

## Palm Farming Business Plan

### Executive Summary:

Palm Farming Partnership was established in 1992 by Owen and Karen Palm. In 2002, their son Bryan became part of the partnership and began to manage and grow the day-to-day operations. Today, the partnership has grown from its original farm and ranch of 230 acres of irrigated crop land and 640 acres of grass to owning over 1,400 cropland acres and over 15,000 acres of grass.

Over the past 10 years, Palm Farming Partnership has significantly increased the beef cattle component of their operation. Their commercial mother cow herd is currently about 850 head. All their calves, plus about another 500 head of locally sourced calves, are grown to about 950 pounds in the partnership's own feedlot north of Mitchell, NE and then transferred to a local commercial feedlot for finishing.

The farming portion of their operation focuses primarily on the production of feed for their livestock operation, but they also raise sugar beets as a cash crop which is usually followed by winter wheat to maintain good crop rotation. Technology has always been an important part of the farming operation. Cellular-based RTK Guidance was adopted in the early 2000's and Palm Farming was an early adopter of variable rate (VR) seeding and fertilizing. GPS-based grid sampling has been utilized for several years to optimize nutrient management. Each spring, soil moisture probes are deployed to optimize irrigation water management.

Palm Farming Partnership's long-term focus will continue to be on growing both the quality and quantity of their commercial mother cow herd. To closely manage the genetic potential of the cow herd, 25 registered angus cows were purchased in 2021 which are then artificially inseminated each year, with male-sexed semen, to produce registered bulls tailored to propagate the desired genetics for herd performance.

Palm Farming Partnership currently grazes their cows during the summer months on 4 ranches in Sioux and Box Butte County. These ranches are located 5, 25, 35 and 65 miles from their headquarters. As they grow the herd, additional pasture will need to be secured.

One of the biggest pain points the partnership faces is the daily ordeal of checking water tank levels at each of these remote sites. There is satellite-based tank monitoring available today, but the upfront cost to utilize this technology are prohibitive. Similar technology that is less expensive, but cellular-based, is not an option due to connectivity.

### Project Proposal:

To solve these pain points and to be able to continue to meet the goals of the partnership, Palm Farming would like to use satellite connected technologies to remotely monitor water tank levels.

### Timeline for project implementation

As soon as the grant money is received the devices will be purchased and installed immediately. The

devices run on battery power so no further infrastructure is required and monitoring is done through the mobile app supplied by the provider. Therefore, this will provide immediate benefit to the partnership.

#### Sustainability

This solution will provide the needed benefits for Palm Farming Partnership to continue to grow its operations for the next decade or more. The devices are mobile and can be moved very easily to new locations as the herd is transferred and the partnership continues to grow its operation. The devices themselves have a 2 year warranty. To extend the life of the devices, a housing device will be created around the mounting post to protect the device from snow, wind, hail, or any other weather events to ensure the value can be realized for more than five years.

#### Project Budget

The partnership needs 20 water tank monitoring systems for all existing herds. The cost for the units are as follows:

Cost per unit: \$499 Year 1 + \$99/Years 2-5

Number of Units Required: 20

Total Request \$17,900

#### Financial Projections

These devices will save daily trips to each water tank during the 180 day grazing period from April 15<sup>th</sup> through October 15<sup>th</sup>. These trips are 250 miles each. That totals to 46,800 miles per year. At the IRS mileage rate of \$0.655 per mile the total travel cost is \$30,654. The cost for the hired help to check the water tanks is \$13,500 (5 hrs X \$15/hr X 180 days).

The ROI for this project is 250%.