30 since planted, would be \$1.000 would be \$4,000. What other business on earth holds

the same time as much opportunity for a high order of mental entertainment and physical effort. The orchardist must live a life of intelligence, vigi-lance, energy, but he will find it ever interesting and agreeable."

QUICK RETURNS FROM ORCHARD.

However flattering fruit growing prospects may appear to the Utah farmer, it is not wise to drop other lines of work and rush into orcharding without thought and consideration.



WELL CULTIVATED ORCHARD.

center of each square. This tree will

landscape scenery, but profit. We come now to the third and last

period. The remaining 50 trees to the nero ought to live ten years (yes, twenty) longer, and produce an aver-age of 25 bushels to the tree per year,

for 10 years as follows: Trees, 1,000, 250 bu, each in 10 years,

I vidual trees nor yet the varied beauty | Unless you are willing to industriously follow up every detail of the business and care for your orchard, giving it your first consideration and best care, all the time, do not begin the under-taking; leave it for some one else to follow. But if you do make up your mind to go into the intensive culture of the soil, study up the situation thoroughly. Determine what line of work you and your farm are best adapted for, whether for truck growing, or berry or large fruit growing. If fruit growing, learn the varieties best adapted to the soil and environment of the farm and then grow those varieties in their greatest perfection. If you are or three variaties. In fact it would fa-cilitate sales and increase the value of the fruit crop if an entire township or county were to specialize on two or these variaties. three varieties.

The same suggestion holds good in respect to peaches, pears, grapes and other fruits, the fewer varieties the better, if first class and grown to their greatest perfection. JOS. H. PARRY, Ex-Secretary State Board of Horticulture.



UTAH COUNTY STRAWBERRY PATCH.

It a day when by a change of employt without working any hurder hours he could get \$10 a day. ill concede the unwisdom of tab farmer directing his energies growing of cheap crops, using puable land and more valuable grow them, when under in uiture the same land could be produce crops twenty times

GROWING ORCHARD FRUITS.

Those who are located too remote from the larger cities and mining towns, and too far away from the rallroad to profitably ship garden truck and small fruits, can grow the larger fruits, apples, peaches, pears and plums, and realize even greater returns than from the small fruits. Returns of \$800

and praining signed proving treatly times is developing so rapitly in the senson produced at the rate of 15,00 and more per acre.
and praining is developing so rapitly of arain and hay revensury to this senson produced at the rate of 15,00 and more per acre.
and praining is developing so rapitly of arain and hay revensury to this senson produced at the rate of 15,00 and more per acre.
and praining is developing so rapitly of arain and hay revensury to this senson produced at the rate of 15,00 and more per acre.
and proving the senson produced at the rate of 15,00 and more per acre.
and proving the senson produced at the rate of 15,00 and more per acre.
and proving the senson produced at the rate of 15,00 and more per acre.
and proving the senson produced at the rate of 15,00 and more per acre.
and proving the senson produced at the rate of 15,00 and more per acre.
and proving the senson produced at the rate of the senson p

hibitions. This year the crop was very light, owing to the late spring frosts, but the fruit brought returns of about \$1,500, and next year, barring frosts, should net the owner \$3,000. That he might take hold of a larger fruit prop-osition. Mr. Kraack sold his orchard near Sandy, which, by his industry, he wrested from the barren sand dunes, for a consideration of \$8,500. During the time Mr. Kraack has occupied his holding near Sandy he has built him-self a fibe residence, a commodions packing house, and a large stone poul-try house, constructing them himself, hibitions. This year the crop was very

Great Possibilities of Arid Farming Emphatically Demonstrated in Utah.

interest to Utah farmers at just this time than the possi-

billities of grid farming. Exreport that "arid farming" is the er name for it-not dry farm--since it is only a principle of luting another means for irrim. Ordinary Irrigation turns water on in streams from gravity this or from pumps.

Arid farming makes the land a nattal reservoir to absorb the water ch falls as rain and anow, instead letting it run off of a hard, unvbilive surface, or later be dried ut through the little canal ducis that m a hard surface. letting out the

tura from beneath. get the water into the land the

farmer calls for it to be plowed he full, and thus open itself to tk up the winter vains. Then he a for it to be harrowed in the a and all through the summer the grain, fail planted, is well that there shall always be a soll cont over the land. This ily sails it to evaporation, and oms of Utah's most arid deserts. the soil has been rolled into soft by the writer, in August, when ed soil all around it at the depth was dry and powdery. BIRTH OF ARID FARMING.

preaching of the gaspel of "demption through arid farm-San with George L. Farrall. John A. Widison, the one "s among farmers, the other the students of the Agriculliege of which he now has the president.

h portion of the state, the in this direction has contered mue pioneer, Mr. Farrell d this post in Cache valley, dione in Dog valley, J., W. on the Lavan ridge, Dan Hau-

ANOTHER THIS YEAR.

-

One new cannery was built this year.

The name of the still farmer are only the name of the states to "New" of the states to "

prove to be a banner one in this great industry. It is estimated that more than

about acres of tomated that more than 2,500 acres of tomatees alone were planted for the present yaar. This yield will be approximately ten tons to the acres. The factories in Ogden ofly this year peid fill per ton to the farmers. These operating in the com-try districts, paid the farmers \$16 per ton.

During the busy season each factory imployes shout 100 persons but this number is at work only during the rush. The average payroll for the year for all the factories is setimated at

\$150,000.

corn, alfalfa, and even some potatoes." He continues by reporting that "a few bushels of fine white potatoes have been exhibited and the grower claims a grop at the rate of over 160 bushels to the acre and that he has sold all he raised at the rate of \$1 per bushel. A June frost did some dumage in Levan and the valley below it, but with this exception, the wheat grop this year was better than ever. "The yields," to quote MF. Paxman again, "have been from 10 to over 50 bushels to the acro.

to quote Mr. Paximan again, "have been from 10 to over 50 bushels to the acro. Bishop Thylor of Levan, who leads in the yield, has produced over 51 bushels per acre from a nice tract of land." Of next season Mr. Paxman declares that "a great amount of energy has been put forth preparing for it. There have been four stam plows bought, al-go a combination harvester and thresh-or, outting and threshing 60 to 100 acres a day. A big now threshing rig has been at work for 90 days threshing about 100,000 bushels of wheat during the season. Much interest is being man-ifered in the dry lands, and every dwner is operating just as fast as facili-ties allow. Experiences show that dry hude tay better the terms. if seried in the dry lands, and every investion is operating just as fast as fadil-tics allow. Experiences show that dry and her this reason the dry lands have increased in value to more than double there are allow within the last year, increased in value to more than double there is a set of the last year, increased in value to more than double there is a set of the last year, increased in value to more than double there is a set of the last year, increased in value to more than double there is a set of the set of the set of the day is the set of the is an end of the there is a set of the last when the the day is not the distant when the the day is not the distant when the the day is not the distant when the the day is the trained the set of the the day is the trained the set of the the day is the father wealth of the set whill be set is unlead that the is the day is the importance of this industry, and give it a comprehension industry, and give it a comprehension industry, and give it a comprehension of the possibilities of the next far years, as a result of the next far years, as a result of the next far

Utah Canning Factories Turn Out 655,000 Cases of Prime Home Products. county. According to reliable inform-ation, they have all done a thriving business during the canning season work of putting up the letters. The The canned the factories.

NE of the many Utah industries,] . O one that has not received a great deal of attention except from those directly associated

with it, but one nevertheless of great importance to the promoters, the farmer, the merchant and the family man, is the canning industry.

A few years ago Utah products, such as tomatoes, beans, peas and fruit, products ranking with the best in the country, were shipped out of the state for canning. Then they were shipped back to the wholesalers, jobbers and retail dealers and each had to make a profit in the handling of the products. This necessarily entailed considerable expanse, which was reduced when homa canneries were constructed and put into operation.

PIONEER FACTORIES.

The idea of establishing a Utah cannery was thought of 15 or 10 years ago, and two were built and put into operation at about the same time. One was Sovier county, Israel Bennion at Wood's Cross and the other at Og-

longer. The factories have had but little trouble in getting material to work upon, and the output has increased ateadily each year. This year it will be much larger than usual, and there have market for every can turned It is the Clearfield Canning Co, factory in Davis county. If was completed at a cost of about \$20,000, and is now in operation. Some of the factories han-die practically nothing but tomatoes. is a ready market for every can turned

fruit in addition to tomatoes. The work of putting up the latter lasts on-ly about two months in the year, but

The connectes in and about Ogden employ on an average of 55 persons, and the same may be said to apply to the other institutions. The daily avroll of all the factories during the busy season is more than \$1,500. Of course the number of amployes and the amount said ly about two months in the scason for other products is much

and the amount paid out for labor skilled and otherwise, varies accord-ing to the amount of business dona But, as before stated, this year will

THE FREEZING OF WELLS.

States the freezing of wells and pumps causes much trouble, and the greateat difficulty is experienced in keeping CAVernous. est difficulty is experienced in keeping some wells open for use during the winter. Strangely enough, the shal-low, open wells give less trouble t at the deeper, drilled or double-tubed driven wells, in which the inner or pump tube is carried below the outer casing. The determination of the cause of the freezing and of means for its prevention is of so great practical importance that a study of the sub-ject has been made by one of the geologists of the United States geo-logical survey. winter.

Throughtout many of the Northern | nesota, North Dakota, and Nebraska, on the other hand, large numbers of wells penetrating porous deposits or In Wisconsin and Michigan

winter. In Wisconsin and Michigan fressing, though less common occa-sionally occurs, and also in Iowa, Missouri, Kentucky, and Indiana. A study of the phenomena as a whole shows that they are closely connected with barometric changes. Freezing, indraft, low-water level, small discharge, and closer water are all characteristic of clear weather and high barometer; the wing of the well and melting of snow about the mouth, strong discharge, and dis-colored waters always accompany low barometer. The direct cause of the

Recipient wells, where air obtains secress through the soil and at the junction of curb and cover, a commit cover should be tightly fitted to the curb, and the curb liself should be could with commit for some distance being the sufference.

coached with comment for some distances below the surfaces. In drilled, or double tubed driven wells the current of cold air drawn is at periods of high barometer between the outer and inner casing near the surface and passing out is a porous bed at the bottom above the water level will cause franzing if the water is pumped so that I stands in the inner tube above the lower end of the outer casing and a long-continued wirrent of such cold air may cause freeping of the ground water about and in the well tube. For this con-dition it is suggested that the space between the current of the outer near the surface to packed with some insertible material. A filling of caa h Suyler county. Erreit Beanion Thome, Mr. Farreit began it 40 as and today he wouldn't beside in a presty strong endorsement. The besi strict is not will to the prest in the business, and year after the besi strict is not will be state. The strict is a prest will be taken, and plow. There are 12 fantories in operator is an addicert to Ogden. In Davis is a strict is at a spect prest in the business, and two in Utah the state of the only about one year. There are 12 fantories in operator is a spect prest of the only about one year. There are 12 fantories in operator is a spect prest in the origination in the origin the origination in th

of iomatoes were put up and every case will be easily disposed of, the price colog \$1.80 per case. Then there were 109,000 cases of peak 25,000 mases of beams and 20,000 cuses of the various kinds of fruits. For these products the factories will have paid out about \$250,000. This makes the dot about the factories will have paid out about \$250,000. This makes the output of to-matoss \$60,000 and the other products 135,000, making a total of \$55,000 cases of home products. The construction of other engaged on or two prosents and it will not be suprising if the end of part marks one or two more in of next year sees one or two more in this state. The business is profitable and is growing each year. When the matter of freight, and of handling the products several times, the shipping east and then back again, are taken into consideration. U one scadue to

consideration, it can readily be seen what a great saving of time, labor and expense is made, and shows the great importance to this industry.

OUTFUT GREATER THAN EVER. According to the best information obtainable the output this year is great-er than ever before. Those in a position to know state that fully \$60,000 cases