

Peat -Based Rust Modifier In Protection Of Metal Surfaces Of Agricultural Equipment From Rust

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Article History	Abstract
Received: 14 th April, 2026 Accepted: 10 th May 2026	<p>This article presents the results of a scientific study on the use of a protective coating made of a peat-based rust modifier to protect metal surfaces from corrosion under the influence of an aggressive environment . Corrosion of metal surfaces of agricultural machinery under the influence of an aggressive environment is one of the current problems. Therefore, in order to implement a new method of its prevention and protection, this research was carried out and positive results were achieved. It was observed that the metal surfaces were improved several times compared to conventional methods of protection, and recommendations on the method and results of application are given.</p>
<p>Keywords: peat-based rust modifier, coating, agriculture, technique, storage, protection, method, aggressive, metal, impact, erosion.</p>	

Introduction. Our country in the economy village farm network importance very big . Because Our Republic population half village in places residence does and yours marriage well-being this network development with integral It depends . outside our country gross internal product and currency income also includes a village farm network noticeable to the point has . Village farm products in cultivation necessary agrotechnician events own on time and good quality done increase , agrarian in the sector village farm to the technique was demand satisfy , village farm enterprises spiritual and physically outdated techniques instead of

modern and resource-saving techniques with to provide encouragement system improvement " Agrarian " for the purpose sector modern village farm techniques with to provide of encouragement additional measures about " Uzbekistan" Republic Presidential Decree No. PQ-103 of March 29, 2023 HYPERLINK "javascript:scrollText()" approved . Village farm network the population food products with and industry some areas raw material with in providing important importance has . Now population number and of needs growth and again work industry of capacity rise village farm products cultivation size further to multiply objective accordingly requirement is doing . That's why for this too the network develop and efficiency increase necessary [1,2].

Research methods. Today on the day metals from corrosion protection to do world economy in front of standing the most important scientific , technical and economic from issues ISO 8044 is an international standard . to the standard appropriate corrosion metal (alloy) and environment between physicochemical or chemical mutual impact as described , this metal (alloy), environment or them own inside received technician of the system functional characteristics to deteriorate take comes . Rust of life all to the fronts impact does , big material damage conveys and our to our safety threat We are always day communication to do products and materials - cars , roads , bridges , residential buildings and water pipes - always rust to the effect exposed will be and this the process uncontrolled leaving No. Corrosion because of damage of equipment not working to remain with related unhappy events happened to be this with together , product of quality deterioration , e.g. pollution , fuel , materials and energy spend increase take arrival possible will be . Village farm technique from rust protection to do his/her without problems and far term to work help gives [3,4]. Above saying as mentioned , the village farm machines to the parks rusty from wear and tear delivered damage years during funds spending to do demand does .

Research results . Take visited theoretical and practical to research according to current metal surfaces during the day from rust in storage varnish paint the coating cover or various lubrication from the methods wide using is coming . In this surface good uncleanliness , external atmosphere environment dust and aggressiveness on metal surfaces due to rusty decay increasingly strengthened , the metal rust resistance and of the coating protection characteristic decreasing is going on .

Table 1

Andijan in the province there is village economy techniques number (as of 1.02.2025)

No.	Province V	Driver tractors number	Mineral fertilizer sprinkle	Chop tractors number	Transportation tractor number	Mini tractors number	Grain combine harvester	Food to reap combines	Cotton dial car	Tractor trailer	Cultivators	Grain planting seeder	Seed planting seeder	Earth straightener
1	Andijan province	604	256	1422	1270	334	228	56	66	2040	1402	18	914	207

This situation prevent to take and protection characteristic increase for the purpose developed countries to experience on metal surfaces various content rust modifiers using the bride. Village economy techniques seasonal work under the circumstances worked on metal surfaces due to chemical and electrochemical rust processes happened will be . Metal chemical and electrochemical from rust protection to do necessary condition metal on the surface permanent and dense film layer harvest to do calculated , this in a way metal rust as a result next happened to be from processes (rot no protection from does (or passivates) [5,6]).

Conclusion. This the process foreign scientists by wide research done . Including : Malov E. N. , Safarov K. U. , Kholmanov V. M. , Salakhutdinov By I. R. studied research in their work metals corrosion the most strong mineral fertilizers with communication when happened will be . Unprotected of steel ammonium nitrate , urea and superphosphate under the influence corrosion losses of 500 hours more than 100–120 g/m³ at a time to reaches [7,8] . Village farm of the technique thin layered in constructions corrosion damage , strength strength by about 30-40% reduces , this and in metal crack and cracks appearance to be take comes . As a result to rust encountered of surfaces decay resistance approximately 1.5 -2 times decreases .

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