
make it grow
LOW PRESSURE MEANS MORE PROFIT
IRRIGATION, THE UKRANIAN WAY
DR. KHALED SHALABI
AMACO COMPANY

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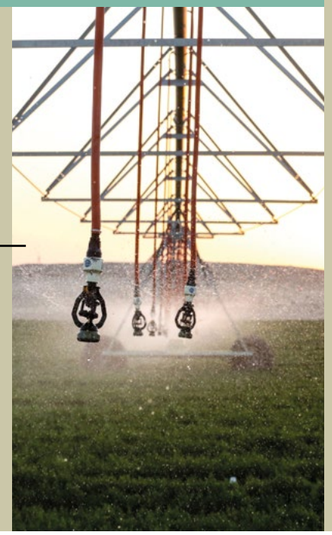
AROUND THE WORLD

WE ARE ON EVERY CONTINENT AND IN MORE THAN 80 COUNTRIES, SUPPORTING SMALL FARMERS AND LARGE AGRIFOOD COMPANIES.



make it grow

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AISco

A WORD FROM CEO

JOSÉ FERNANDO TOMÁS

It is my pleasure to present to you the second issue of our magazine MAKE IT GROW. The comments we received from you after reading the first one were very positive, so our team worked very hard to continue exceeding your expectations, sharing with you our new ideas, our latest products, informing you about industry trends and what are we doing to help you to produce more, and most importantly, using your resources with more efficiency. All of our efforts are made to support and help our farmers wherever they are.

And that is exactly what this article is about; how important farmers are, how important farming is. In the first magazine, I was sharing with you ideas about the importance of developing a Food Sufficiency Program in every country to guarantee enough production to feed the nine billion people that will live on Earth by the year 2050. Much of this food production will be grown under very difficult conditions: volatile climate conditions, limited surface of arable land, and managing a key resource for life as water is.

Under such a scenario and challenge, many changes should be expected in the agricultural industry. First of all, many countries are experiencing how their rural population is moving to the main cities and industrial areas. Our Governments should analyze why this is happening, but I believe the answer is very easy: farming economic return does not correspond with the effort farmers do nor with the risks involved in this economic activity. Farming demands an important and often large investment in fixed assets (land, irrigation systems, farm equipment, storage infrastructure) and working capital (labor, seeds, fertilizers, chemicals, energy cost). All this investment is exposed, during the time it takes for the crop to grow, to all climate risks: heavy rain, drought, hail, storms, hurricanes... And exposed to any vegetal illness and the attack of any kind of plagues... If we put together all these facts (high investment and high risk), add the personal effort farmers do on raising their crops, and compare it with the return farmers get, we would all agree that their decision to move to the cities, looking for a more comfortable life and a more profitable investment is reasonable.

But is this decision positive for the world and our challenges? What would be the consequences if our Governments do not intervene and change this trend? In many cases, our politicians are more concerned with guaranteeing low prices on their citizens' food needs to secure their vote rather than protecting their farmers' investment return. And doing so year after year, Governments make it very difficult for farmers to survive. Very few investors decide to enter in this industry, as any other economic activity requires less capital, has lower risk, and gives higher returns.

This situation does not happen everywhere. Some countries that know about the importance of having a strong agricultural industry, protect their farmers by establishing policies that reduces their risks, financing their investments with subsidies, and controlling the final prices with different types of controls. This is mainly happening in the United States, the European Union and some South American countries. And even in these cases, we continue seeing that the children of traditional farming families, once they have concluded their education, rarely return to the family business but continue their professional careers in other industries.

Sooner or later this trend will change, our Governments will not be able to guarantee the Food Sufficiency based on the agricultural surplus of other countries, and will have to develop their local production. We do not have much time left, as 2050 is there waiting for us with a world global population of 9 billion people to feed.

By that time, we will need many farmers. And AISCo will always be supporting them, providing them our best advice through our Project Engineering department, supporting their execution with our Project Managers, supplying the best Farm and Irrigation Equipment, guaranteeing the best installation and maintenance of their machinery, directly or through our Dealers, Companies and Partners. And always meeting our AISCo vision: providing our farmers a... ***solution for life.***

IRRIGATION, THE UKRANIAN WAY.

How Western Irrigation Systems win Ukrainian agrarians over

Each leading agrarian knows that to obtain strong and stable crops and consequently, high profits, one of the important considerations throughout the cultivation of agricultural crops is the use of irrigation systems. The issue is just as acute for Ukraine. This country pays a great deal of attention to irrigation while a considerable part of the Ukrainian business lies within agriculture.

The AMACO company, which is a structural unit of the great international business group known as Alkhorayef, actively implements WESTERN irrigation systems among Ukrainian agricultural producers. This company is one of the biggest dealers in Ukraine, selling agricultural, construction equipment and commercial transport. The distribution network of the company is represented in 14 regions in Ukraine. The key lines of business are sales of spare parts for foreign agricultural equipment, aftersales warranty and post-warranty maintenance, sales of equipment and irrigation machines.

Irrigation is particularly critical for southern regions of Ukraine, which is related to the climate peculiarities in the south. Everything contributes to high quality cultivation of crops – fertile Ukrainian black soils, water supply, and hard-working agrarians.

The leading agricultural enterprise TH "Prodexim" Ltd. is no exception. It is part of "Prodexim" corporation of agricultural companies and is one of the most successful manufacturers of the sphere in Kherson Region. The production plant of the enterprise is located in the village Zaozerne in the Kakhovka District, where WESTERN irrigation machines operate.

TH "Prodexim" Ltd. has been successfully working in the Ukrainian market since 2000 and is now one of the biggest manufacturers and exporters of agricultural products (soy, corn, sunflower etc.) in the Kherson Region. The enterprise steadily enlarges its geography and scope of production to the extent of its development.

"AMACO distribution network is represented in 14 regions in Ukraine"

One of the major activities of the company involves growing legumes, cereals and oil cultures in Kherson Devin on more than 4,200 ha including 3,200 ha of irrigated land. These agricultural products are supplied both to internal and export markets.

The whole region accounts for 426 thousand ha of irrigated soil which constitutes 21.6% of total agricultural land and a guaranteed insurance fund of food and resource provision of the region in drought years. ***The basis of irrigation agriculture is ensured by major water supply systems,*** among which the biggest are Kahovska, Krasnoznamyanska, Inguletska, Northern Crimea main canal as well as other systems (an irrigation system is a system of functionally connected hydro technical constructions, machines and mechanisms, reservoirs, forestations, communication and electricity lines, roadways and other constructions necessary for providing and maintaining optimal water, air, nutrition and warmth regimes for soils to obtain stable high crops of agricultures by inducing soil fertility , effective usage of agricultural and meliorating equipment – Ed.) ***The matter of irrigation in the South of Ukraine and its practical implementation was the focus of agricultural experts and scientists.***

Every person knows that to get high-quality and stable yields it is necessary to maintain a balance of warmth, moisture and air of the soil and temperature and moisture balance of the air during the whole period of vegetation of crops. Now the experts of the company have positive experience in cultivating agricultural crops in zones which are agriculturally risky in terms of irrigation, where such highly profitable crops like corn and soy are not grown on rainfed land.

WHAT FARMERS IN KHERSON REGION HAVE TO SAY

The AMAKO team talked to the leading experts of TH “Prodexim” Ltd., namely Chief Hydrotechnician Volodymyr Malyshenko and Chief Agronomist Igor Zik, and learned which crops are grown, which irrigation mode is used and which irrigation systems are used in the farming. They have also found out how effective irrigation is and what the payback term for the irrigation systems is in practice.

- Which results do you achieve due to irrigation in general? And when exactly did the company “Prodexim” start to use irrigation in their fields?

We started installing modern irrigation systems two years ago. Before that we used universal sprinkling machines “Fregat” which moved due to water pressure in the system. Now we are in village Zaozerne, which has 1,045 ha allotted for irrigation, where previously 19 USM “Fregat” irrigation machines were used.

Today, in Kherson Region, there are Olhivska, Zaozernivska, and Volodymyr-Iliinska irrigation areas, where 19, 15 and 13 “Fregat” machines work respectively. That is, the total area of irrigation is more than 3,200 hectares. Eventually, when we saw the opportunity to expand irrigation areas and USM “Fregat” machines have become outdated after 30 years of operation and certainly started to go down, we decided to replace them with modern irrigation equipment to improve energy efficiency and to increase the irrigated areas. For two years in a row, we have been replacing the old sprinklers with the new irrigating machines. The first circular WESTERN machines (521 and 700 m) were supplied by AMAKO.

- Did the watering quality improve when you began using the new irrigating machines? Which effect do you achieve by using modern irrigation systems on your fields?

Thanks to these machines we achieve maximum uniformity of irrigation, and consequently uniformly thick sprouting and ideal crops. Compared to the previous irrigation machines, we achieve higher efficiency of the irrigation process because WESTERN machines have a high rate of stable operation and a much lower index of water vaporization while watering due to modern nozzles and their optimal location.

- As far as we know, besides irrigation lands you also have rainfed lands (a kind of farming, where the harvesting lands are not watered, but are waiting for the rains - Ed.). Which cultures do you grow on irrigated and which on rainfed lands?

Soy, corn, sunflower are only grown on irrigated lands. We grow wheat, barley, and rapeseed on rainfed lands. The latter was also sown on irrigated lands though.

- What is the difference in the productivity of your farm then if you grow the same cultures on rainfed land and when you use the irrigation systems?

Rapeseed is mainly grown on fallow land. Then the yield is not much different from the one you get on irrigated lands. If we use irrigation, we get 30 dt per ha, while on fallow lands we can easily get 25 dt per ha. The same also applies to wheat: both on fallow and irrigated lands we get 55-60 dt per 1 ha. If we grow wheat without watering after predecessors, we get the result of 25-30 dt per ha. Corn on rainfed land in the southern region gives the yield of 0 to 40 dt per ha, while irrigation ensure an average yield of 100-120 dt per ha. When growing sunflower on irrigated lands we obtain an annual yield of plus 15 dt per ha compared to rainfed land yield. As you can see, the difference is significant. You can imagine how much more the annual gross income of the enterprise is when growing agricultural crops on irrigated lands. The numbers are stunning, but the main advantage of irrigation in the South of Ukraine is the reduction of risks and the guarantee of stable yields.

- What about soy? How does it yield on irrigation?

On irrigated lands we have an average of 4 tons per 1 ha; we don’t even sow it on rainfed fields. It doesn’t make sense, because this culture does not withstand high temperatures of Kherson Region and the lack of natural moisture in the soil. But since soy is a highly profitable culture, it’s very lucrative to grow on irrigation.

What are the advantages of modern irrigation systems over sprinkling machines (USM “Fregat”)?

Today, 95% of all farms prefer irrigation machines of circular type. The front type is only used in places where stationary circular systems cannot be installed. The maintenance of stationary systems requires a minimal number of people compared to the front systems, because each of them needs the permanent presence of a human. In our farm, irrigated lands divided into sections of 10-15 machines, which are served by 1-2 persons. The key requirement is to have the appropriate pressure and flow rate of water at the discharge outlet in the water supply system. In this case, WESTERN systems have low operating pressure. For example, a system of 420 m in length with a water flow rate of 60 l/s has a working pressure of 2.6 bar compared to USM “Fregat”, which has the same length and water flow. The minimum starting pressure for the system varies from 4.5 bars and more if low pressure cylinders were installed whereas high pressure cylinders require minimal pressure at the entrance to the USM “Fregat” equal to 6 bars. By reducing the operating pressure of the system we can increase the volume of water in the irrigated area while using the same pumps which in its turn, allows us to increase the area of irrigated land by 10-20% and maintain the same level of water supply to each hectare of land. And this is what we aim for – to improve the efficiency of the system and increase the irrigated area.

- Do you plan to buy additional irrigation systems, expand the area of irrigation in the nearest future?

Yes, of course. We are currently holding a tender for the purchase of 14 irrigation machines, and your company also takes part in it. In 2016/2017 we plan to purchase two front 12 circular irrigation systems. And if everything is fine, in a year we are planning to completely replace the outdated sprinkling machines with the new modern irrigation systems at the Olhivka fields.

- If you compare WESTERN irrigating machine to other manufacturers, which you also use at the enterprise, what conclusions can you make? Which ones do you prefer and why?

We've already been using WESTERN irrigation systems for 2 years. Last year, we also installed Valley machines for comparison but haven't tested them to fullest yet. To make an objective assessment we need more time, but in two years we were able to make sure that WESTERN systems are reliable, sustainable in difficult conditions and simple to operate. We are completely satisfied with them.

-What basic requirements for irrigation systems have you named to the participants of the tender? What criteria do you use when choosing a system and which the manufacturer of irrigation equipment do you trust most?

Of course the main criterion is the reliability and durability of the machine. We compare them to those we already have, and how they have proved themselves. The second criterion is the maintenance of the equipment. It's very important for us, how developed the service of supplying company is and how promptly service engineers respond to calls. And the third criterion is the cost of the irrigation equipment.

- Could you recommend WESTERN irrigation systems to other farmers and the owners of agricultural enterprises that grow crops?

When it comes to WESTERN, certainly. Of course I recommend them. I am totally satisfied with this machine and I hope that next year we'll choose WESTERN irrigation systems in the end. Because we already have 2 years of experience with these machines and are well informed of their features and reliability.

- And how's water supply in Kherson Region? Have you ever faced any difficulties related to lack of water or some unfavourable occasions?

As for the water supply, there are generally no problems. Sometimes there are power surges, and it affects the operation of the irrigation machines. Imagine that the length of this canal reaches about 130 km, it originates from Kakhovka Reservoir and supplies water to Kherson and Zaporizhzhya Region where 226.5 thousand ha can be irrigated on schedule, such irrigation system as Kahovska is one of the largest in the world and the largest in Europe. After its full development it should ensure the irrigation of 780 000 ha of land between the Northern Crimea Canal and Molochnyi Estuary in Zaporizhzhya Region.
The source of the irrigation for the farmland system is the Kakhovka Reservoir. To supply water from it, the Kakhovsky Main Canal houses a pumping station designed to supply 530 m3/s of water to the height of 25 m was built. The system is built with a closed inter-farm network, using sprinkling equipment, automated water distribution and watering, design solutions that ensure project efficiency and land use ratios. All farmlands of Kakhovska irrigation system are irrigated using machine water lift, mostly by a two-step scheme: the first lift is done through the main pumping station, the second uses farm pumping stations which take water from the main channel and the distributors and simultaneously create pressure required for the operation of sprinkling machines in the closed irrigation network.

The main pumping station of Kahovska irrigation system provides water to other irrigation systems: Pryazovska, Sirogozka, Northern Crimea Canal, Henicheska, Kalanchatska etc.
The operation of Kahovska irrigation system is based on the principles of automatic regulation system (ARS) using local automation at the enterprise network, multistage regulation of reaches, electro and hydro automatic as well as telemechanic means which ensure full control of the work, and therefore, management of the system through computers.
Kahovska irrigation system is unique and has already been providing most of the South of Ukraine with quality irrigation water for almost 40 years.

"Irrigation for agrarians is a guarantee of stability and good harvests."

Summing up the above information, we can affirm that the agricultural business in Ukraine is at high levels, and irrigation is an important part of the process of crop cultivation. Ukrainian fields are irrigated by the systems of European class no worse than those in other developed countries, and sometimes even better.

Ukraine has something to show and be proud of. No wonder that there is a saying "Ukraine is an agrarian state", which is based on the fact that agriculture plays an important role in the economy of the state. Irrigation for agrarians is a guarantee of stability and good harvests.

AMAKO
AIA GROUP OF COMPANIES

For more information, please visit
http://www.amacoint.com

ARTICLE

Low pressure means more profit

Khaled Shalabi
(Ph.D & MBA)
(Global Development & Marketing Director - Alkhorayef Industries Co.)

Proceeding of our always commitment towards our global customers in providing the most appropriate solutions for their agricultural projects to maximize their return on investment, considering their project's conditions such as climatic conditions, soil type, water sources and availability.

This case study started in a country where the fuel price is considered to be one of the most critical elements when estimating the return on investment (ROI) of a new agricultural project.

The project area was about 6,000 hectares (14,280 feddan) and the diesel price at that time was about $0.53 per liter.

The main target of the investor was implementing center pivot irrigation systems that irrigate the targeted area with a very low operating pressure required at the pivot point to minimize the annual fuel cost and maximize the annual profit.

Once the target was defined, studying the climatic conditions of the project to define the peak consumptive use of the crop during the year was the first required step in order to define the required flow to irrigate the 60 hectares. Then the selection of the proper configuration which gives the lowest operating pressure at the pivot point of each of the center pivot irrigation system and consequently gives the lowest annual operating cost based on the information available in the below table.

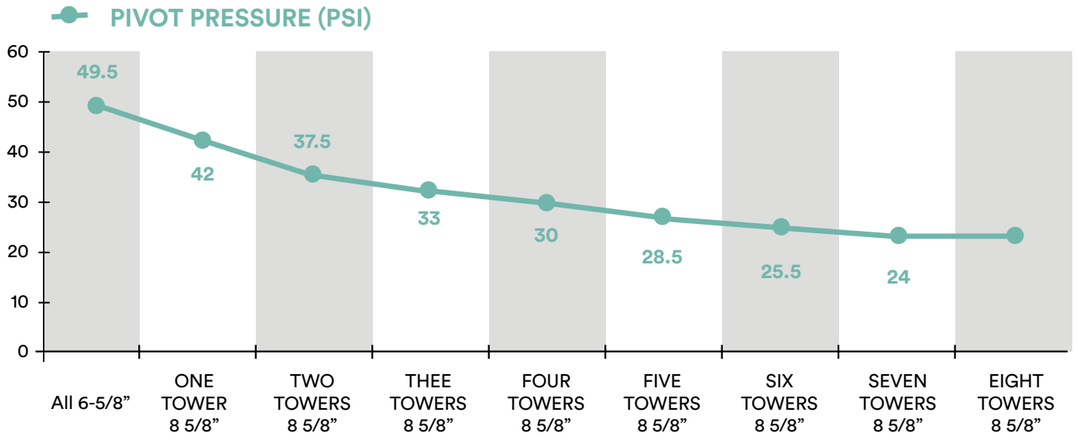
Irrigated Area, Ha	60
Crop Type	Alfalfa
Flow, GPM	1500
Maximun Water Consumption/day	14
Water Quality, PPM	1500
Average fuel Consumption L/hr/hp	0.186
Yearly average running hrs	5000
Fuel Cost SR/L	$0.53

In order to irrigate 60 hectares (143 feddan) – 438m radius - with one center pivot irrigation system, center pivot irrigation system has been configured to have 8 spans, all of them 6-5/8" pipe size, with different lengths to cover the required pivot radius of 438m to irrigate 60 hectares of land.

All spans were equipped with low pressure sprinklers and 10 psi pressure regulators. The pressure at the end of the pivot is adjusted at 15psi (1 bar), and friction losses were calculated to get the required operating pressure at the pivot point which was about 50 psi (3.2 bar) in this first scenario which is considered as the initial comparison index.

In order to simulate the effect of using 8-5/8" spans on the required operating pressure at the pivot point, 8-5/8" span has been inserted in place of the first 6-5/8" span and recalculated the required pivot point pressure. As a result of that, the required operating pressure was reduced to 42 psi (2.89 bar).

This exercise is repeated starting from the first span up to the seventh one to graphically display the trend of the operating pressure in each scenario. The following graph reveals the effect of using 8-5/8" pipe size spans on the required operating pressure when using seven spans of 8-5/8" instead of 6-5/8" pipe.

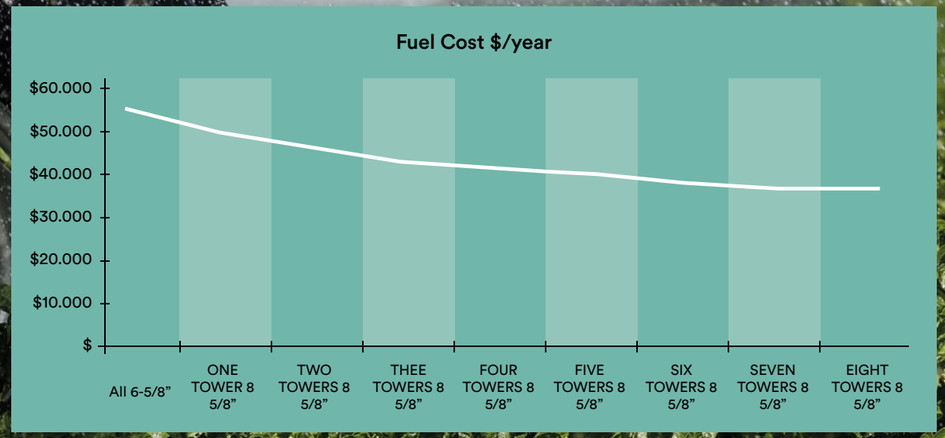


As a result of inserting 8-5/8” spans in place of the 6-5/8” spans, the friction losses along the lateral line in the spans gets down dramatically and consequently reduced the required operating pressure at the pivot point to the minimum level and reached 24 psi (1.65 bar). That shows the positive impact of using 8-5/8” spans instead of 6-5/8”, in getting the required operating pressure down at the pivot point.

The following table and graph reveals in detail the hydraulic calculations of each scenario and the impact of using seven spans of 8-5/8” pipe on the operating pressure at the pivot point.

SYSTEM SPECS	All 6-5/8”	ONE TOWER 8 5/8”	TWO TOWERS 8 5/8”	THREE TOWERS 8 5/8”	FOUR TOWERS 8 5/8”	FIVE TOWERS 8 5/8”	SIX TOWERS 8 5/8”	SEVEN TOWERS 8 5/8”	EIGHT TOWERS 8 5/8”
PIVOT PRESSURE (psi)	49.5	42.0	37.5	33.0	30.0	28.5	25.5	24	24
MAINLINE 10” (500M) FRICTION LOSSES	38								
PUMP REQUIRED PRESSURE (psi)	87.5	80.0	75.5	71.0	68.0	66.5	63.5	62	62
REQUIRED HORSE POWER AT PUMP	102.19	3.38	8.18	2.87	9.37	6.67	4.17	2.37	2.3
Aver. Fuel Consumption L/H	19.0	17.4	16.4	15.4	14.8	14.4	13.8	13.5	13.5
Fuel Consumption Cost in $/year	$50,529	$46,256	$43,654	$41,052	$39,317	$38,450	$36,715	$35,848	$35,848
Fuel Consumption Cost Variance	Index base	-8.57%	-13.71%	-18.86%	-22.29%	-24.00%	-27.34%	-29.14%	-29.14%

“As a result of this pressure reduction, 29% of the fuel cost is saved annually for each irrigation system”.



CORNER SYSTEM

What is a Corner system?

For the readers who have never heard of a Corner, it is a Pivot with a flexible arm mounted on its end that can be extended automatically in order to reach the corners of the field where a Pivot alone is unable to irrigate. The connection of the Corner arm to the Pivot is made by a flexible joint. It is important to point out that the uniformity of the irrigation application will be high thanks to a system of valves that open and close automatically as the Corner extends and retracts. It is equally important to note the ability to operate safely on slopes; the rolling base is wider and provides more stability for applications in rough terrain. The entire system is managed by control panels that allow the user to custom configure many of the system's operating characteristics and monitor operating conditions using a user friendly Human Machine Interface.

How does a Corner operate?

When the Pivot begins to pass by a corner, the arm begins to unfold and extend into the corner to irrigate additional ground. During this extension, the sprinkler spacing and runtime durations are adjusted by the control panel as needed to maintain an even application of water under the system. This creates a uniform application depth regardless of the angle and speed of the Corner. The End Gun can be controlled based on the heading of the Pivot and independent of Corner angle, giving the user more control over its operation. As the Pivot moves past the corner of the field, the Corner arm automatically begins to tuck back in behind the Pivot, turning sprinklers off and reducing the application rate during retraction to prevent overwatering.

"The Corner extends and retracts, automatically adjusting its water application rate, without any input from the user".

In terms of management, the Pivot is still managed from the panel installed at the Pivot Point. The speed and position of the Corner system is controlled without any user input or adjustment of settings once installed, allowing for simple operation and no additional complications during startup.

The Corner extends and retracts, automatically adjusting its water application rate, without any input from the user.

What is the difference between a Corner and a Pivot?

Actually, the differences between a Corner and a Pivot are small in terms of features. Both apply water to the field using sprinklers spaced at predetermined distances in order to maintain uniformity during machine operation and both move around the field automatically when commanded to do so by the control panel mounted at the Pivot Point. The Corner arm folds and unfolds, automatically steering itself along its path as the sprinkler pack is leveraged to maintain uniformity. There are some additional differences in terms of installation but the user should not worry about them once the system is installed.

When is the installation of a Corner economically viable?

The decision to install a Corner is determined mainly by the size and value of the area of the plot not being irrigated by the Pivot alone. Its installation should be considered in plots where large areas of ground are not being irrigated by the Center Pivot alone, for instance, square or irregular plots. As an example, a perfect square plot of 25 hectares, irrigated by a Pivot with Corner will irrigate 5 more hectares. That is an increase of 20% of the total area of the field. Thanks to these machines, the previously unused ground under the Corner can be irrigated, thus obtaining an increase in the final harvest.

The farmer should consider the cost of leaving areas of the field unused, how much he/she has to spend to install and maintain other systems of supplemental irrigation for theses corners, and the time required to manage the combined irrigation. If the grower reflects on these issues, he/she would definitely choose the Western Corner before any other auxiliary system of irrigation.

CP600
CORNER SYSTEM

The CP600 Corner System utilizes the latest mechanized control technology to increase yields and ultimately, profits. Using variable frequency drives on the Corner Tower and End Tower, feedback from the unique flexible linear slide joint connector synchronizes the speed of the Corner span with the Pivot to provide continuous move operation as it squares the parcel. Unlike competing designs, the flexibility of the connection between the Pivot and the Corner prevents the buildup of stress in the Corner span as the system moves around the field.

As the Corner moves through the field, the monitoring and control system determines how much water is required during acceleration or deceleration based on speed feedback from the Variable Frequency Drives. As the system speeds up and slows down during extension and retraction, the control algorithm adjusts the water application automatically to control under and over watering. The addition of a unique "acceleration sprinkler pack" applies additional water as necessary during heavy acceleration into the Corners to prevent under watering and increase yields.

"An unique acceleration sprinkler pack applies additional water as necessary to prevent under watering and increase yields".

The Corner control system is comprised of industrial grade Programmable Logic Controllers and robust sensors to provide reliable operation and simple installation. The addition of a Human Machine Interface (HMI) on the Corner allows the user to view all the runtime data live, adjust Safeties, view sprinkler zoning information, and view fault logs to give you the most information and control possible to keep your system running reliably; a feature not offered by any of the competition.

A summary of the product features is as follows:

- Constant Move End Tower and Corner Span
- Variable Frequency Drive for Motor Control
- Industrial PLC Control with HMI
- Acceleration/Deceleration Sprinkler Package Optimizes Water Usage
- Buried Wire or GPS Guidance
- Unique Linear Slide Mechanism Couples the End Tower to the Corner Span
- 287.5' Maximum Span Length Including Overhang
- Inverter Duty Rated 1.75HP Drive Motors
- Heavy-Duty Drive Train is Corner Rated
- Wide Stance Wheel Base

UMC

LISTEN, INNOVATE, ADAPT.

Universal Motion Components (UMC), based in Costa Mesa, CA USA, provides products that help drive Alkhorayef center pivot irrigation systems across the globe. Our experienced team has worked closely with the Alkhorayef Group to develop innovative products for the areas of the globe that they service.

The Right Formula for Success

Over the past 4 decades, UMC has assembled a team of top engineers, quality assurance technicians, and production supervisors with decades of experience and an unparalleled track record of listening, innovating and adapting to changing irrigation practices. With center pivots in so many countries around the world, we're continually testing, optimizing and adapting our products to keep those center pivots running longer and stronger.

UMC Drive Train, purpose built for center pivots and lateral move irrigation systems

The UMC drivetrain is a system. Each component of that system is designed to work together as a system in balance. We do not believe in a one size fits all solution. As the largest manufacturer of center pivot drive train components that provides the widest variety of Gearboxes, Center Drive Gear Motors and Couplers, UMC has the exclusive advantage to provide our customers with the ideal solution for their unique needs.

UMC Center Drive Gear Motor (Powersaver) - Designed and Engineered in the USA

The UMC Powersaver offers the widest variety of gear ratios in the industry to meet the varying demands of water application rates. The UMC Powersaver is dual voltage and available in three phase and single phase power for applications around the world.
As part of the UMC balanced drivetrain system the Powersaver is designed for many years of trouble free operation.

Design

UMC saw the need for a more efficient electric motor and introduced the first Center Drive Gear Motor with a helical gear design, setting the standard for irrigation drivetrain over 30 years ago. This product has evolved into an efficient and reliable power transmission unit with models to fit all applications and it has become the standard method for powering center pivot irrigation systems.

Quality

All of UMC's Powersavers go through rigorous testing procedures and each finished unit is surge and high-pot tested prior to final assembly. Our motors are designed to meet UL, CSA, CCC, and CE requirements.

Key Features

- **Spray Guard:** designed to protect internal windings from moister when sprinkler nozzles are located below the motor. A feature only found on UMC Powersavers.
- **Input and Output Seals:** specially designed for longer life.
- **Finned Aluminum Stator Can:** for cooler operating temperature an extended motor life.
- **Oil fill port:** positioned to set correct oil level when unit is installed on the system.

For more information, please visit
www.umcproducts.com

UMC

AISco travelled around the world to meet its customers in Ukraine, Russia, Egypt, Italy and Sudan. This month AISco will be in the USA.

It was an eventful season in which AISco attended a number of international trade-shows, besides releasing some new products to make it easier for farmers to Make it Grow. AISco is always committed to its responsibility towards community and environment. Because of this commitment, we push the farmers to use clean energy sources like solar, and offer them solutions to keep their irrigation systems working for a longer time in order to sustain our resources and help provide solutions for life.

June

AMAKO, the WESTERN Ukrainian dealer, took part in the AGRO-EXPO (Kiev, Ukraine) which is one of the leading exhibitions for agriculture in Eastern Europe. The staff of AMAKO had the opportunity to meet their customers and growers, further building the commercial relationships.

September

AISco witnessed the 29th edition of SAHARA International Agricultural Exhibition for Africa and the Middle East which took place in Cairo, Egypt. During the four-day show, all the agricultural industry gathered in the Cairo International Conference Center in which AISco MENA was pleased to come and offer to the audience our state-of-the-art irrigation products.

October

AISco attended AGROSALON, which is the largest exhibition of agricultural machinery in the CIS and involves agricultural machinery manufacturers. The AISco EUROPE team along with the Russian dealers presented at it and were met with customers, growers and suppliers which visited the booth, exchanging opinions about agricultural perspectives and discussing the future of irrigation in the CIS countries.

November

was a busy month with interesting covered events; the first one was EIMA show - International Agricultural and Gardening Machinery Exhibition - settled in Bologna, Italy and, as usual, it was an unquestionably successful trade fair. Our second event was SIAFE (Sudan International Agriculture Business Forum & Exhibition); the premier event that brings together an unique and international mix of experts such as agriculture engineers, researchers, exhibitors and decision makers across the globe to exchange their knowledge, experience and research innovations to its agriculture summit.

ONE OF OUR TEAM

IGOR LOZOVOY

RUSSIAN TERRITORIAL MANAGER

Igor is our new territory manager responsible for the Russian market.

He has worked in Sales of Agricultural Machinery for 12 years and since 2011, he has worked in the field of irrigation.

Igor graduated from the South Russian State Technical University with a degree in hydrogeologist engineering.

As a student, he studied modern agriculture at a German farm.

Previously, he was working for a pivot manufacturer as a territory sales manager where he implemented dozens of successful projects in Russia. At AISco, Igor is responsible for dealer network development and key account projects.

"It is a great pleasure to work with such a professional and responsive team.

"I see Russia as one of the most important irrigation markets in the world. Farmers here are very ambitious and they request state-of-the-art equipment and technology. To meet the demand, our engineers at AISco constantly create and implement new products. We successfully satisfy the needs of the farmers and they are happy to work with us. Constantly growing our dealer network is making AISco one of the major pivot manufacturers in Russia. I enjoy my work at AISco. It is a great pleasure to work with such a professional and responsive team."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