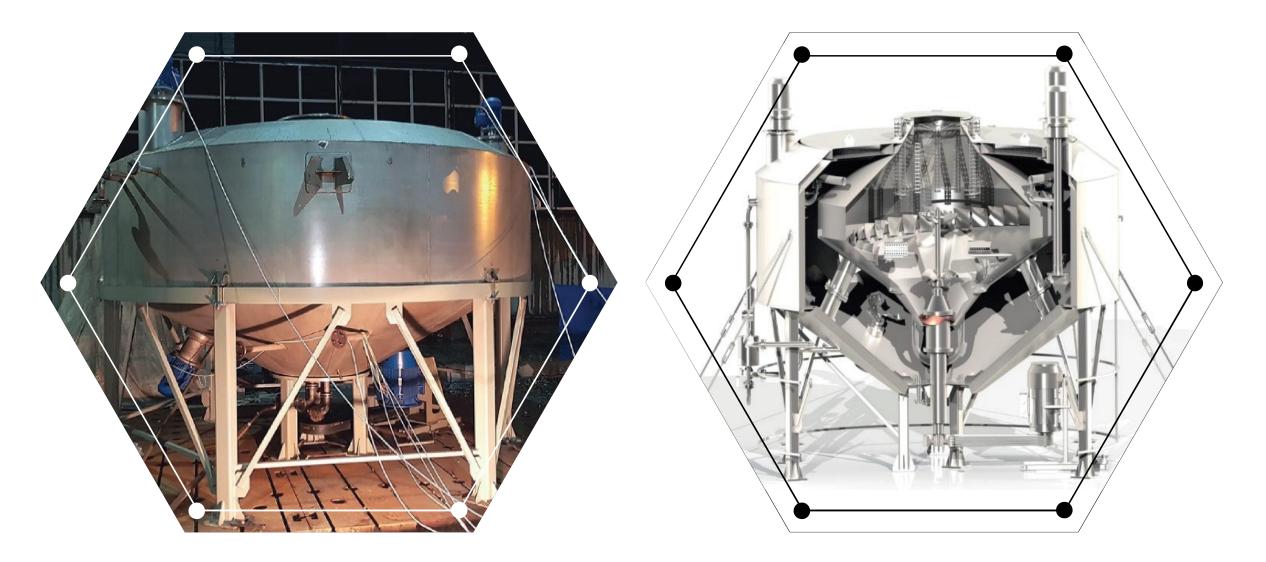


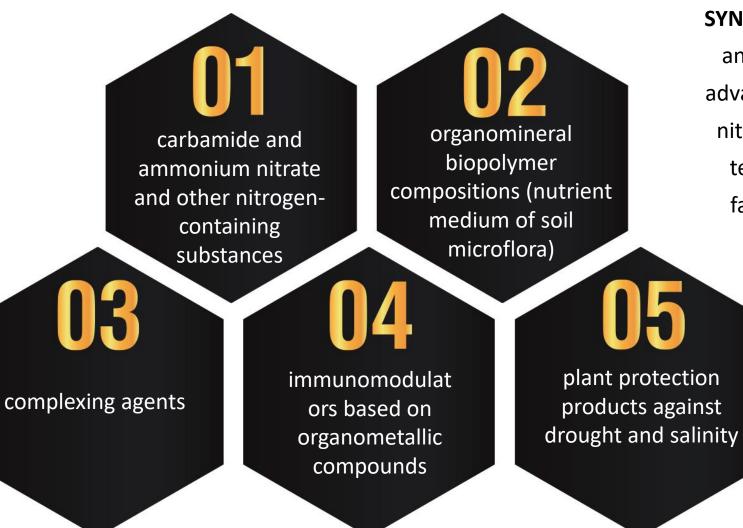
SYNAGRA GROUP is engaged in the development, production and industrial introduction of a number of unique and highly effective products for agro-industrial complex, including turnkey technological cycles.

The main advantage of **SYNAGRA GROUP** is flexibility and **customer oriented approach**. Owing to a team of professionals, a solid scientific base and production facilities, the company has the opportunity to create products with consideration of particular characteristics and concerns of a specific customer.



Plant of carbamide-ammonium solutions and liquid complex fertilizers





SYNAGRA GROUP is engaged in installation and adjustment supervision of effective advanced plant for the production of liquid nitrogen organic-mineral fertilizer on the territory of the customer's production facilities. Production can be based on: 06





any set of chelated micro-elements (including citrate forms) and growth stimulators (brassinosteroids and gibberlins), as well as structured deionized water in order to obtain the effect of superfluidity.

Processing unit is suitable for the production of liquid chloride-free complex microfertilizers) from mineral concentrates: phosphoric acid, potassium hydroxide, urea, ammonium sulfate.

Carbamide-ammonium solutions and liquid complex fertilizers produced on equipment of SYNAGRA GROUP can be used in drip and sprinkler irrigation systems, as well as standard methods of application through sprayers, including on the frozen thawed soil with temperature up to -17 deg. Celsius.



PRODUCTION MODULE CONSISTS OF:

- sound-chemical reactors with boiling bed, equipped with high-speed turbo mixing devices of the vortex type;
- Flowing hydropercussion devices;

- ultrasound generators with polarizing elements and magnetic attachments;
- electro-reactive flowing heaters of new generation for large-scale production (from 1000 tons per day), or energy-efficient systems on any fuel suitable for the customer during the production of small volumes (up to 500 tons per day);
- water structured on the effect of superfluidity.

If necessary, the production module is equipped with an automated system for loading raw materials and integrated storage tanks for 500 tons or 1000 tons. Also it is possible to arrange a process room, taking into account resources and needs of the customer.



MIXING STATION OF FINISHED FERTILIZERS

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EFFECT OF IMPLEMENTATION OF PLANT AND USE OF PRODUCED FERTILIZER:

- Reducing the need for the use of standard free-running mineral fertilizers by 2 times, standard liquid fertilizers are reduced by 20-30% due to the effectiveness of new product and, therefore, an increase in content of organic nitrogen by 3-4 times;
- NO loss of nitrogen and saving full nitrogen content during transportation to the place of use (in contrast to "home-made" carbamide-ammonium solutions). Moreover, there is an increase of nitrogen up to 10% when using nitrogen-fixing substances;
- The superfluidity of the finished product in contrast to liquid carbamide-ammonium solutions made with the addition of humic substances;



- Absence of oxides of nitrogen;
- Start of reclamation and cleaning of depleted soil, creation of agro-grounds on sand formations in arid zones;
- Reducing the cost of produced liquid fertilizers by 15-20%, taking into account cutting the transportation costs (there is no need to transport water from afar);
- Increase in average yields in any soils and agricultural crops by 20-25%;
- The additional concentrates necessary for production (supplied by SYNAGRA GROUP) are within 3-5%, all the rest is produced at the place of application.

The whole production complex is controlled by a single automation and dispatching system. It significantly reduces the risks of emergencies and personnel intervention in the characteristics and quality parameters of the finished product.

Costs for starting and organization of production are compensated during one field season due to the use of an honest product, and not solutions using cheap substitutes for nitrogen mineral complexes with similar physicochemical characteristics, so-called "empty" carbamide-ammonium solutions.

Technological cycles are know-how.

SYNAGRA GROUP performs supervising installation and training of personnel in the process of equipment assembly.

The formulas of fertilizers are developed based on the wishes and needs of the customer.



SYNAGRA GROUP offers supply of the production complex with the following characteristics:

Plant capacity is 200 tons / day.

Energy consumption is maximum 70 kW per ton of finished products. The total required input power is 1200 kW. Plant is a monobloc unit. Water consumption is about 35 tons per day.

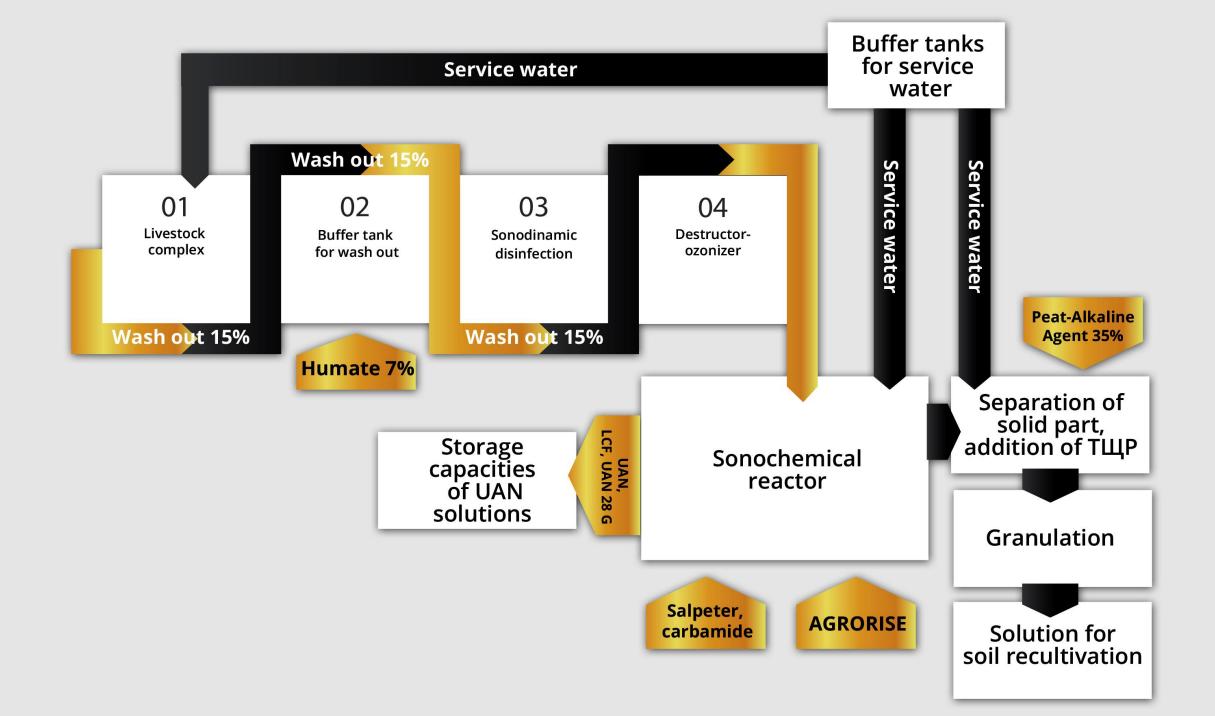
The possibility of production of liquid complex fertilizers. Possibility to create compositions of microelements directly in the solution of carbomide-ammonium mixtures and liquid complex fertilizers.

Finished product does not contain ammonia water and it means the absence of nitrogen losses when carbomide-ammonium mixtures is overloaded.

Complete production complex is controlled by a **single system of automation and dispatching**. It significantly reduces the risks of emergencies and personnel intervention in the characteristics and quality parameters of the finished product.

General information:

We use steel of European manufacturers with the corresponding certificates.





Specification:

- Assembly and access covers
- Pumping equipment taking into account the requirements for duplicating pumping units for chemical plants.
- Technical fitting pipes, pipelines across the workshop. Pipeline for pumping.
- Isolation valves.
- System of automatic control and dispatching.
- Power cables, telemetry cables
- Electrical control boards
- Boiler equipment (based on the needs and wishes of the customer)
- Service water degassing system
- Mixing device with capacity up to 1250 RPM, 2 pieces (depends on solution), 56 kWh (made in stainless steel). Mixing device is equipped with magnetic couplings (stainless steel in grade AISI 316 TI) eliminating accidental spillage in channelings of mixing device.

Together with the plant, we transfer the following intellectual rights:

- 1. Licenses for the use of production technologies
- 2. Training of personnel for technological operations.
- 3. Passports for the supplied and installed equipment.

The price of complex does not include:

- Foundations,
- Lifting equipment,
- Weighing equipment (model and manufacturer are agreed for inclusion in the general dispatch and automation system),
- Storage tanks,
- Overpasses and stairs,
- Power supply to the workshop (cabinet),
- Water supply to the workshop,
- Bunkers,
- Ventilation,
- Lighting.

SYNAGRA

We look forward to start our cooperation. Please contact us and we will provide all necessary information.

> ADDRESS Ukraine, 49000, Dnepr city CALL US +380675341414 (general) +380676476895 (sales department) +380956409402 (sales department) +380675688353 (sales department)