

Dynamic Growth With Many New And Advanced Products

The GDR bases the development of its economic and trade relations and scientific and technical co-operation with all countries of the world on the principles of equal rights, mutual advantage and compliance with its obligations. This point of view has proven to be a solid basis for international relations.

The successful and dynamic economic development in the GDR is being continued in 1985. Based on the positive results of intensive economic activities in industry, agriculture and trade, ambitious aims have been set also for the second half of the eighties, aims which are now put into practice with imagination and energy in all fields of national economy. As part of this steady development of GDR national economy, Kombinat FORTSCHRITT Landmaschinen has developed and structured its capacities and potentials so as to be able to comply with the high demands of currently more and more complicated environmental conditions.

The 30 Kombinat factories unite the special knowledge and experience of a one-hundred-year-old tradition with the achievements of science and engineering to form an efficient and dynamic unity.

Today more than ever before, the export offer submitted by FORTSCHRITT at 38 international Fairs corresponds to the whole variety of customers' wishes in the field of agriculture. This offer comprises complete farms

and plants, high-capacity agricultural machinery, industrial robots, process computers, gardening equipment, licence offers and assemblies and even engineering transfer. In addition to standard solutions, numerous variants, corresponding to different agrotechnical, ecological and commercial conditions are largely available.

Priority trends of our new and advanced products are extended field of application, increase of the degree of combination, increase of working productivity, low degree of maintenance and reduction of petrol consumption, reduction of harvesting losses and damage, improvement of the weight-performance-ratio and more favourable ergonomics.

Kombinat FORTSCHRITT's scientists, designers and economists have started comprehensive investigations and developments, which meet international market demands.

Science and industry today have to pay more attention to the natural balance of the soil-plant-animal-soil chain, and if possible keep it absolutely free from interruptions or breakdown. Microelectronics, alternative fuels, sensors and computers are key words for new engineering solutions, which are effective, easier, more economical and less detrimental to the environment. The high degree of innovation of its production programme



FORTSCHRITT – Largest exhibitor of agricultural machinery and equipment at the Leipzig Fairs

shows the consideration which FORTSCHRITT gives to these future tasks.

In future we will develop and offer more and more products in connection with technological solutions and application conceptions according to local markets and demands. Here, to mention only a few, are some examples: licensed/assembly production for tractors, potato harvesters, soil working implements and harvester combines, catalogues for individual weld joints in the agricultural machinery industry, production licences for seed cleaners, machinery and installations for milk production and processing, designing and development for setting up farm complexes, potato-storing and potato preparation facilities.

Of interest to developing countries is, for

instance, the possibility of acquiring FORTSCHRITT assemblies, which can be completed in local production and assembled under licensed production. We offer all the technical, technological and commercial assistance for such products, which also includes the training and upgrading of the staff at home or in the GDR. Experience has proved, that this opens new ways to the mutual advantage of both partners. Striving for effective solutions, based on tried and proven results and the variety of the offer, all under the responsibility of on single company – these are the trump-cards in the combination of science, technology and economy which FORTSCHRITT holds in store for its customers.



Field chopper E 281 C

Powerful Technique For Forage Harvesting

For more than 100 years now Kombinat FORTSCHRITT has specialised in the production of forage harvesting equipment and has been manufacturing harvester combines all that time. The technical demands of agriculture, international trends, the theoretical and practical experience of experts all over the world are the foundation stones on which the development of our latest forage har-

vesting equipment is built, equipment which takes into account all the various conditions and requirements of economic fodder production.

Our latest swath mower E 303 is a universal, high-performance machine for forage harvesting, with 11 adapters from our own production as well as adjustable variants of internationally tried and proven auxiliary equipment.

All FORTSCHRITT swath mowers are equipped with cabins – fully air-conditioned if desired. This, together with their easy manoeuvrability will ensure easy and comfortable operation and driving. Depending on the adapter used at a given moment, the swath mower is an ace for the harvesting of grass, forage, rape and grain, as well as for swath removal. The E 281 C is the youngest link in the chain of tried and proven field choppers. Depending on the equipment in use, the machine can handle all processes of fresh forage reaping or silage production, short chopping, dry forage production, maize reaping as well as straw chopping. Special equipment for the production of long chaff attains optimum results in fresh forage feeding. It ensures high-quality intermediate storage of forage and complies with the conditions of animal physiology in cattle feeding. It goes without saying

that optimum driving comfort is just as much a part of the E281 C as it is of the swath mower.

The third link in the chain of forage production is the high-density press K454 for the baling of hay and straw. It is a machine which meets the highest demands of performance, baling quality, baling density and technical safety. Equipped with an ejecting chute which can load the crop from either side of the vehicle driving alongside the press, the high-density baler K454 is able to clear the fields very rapidly. The tying system with FORTSCHRITT know-how guarantees an almost 100% perfect tying quality.

All in all – with FORTSCHRITT forage harvesting equipment you will be able to harvest the high fodder production on your fields safely and speedily.

Swath mower E303



Potato Harvesting Is Our Great Strength

There is no doubt that potatoes are of great importance as a basic food, important fodder for animal feeding, as well as industrial raw material for the production of starch and alcohol.

VEB Weimar Works, one of the factories of Kombinat FORTSCHRITT Landmaschinen has been developing and producing potato-harvesters for the past 30 years. All the machines, from harvesting to processing and marketing, comply with international standards of potato cultivation, so that the user can assemble his machine system according to his own experience, and combine it with ma-

chines of other manufacturers.

FORTSCHRITT potato-harvesters are equipped with one, two or three row digger separators, according to different needs. Our machines are made up of tried and proven assemblies, which are constantly upgraded to meet the most up-to-date standards. Some of them are unique on the world market and characteristic for our potato-harvester.

On particularly sloping areas the most effective output is obtained by the two-row digger-separator and loader E 686. New types of assemblies, such as the highly effective potato

Potato harvester E 689





Potato harvester E 686

foliage separating device, the special height-of-fall adjusting device and the unique design of a bulk hopper, guarantee that this machine is capable of particularly high performances.

The unique single-row digger separator and loader E 689 is the latest product in our line of potato-harvesters. It is used to harvest potatoes planted from 62.5 to 92 cm distance within the row. The E 689 is available as a bin or bagging machine. Compared with other one-row potato-harvesters on the world market, the E 689 is the first machine equipped with two screening belts. Use of the E 689 decreases working time by 80% per hectare.

The same high demands made on our potato-harvester were also considered for the equipment of potato sorting and grading and potato marketing. Careful treatment of the potatoes, exact sorting and grading, faultless potatoes and constant maximum efficiency are the four basic demands made on machines of this type.

Kombinat FORTSCHRITT produces and supplies sorting and grading machinery with throughput performances of 8–30 t/h, in conformity with the customer's special demands. The technology of preparation and processing can be varied in manifold combinations and complemented by special equipment.



Harvester combine E516

Highly Efficient Combine Harvesters For All Threshing Crops

The production of combine harvesters has a special place in the manufacturing programme of Kombinat FORTSCHRITT Landmaschinen. Our combine harvester line consists of three basic combine harvester types, ranging in capacity from 21–40 t/h total throughput (grain and straw).

All our combine harvesters are reliable machines which work according to the tried and proven tangential flow principle and can be used for all types of threshing crops.

Because of their universal use and the avail-

ability of auxiliary equipment, our combine harvesters work in many countries under the most varied conditions, and to the full satisfaction of our customers.

One of the latest advantages of our harvester combines is their use in maize as CCM variant (corn-cob-mix), which complies with the most up-to-date results in the research of animal feeding.

The E514 is one of the most powerful combine harvesters in its capacity range. Thanks to its design, it can meet all demands, its per-

formance and exactitude during threshing never fails even under most difficult harvesting conditions.

The E514 can be used for more than 50 types of threshing crops, and is available with numerous different auxiliary equipment. Its special advantage is the manifold use of the hydraulic and the optimum adjustment of grain tank volume and throughput capacity to obtain high efficiency on fields of different sizes.

The combine harvester E516 meets the very highest capacity demands. Decades of experience combined with sophisticated engineering and technical know-how find their ex-

pression in its allround design. This is what it takes to become one of the top products in this class of combine harvesters. Its performance is between 36–43 t/h. The performance of the threshing mechanism is the result of the widening of the threshing channel up to the fixed limit set by the international crop divider, the enlarging of the threshing drum diameter and the optimum development of further assemblies of the threshing device, in particular the straw guide mechanism, increase of the shaker efficiency and improvement of the dressing equipment.

Harvester combine E514





High-density baler K 454

The combine harvesters equipped with an 8-cylinder Diesel engine of a capacity of 228 HP, which can be transferred without problem to the field, by means of a hydrostatic drive. The air-conditioned cabin as well as hydraulic steering and electronic control systems make for the greatest driving comfort and safety. The E 516 has been awarded several gold medals at international trade fairs and exhibitions.

The grain and seed preparation and processing machinery, manufactured by VEB Anlagenbau Petkus Wutha, one of VEB Kombinat FORTSCHRITT's factories, meets all processing demands for more than 200 types of seed cultivations.

We build pre-cleaning machinery for raw stock threshing, conservation, drying and storage equipment, machines for the preparation and processing of seed, laboratory machines, as well as complete plant for the preparation and processing of fine seed.

Among the most well-known machines for the preparation and processing of seed is the "Super K541" and "Gigant K531". It has a simple design, all-round use and high efficiency.

The sorting and grading machine K545 and the cell release lever K231, a combination of

machines adapted to each other, is highly efficient processing plant for greater quantities of seed. The highest degree of concentration and efficiency is reached in seed processing plant, where the individual machines are combined in suitable machine systems and machine plant. VEB Anlagenbau Petkus Wutha is a renowned specialist with decades of experience in the construction and manufacture of cleaning plant with different technologies. There is actually no type of seed which cannot be processed by Petkus machines.

Of special attraction in FORTSCHRITT's licence offers is the "assembly production for agricultural machinery and equipment". This complies with the demands of many countries wishing licensed production of single pieces or assemblies in addition to machinery import. Our offer comprises various combinations which can be completed by high-level training. The scientific and technical documentations "Welded Construction in the Agricultural Machinery Industry" and "Designing of Agricultural Machinery According to Local Conditions" also characterize the efficiency of the Kombinat.

Hundred-year-old Tradition in the Construction and Design of Silos

Based on tradition and the latest scientific and technical know-how, the silos from VEB Kombinat FORTSCHRITT meet the most up-to-date technical and economic demands. Experts of the factory co-operate closely with engineers and designers and are therefore in a position to supply silo plant, grain-drying plant, mechanization solutions for storage silos, from the simplest to remote-controlled and supervised silos of all sizes and dimensions.

Our programme for the storage of grain consists mainly of concrete silo bins for large silo plant and metal silo cells or storehouses for short-term storage or for small silo plant. The plant for storage, supply, transfer and re-shipment as well as export and import in the port differs according to the requirements made on the silo plant. Depending on the site conditions, the grain intake can be carried out via ship, railway or trucks.



Metal silo bins

Concrete silo bins



FORTS



Kombinat FORTSCHRITT exports more than fifty percent of



its annual production to over 70 countries on four continents.

FORTSCHRITT – Tractors, Reliable, Tried and Proven

Tractors manufactured by Kombinat FORTSCHRITT, VEB Tractor Works Schönebeck, are the result of decades of experience in the construction and design of agricultural machinery and tractors.

The two new alternative types ZT320 and ZT323 continue the tradition of the tractor types ZT300 and ZT303 which operate successfully at home and abroad. The outstanding characteristics of these tractors are the excellent working conditions for the tractor-driver, increased possibilities of use, high reliability and safety, and very low petrol consumption.

Our tractor-drivers enjoy great driving comfort with the elastically mounted cabin, the ventilation and heating equipment as well as the compressed air springs driver's seat, decreased operational needs and lack of noise inside the cabin. Numerous additional assemblies, a variety of alternative possibilities specific for the country in question, as well as the greatest possible interaction with 40 trailer, attachment and auxiliary equipment, make for all-round, economic functioning. VEB Tractor Works Schönebeck guarantees customers an efficient and impeccable supply of spare parts and after-sales service.

Tractor ZT323





Modern Technology Makes For Effective Soil Cultivation

VEB Bodenbearbeitungsgeräte "Karl Marx" Leipzig, one of Kombinat FORTSCHRITT's factories, has in recent years developed a number of new products in the soil cultivation equipment line.

The mounted disk plough B213 was designed according to the latest know-how and tests in tropical countries, and is known for its sturdiness at work and simplicity of operation and functioning.

The plough is particularly suited for a first time cultivation of heavy loam and clay soil. Even root-infested soil and dense undergrowth are no obstacle for perfect ploughing. A particularly economic use of the B213 is possible with the use of the ZT303 as a means of traction.

The disk harrow B402 is best used for surface cultivation of the soil like turning, chopping, and clod breaking on dry and heavy soil.

High quality results can be obtained, above all, by changing the angle of sight of the disk, thus adapting it to the soil.

The disk harrow B402 can reach working widths of 3 or 4 m, depending on the type of implement in use. The furrow skin plough, a tandem plough, consists of a front and rear plough with a steered chassis in between. A working width of 4.20 m is reached by means of a hydropneumatic plough body component secured against overcharge. This plough body component, Type 15 Z, was developed specially for the working speed of skin ploughing which guarantees the ploughing under of organic substances to increase the fertility of the soil with humus.

An implement for additional cultivation work B605

with different tools was developed especially for the B540. Depending on working and soil conditions, lens packers, disk packers, trailed clod breakers and toothed lasts can be used. Each furrow skin plough B540 has two B605 attachments. A special tractor is required to pull both these implements. When transported, the B605 is placed on a mechanically adjustable carrying axle.

The B550 is used in the cultivation of soil for seed and autumn furrows with tractors of the 50 kN tractor class. The hollow profile frame in light construction on which the soil cultivation implements are attached at regular distances, is divided behind the fifth plough body component by a joint, so that the plough can adjust itself to the soil structure, especially on broken soil. The linking-up of the plough with the tractor is carried out by means of a triangular mechanical coupling at the three-point suspension of the tractor.

The B550 can be reduced from 8 to 7 or 6 plough body components in accordance with the desired working width, without having to remove parts of assemblies.

A combination with the seedbed cultivation implement B601, increases efficiency through the cultivation of the freshly ploughed soil. Solidifying, clod breaking and levelling of the seed furrow create favourable conditions for the following sequence of work.

The seedbed processing implement B601 is a follow-up implement for eight-furrow ploughs of the 50 kN tractor class. It is used for solidifying, clod breaking and levelling of the seed furrow.



Mounted disk plough B213

A total of 6 rolling tools can be fixed to two oscillating tool frames suspended next to each other, so that three rows of tools with different processing effects can become effective in one working

direction.

The tools, disk packers trailed clod breakers, or clod breakers are exchangeable and can vary according to soil conditions.

Vacuum tank trailer HTS101.27



Optimum Fertilization Ensures Large Crops

VEB Landmaschinenbau Güstrow, one of Kombinat FORTSCHRITT's factories, has for years been manufacturing large-area fertilizer-dispersing implements as superstructures for trucks, enabling an effective and high-quality application of mineral fertilizer.

The extremely high capacity of these implements guarantee the right output, while good dispersing quality ensures uniform distribution. Both factors guarantee economic operation. At present two types of large-area fertilizer-dispersing implements are available, the D032, mainly for the output of potash, phosphorus and lime fertilizer, and the D037 for the output of nitrogen and multi-nutrient fertilizer.

It goes without saying that optimum fertilization includes the output of liquid manure and other liquid fertilizers.

For this reason Kombinat FORTSCHRITT designed and manufactured the vacuum-

tank-trailers HTS80.45 and HTS101.27. The polyester tank, reinforced by glass fiber, guaranteeing safe transport, makes for very low dead weight as well as for a construction which requires little maintenance and servicing. Optional pressure or vacuum-operation permits automatic filling and/or transfer to the taking-over implement.

VEB Landmaschinenbau Bernburg, one of Kombinat FORTSCHRITT's factories, has been manufacturing sowing machines for more than 125 years. The tried and proven drill line A200, A201, A203, A205, renowned throughout the world, undergoes constant up-to-date up-grading, complying with the demands of highly sophisticated agricultural systems.

The rapid discharger of the seed container, as well as the hectare meter, the filling indicator and sowing control are part of the equipment.

Seed drill A205





Effectiveness Also For Small-Scale Operation

With its line of gardening implements, E930, Kombinat FORTSCHRITT offers a combination of implements which makes it possible for the user to carry out a total of 16 different tasks in his garden and on small fields with the help of numerous adapters.

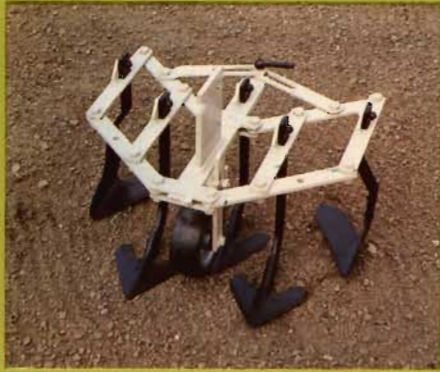
Rotor chopping, clearing of snow, pumping of water and mowing, soil cultivation with harrow and plough as well as sweeping and transport jobs – this is only part of the scope of work which this machine can manage.

For instance, 2 – 3 lawn sprinklers can be operated by means of the water pump. Lime-washing and pest control in stables can be carried out by

means of the spindle pump. The working depth of the rotary hoe for soil loosening or weed control can be chosen steplessly. The clearing blade manages wet snow up to 15 cm and powdery snow up to 40 cm with a working width of 80 cm.

Operating these implements is not at all complicated; this is true for the handling of the implements as well as for the changing and fitting of auxiliary equipment, which is a one-man job. The sturdy and easily operable engine has a petrol consumption of 1 l/h.

An exhaust-gas control vent keeps the noise level at a minimum low.



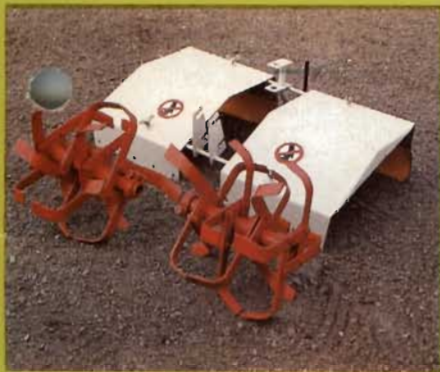
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E 930 – prime equipment



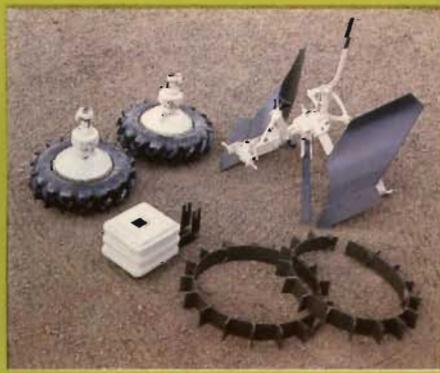
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1: Multi purpose implement A13
band running arrangement A56

2: Rotary cultivator A11

3: Ridger A16

4: One way plough A17

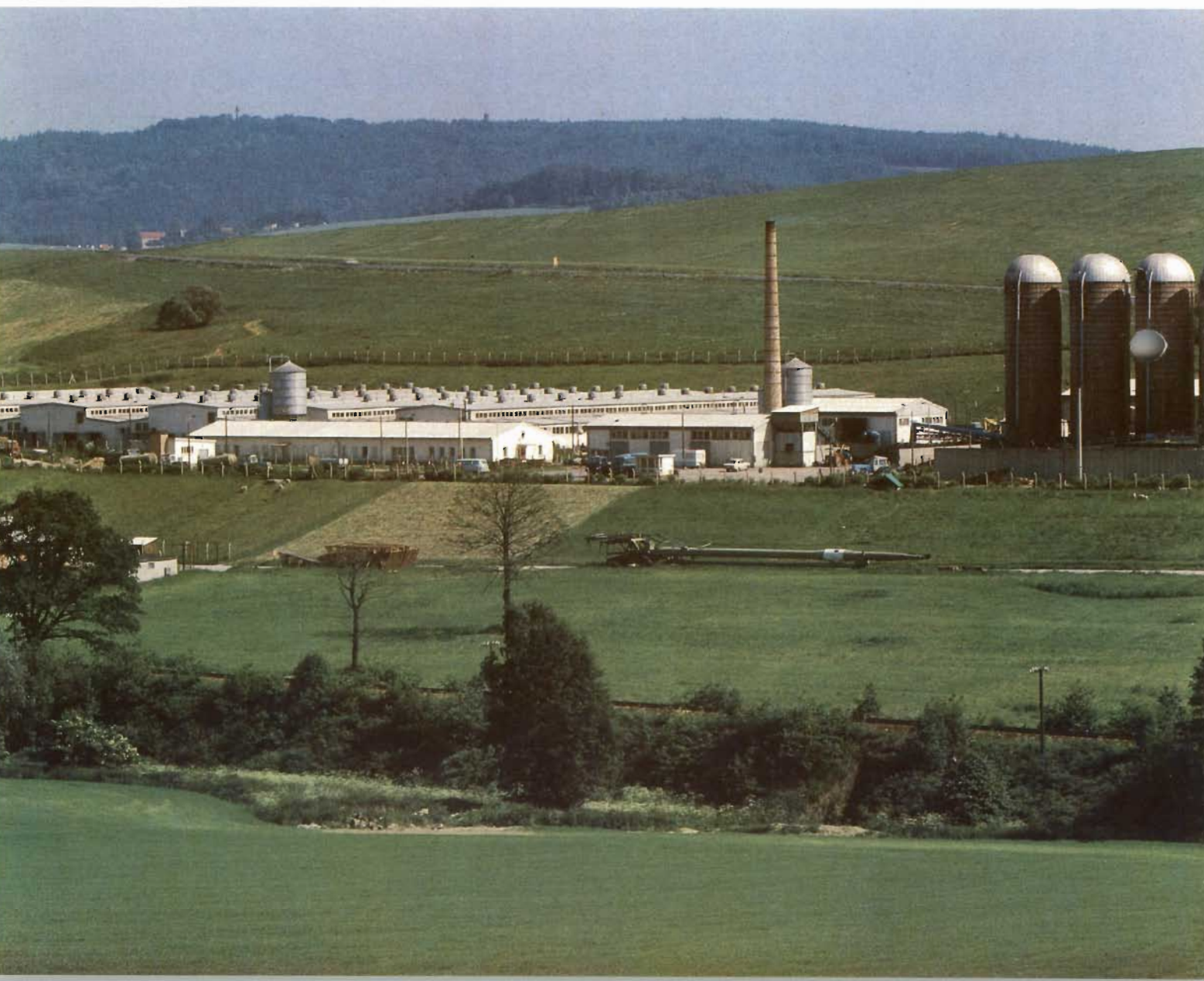
5: Harrow A15

6: Snow plough A53/Dozer Blade A51 with
7: Mowing cutter bar A33 with bevel wheel driving gear A3310

8: Cylinder cutter mover A32

9: Broom A52 with collection sack A54

10: Irrigation pump A 63/Spindle pump A64





General Supplier With Great Experience

FORTSCHRITT has the experience, the capacity and the technical know-how to design, set up, construct and equip agrarian complexes and self-reliant, independent large-scale farms – the basis for adequate, high-quality feeding of the population.

VEB Agroanlagen Dresden, the general supplier, offers system solutions, farming projects and all technical prerequisites for agrarian complexes and modern large-scale farms. The general supplier offers the following services:

- studies (opportunity and feasibility studies)
- plant know-how (production engineering, documentation for operation and management, technical system solutions, plant arrangement)
- delivery (engineering, equipment, civil works, organization projects, technical equipment and agricultural machinery, carcassings, first animal stock)
- supervision and erection management (civil works head office, supervision of erection, special erections)
- putting into operation (start-up and handing over, temporary operation)
- training (management staff, operators, maintenance staff)
- complex service (after-sales service, spare parts supply)

FORTSCHRITT offers assistance to those who prefer the do-it-yourself method. This includes licences for assembly and local production of agricultural machinery. We equip production sites according to the required quantity.



Milk Production and Processing Technologies for the Present and the Future

In accordance with clients' wishes and the conditions of the respective sites, FORTSCHRITT supplies plant for 100 to 2,500 cows, cattle-breeding and cattle-fattening plant for up to 20,000 animals, pig-breeding and pig-fattening plant for up to 2,500 tons of meat per year.

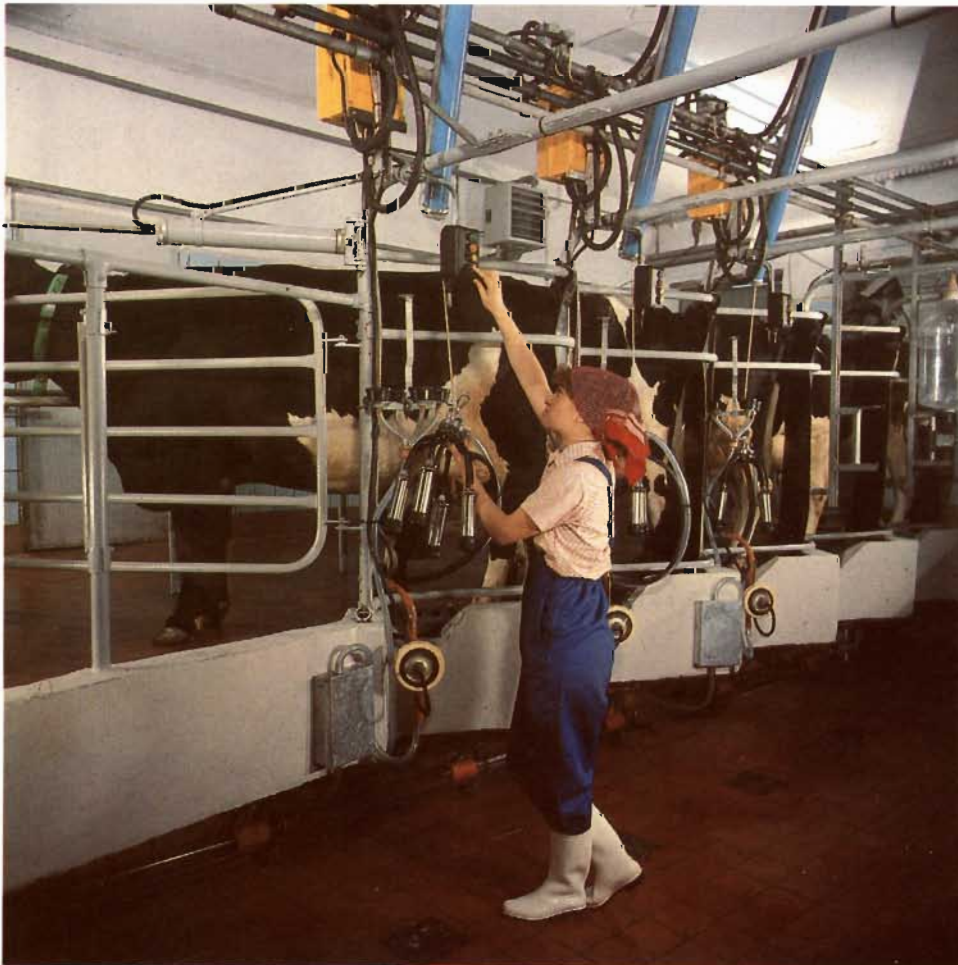
Such plant comprises complex fodder storage, fodder distribution, stables and sties, milk production and processing, cooling and

storage, calving and veterinary facilities, as well as de-manuring operations.

VEB Anlagenbau Impulsa Elsterwerder, one of Kombinat FORTSCHRITT's factories, has been a reliable partner in the field of agriculture for many years.

The R208 cleaner is a high-pressure sprayer for hard cleaning jobs in the different fields of economy, which complies with the highest scientific and technical standards.

Impulsa milking merry-go-round installation





Milking cluster, disinfesting and cleaning installation



Sheep milking installation M696

Can milking installation M602





**Kombinat FORTSCHRITT Landmaschinen
VEB Erntemaschinen Neustadt
Stammbetrieb
DDR–8355 Neustadt in Sachsen**

**FORTSCHRITT Landmaschinen
Export–Import
Volkseigener Außenhandelsbetrieb der DDR
DDR–1185 Berlin**