

# Կանճռակի ձերք իքու դիզելային վառելանյութ



ԹՀ ՍՊԸ ՁԵՐՔԻ ՎԱՆԻ ԴԻԶԵԼԱՅԻՆ  
ՎԱՐԵԼԱՆՅՈՒԹ (ԹՊԴ)



# VEG-Tuning



Í³ Ýxñ³ Íç Ó»Á Çµñ..¹ç½»É³ ÚçÝ í³ é»É³ YñðÁ

‘ÁÉñÇ NÇßáÓáðÙÙÝ Ù»ç 1»é ‘ë Áí³ ï³ Ýç 3 ßÝ³ ÝÁ áÓç °íñáà³ ïâí Ù»Í  
ñ³ ñÇÍ»Ùç 3 ñ³ . áðÙÙÙ Ùµ i 3 ñ³ Íí³ Í 1 Ç½»ÈÙçÝ í³ é»ÈÙçÝ ï³ ãáðÙÁ: 2 Ù 3 ÈùÁ  
Ð³ ÙÙ ëi 3 Ý Ñ³ ë³ i, “ 3 ïéññ ÿÉ 1 Ç½»ÈÙçÝ í³ é»ÈÙçÝ ï³ ãáðÙÁ 1 ïç i ñç 3 ñÅ»ùÁ ÙýáðÙ ÿ  
3 ÝÑ³ Ù»ÙÙ i 3 Í»Ùç 3 ñØñ, Ù³ Ý 2000 Á. i 3 ñí 3 ëi 1 Ùç · Ý»ñÝ ÿÇÝ: °Á» NÇB» Ëö ïçÝ»ÝÙ  
à³ i »ñ³ ¼Ùç 1 ÅÝ 1³ ï 3 ñçÝ»ñÁ, 3 à³ 3 Ù»Ý Ùç ïç i ñ 1 Ç½»ÈÙçÝ í³ é»ÈÙçÝ ï³ ãáðÙÁ  
¼ñ³ Ñ³ i »ÈÝç 3 Ùç áö 3 i í áï ñ³ Ýéåáñi Ç Ñ³ Ù³ ñ 3 ¼Ùç 3 Ý · ãñÍ áðÙññðÙÝ»ñç Á³ -  
i »ñ³ Ùç Ñ³ éóíáðÙ 3 ÝÑ³ 1³ i 3 ïç 1 Åí³ ñáðÙÙÙ Ùµ: 2 Ù i 3 ñçÝ»ñçÝ · Çi 3 ï³ Ý-  
çÝ Á»Ý»ñ³ ï³ Ý Ùç i ùÁ ãñáà i áðÙÝ»ñç Ù»ç ÿñ, 3 ÚÙÝi ñ³ Ýù³ ÙçÝ ÿñ· Ç³ Ùç Ùç ¼Ùç 3 Åç i  
i 3 ïñ»ñ³ ï³ Ý»ñ 3 é 3 ç 3 ñí 3 »óçÝ: Ø 3 èÝ 3 íáñ 3 à»ë ëi »÷ 3 Ý 3 ï»ñi Ç Ñéåáç i 3 ïç  
ÿÉ i ñ 3 ï³ Ý ÿñ· Ç³ Ý ëi 3 óíáðÙ ÿñ Ð³ ÙçÉ i ñ 3 Ù»ùÁ Ý 3 3 ñi 3 1 ñ³ ï³ Ý Õ»éÝ 3 ñíáðÙÙÝ  
Ù³ ñÅ³ ï³ Ý ÿÉ i ñ 3 ï³ ÙÙ Ùç Ùçáóáí, ãñç 1 Ç½»ÈÁ 1»ñ 3 Ó»» ÷ áÈí 3 Í ÿñ Ùç 3 Ý . 3 ¼áí  
3 ßÙ» 3 i »ññ Ñ³ Ù³ ñ:

<sup>2</sup> ūēñ<sup>3</sup> ñ<sup>1</sup>» Ý Ñ<sup>3</sup> Ü ÝÇ , áñ »íñáà<sup>3</sup> ï<sup>3</sup> Ý ß<sup>3</sup> i<sup>3</sup> e<sup>3</sup> ç<sup>3</sup> i<sup>3</sup> ñ »ñïñÝ»ñ · áí<sup>3</sup> ½ áðÙ »Ý  
j<sup>1</sup> ááñ. Ç<sup>3</sup> á<sup>2</sup> è<sup>3</sup> Ù»Ý<sup>3</sup> Ù<sup>3</sup> úáñ " Ñ<sup>3</sup> Ù»Ù<sup>3</sup> i<sup>3</sup> µ<sup>3</sup> ñ jÅ<sup>3</sup> Ý ï<sup>3</sup> Ýxñ<sup>3</sup> IÇ Ó»ÃÇó á<sup>3</sup> i<sup>3</sup> ñ<sup>3</sup> eë<sup>3</sup> í<sup>3</sup> Í  
C<sup>1</sup>»É<sup>3</sup> ÜÇÝ i<sup>3</sup> é»É<sup>3</sup> ÜkáñÁ:

í »Ó³ Ú³ óÙ³ Ý Ù»ç: êññ³ Ýáí ÍñðíáðÙ { Í³ Ý³ á Í»ñç áó ëçñéç ³ ñii ³ ¹ ñáðÁÙ³ Ý Í³ ñ..áñ µ³ Õ³ ¹ ñçäÝ»ñçó Ù»ÍÁ: ØÝáðÙ { ³ Í³ ÓÝ»É áñ ³ Ý³ ëÝ³ Í»ñç Ù»ç { Ë³ éÝí »ÍñðÓ»Ä ù³ Ù»Íñð Ñ»í á ÙÝ³ ó³ Í ñáðéàÝ áó ññðÁÁ [1]:

Í<sup>3</sup> Ý×ñ<sup>3</sup> İÇ İ»ñ<sup>3</sup> ÜÇÝ<sup>3</sup> ñÅ<sup>3</sup> ÝÇùÝ»ñÇó Í<sup>3</sup> ñ<sup>3</sup> áñÝ<sup>3</sup> Ú<sup>3</sup> ;, áñ Ñ<sup>3</sup> ÝíÇë<sup>3</sup> ÝáðÙ<sup>3</sup> ;<sup>3</sup> Ý<sup>3</sup> èÝ<sup>3</sup> Í»ñ  
í<sup>3</sup> Õ .<sup>3</sup> ñÝ<sup>3</sup> ÝÝ áó ãðÙ<sup>3</sup> ßÝ<sup>3</sup> ÝÁ, »ñµ µ<sup>3</sup> ¼Ù<sup>3</sup> ÙÙ<sup>3</sup> Èáï<sup>3</sup> i »ë<sup>3</sup> ÏÝ»ñÇ<sup>3</sup> ñi<sup>3</sup> 1 ñ<sup>3</sup> 3 ñ<sup>1</sup>-  
låðÙ<sup>3</sup> í»i áðÅlåðÅ ÇçÝáðÙ<sup>3</sup>; ,<sup>3</sup> ÄáðÙ<sup>3</sup> ;<sup>3</sup> ïçë»ñI<sup>3</sup> ñ<sup>3</sup> ðÝ»ÉÍ<sup>3</sup> ÝÝ<sup>3</sup> ã Í»ñÇ<sup>3</sup> û<sup>3</sup> .<sup>3</sup> áñÍáðÙ<sup>3</sup>  
25-30 ûñáí (Ùáï<sup>3</sup> íáñ<sup>3</sup> à»ë 20 ûñ<sup>3</sup> ßÝ<sup>3</sup> ÝÁ „ 5-10 ûñ<sup>3</sup> ñÝ<sup>3</sup> ÝÁ) Í<sup>3</sup> Èí<sup>3</sup> Í NáðÙ<sup>3</sup> ïçÙ<sup>3</sup> Ù<sup>3</sup> Í<sup>3</sup> Ý  
à<sup>3</sup> Û<sup>3</sup> ÝÝ»ñÇó, ½ ñ<sup>3</sup> ðÙ<sup>3</sup> Ý ÷ áðÙ<sup>3</sup> Çó, <sup>3</sup> Ý<sup>3</sup> èÝ<sup>3</sup> Í»ñ<sup>3</sup> ÜÇÝ é<sup>3</sup> óÇáÝ Ó<sup>3</sup> íáñÙ<sup>3</sup> Ý Ù<sup>3</sup> èë<sup>3</sup> Üçó:

Í<sup>3</sup> Ý<sup>3</sup> á Ú<sup>3</sup> ee<sup>3</sup> lādū á<sup>3</sup> nád<sup>3</sup> í<sup>3</sup> ád<sup>3</sup> { 9-15% aān Ylād<sup>3</sup>, 3-5% aānai »ÇÝ, 5-6% µÇá-  
3 n<sup>1</sup>lād<sup>3</sup> í<sup>3</sup> i Ylād<sup>3</sup>, 2-4% µçç<sup>3</sup> Ylād<sup>3</sup> (eeà÷àòeè), 15-42 Ù./í. Í<sup>3</sup> náii ÇÝ, 504-1070 Ù./í.  
3 eIáñµÇÝ<sup>3</sup> ÜÇÝ AÄáá

Í ³ Ý×ñ³ ÍÇ ³ ÏÁñÁ Çñ ëÝÝ¹³ ñ³ ñáðÙ³ Ùµ Ùáí ÇÍ ; áñáí »ÇÝáí ³ Ù»Ý³ Ñ³ ñáðëí ëáÙ³ Úç  
 ³ ÏÁñÁ ÇÝ: 1 ó»Ýí Ý»ñ ³ Ý×ñ³ ÍÇ ëÇéáéÁ á³ ñáðÙ³ ÍáðÙ ; 14-24 Í»ñ³ Íñ³ Ùç³ íáñ, ÇéÍ 1  
 ó»Ýí Ý»ñÁ · ñ³ ÝáðÙ³»ñC í »ëùáí ² 90-110 Í»ñ³ Íñ³ Ùç³ íáñ " 8-9 Í . Ù³ ñéáðÙ³ Í áñáí »ÇÝ:  
 ê»ñÙ»ñÁ á³ ñáðÙ³ ÍáðÙ »Ý 40-50% ïáðÙ " 21% áñáí »ÇÝ: Í ³ Ý×ñ³ ÍÇ ßñáÁÁ á³ ñáðÙ³ ÍáðÙ ;  
 40% áñáí »ÇÝ, áñC ÇÝùÝ³ ñÅ»ùÁ 3-4 ³ Ý. ³ Ù ³ 1»ÍÇ ÷ áùñ ; »Ã» Ñ³ Ù»Ù³ i »ÍáðÙ³ ÍÇÝ»Ýù  
 Ùë³ áéÍñ³ ÚçÝ ³ Ù ÕÍÝ³ ÚçÝ ³ ÏÁñÁ Ñ»í :

Àëi Ì<sup>1</sup>»ñç . Çi ³ N»i ³ ½i ³ Ì<sup>3</sup> Y ÇYëi Çi áoi Ç i 1Ü<sup>3</sup> H»ñç (ÁI ÈÈ êi ðì 1â) ³ ÑY<sup>3</sup> Y<sup>3</sup> ó<sup>3</sup> Y Ì<sup>3</sup> Yxñ<sup>3</sup> ÌÇ ãan ÝlåðAðU à<sup>3</sup> ñáð<sup>3</sup> IíáðU ; 25,6% ãnai ÇY, Nlæœí<sup>3</sup> IùY»ñ - 21,4%, lðð<sup>3</sup> - 5,1%, ÙlaËçñ<sup>a</sup> 14,7%, ³ ½i ³ ñáð<sup>3</sup> Iáð ðuei ñ<sup>3</sup> Ìi Çí YlåðA»ñ<sup>a</sup> 33,1%, yáëyáñ<sup>a</sup> 0,61%, Ì<sup>3</sup> Íçáð<sup>a</sup> 3,5%, Ì<sup>3</sup> Íçáð<sup>a</sup> 1,8% " 421 Ù./Ì. Ì<sup>3</sup> ñái ÇY: ¶<sup>3</sup> ñY<sup>3</sup> Y<sup>3</sup> ó<sup>3</sup> Y<sup>3</sup>  
¹»áuáðU Ñ<sup>3</sup> Ù<sup>3</sup> à<sup>3</sup> i ³ èE<sup>3</sup> Y<sup>3</sup> µ<sup>3</sup> ñ<sup>19,3; 18,3; 4,8; 14,1; 48,7; 0,4; 4,1; 1,6" 271 Ù./Ì. :</sup>

2 **ßÝ**<sup>3</sup> Á Y<sup>3</sup> ÿ<sup>3</sup> ñ<sup>3</sup> I<sup>3</sup> ó<sup>3</sup> Yú»ñÁ I<sup>3</sup> ñ»Í<sup>3</sup> ï<sup>3</sup> ü<sup>3</sup> i<sup>3</sup> áñÍ<sup>3</sup> É<sup>3</sup> YÙÇç<sup>3</sup> I<sup>3</sup> Yáñ»Ý Çµñ<sup>3</sup> ñá-  
í<sup>3</sup> i<sup>3</sup> û<sup>3</sup> ð<sup>3</sup> ï<sup>3</sup> á»ë<sup>3</sup> Ú<sup>3</sup> áÇëç<sup>3</sup> ñáï<sup>3</sup> i<sup>3</sup> û<sup>3</sup> ñáðÚ Ë<sup>3</sup> í »Ý ñ<sup>3</sup> ÍáðÚ Èáßáñ »Óç<sup>3</sup> ñ<sup>3</sup> íáñ  
3 Ý<sup>3</sup> éáðÝ»ñç Ù<sup>3</sup> i<sup>3</sup> ð<sup>3</sup> ßÍ<sup>3</sup> ñÁ<sup>3</sup> ááÈ<sup>3</sup> ñÝ<sup>3</sup> ñÁ<sup>3</sup> á<sup>3</sup> ñÁ<sup>3</sup> Y<sup>3</sup> éáðÝ»ñÁ<sup>3</sup> ñ<sup>3</sup> Í<sup>3</sup> óÝ<sup>3</sup> é<sup>3</sup> íái<sup>3</sup> Ú<sup>3</sup> Y<sup>3</sup>  
Á<sup>3</sup> Ù»ñCÝ »ÓÜ<sup>3</sup> ÚC á<sup>3</sup> i<sup>3</sup> éáí<sup>3</sup> YÙÇç<sup>3</sup> á»ë<sup>3</sup> YÓñ<sup>3</sup> CÓ ñ<sup>3</sup> i<sup>3</sup> á:

Ü<sup>3</sup> Eİ̄ÇÝ êêDØ-áðü é<sup>3</sup> lâÝ<sup>3</sup> óí<sup>3</sup> İ̄ <sup>3</sup> ïñ<sup>3</sup> bÝ<sup>3</sup> Ý<sup>3</sup> ó<sup>3</sup> Ý̄ İ̄<sup>3</sup> Ýxñ<sup>3</sup> İ̄ç̄ 14 eáñī . ī ÇÝÇóÙ<sup>3</sup> Ý̄ 15/59, ī ¾Ø, AEí<sup>3</sup> Yái á-üñ<sup>3</sup> Yái eí̄ç̄, <sup>3</sup> nñÙ<sup>3</sup> Yéï̄ç̄, İ̄ Ç̄ eí̄ç̄ 18, Øç̄ī Yçóï̄ç̄ 2, Ü»Ù»ñç<sup>3</sup> Yéï̄ç̄, äñäÙç̄Ý̄, êÝç̄ī ÇYéï̄ç̄ (êêDØ e»E»Ī ïóçáÝ̄ eáñī »ñ), ¶ññ<sup>3</sup> Yí̄, İ̄ 1çÝ̄<sup>3</sup>, ¶ññç<sup>3</sup>, ¾¹ç̄ī<sup>3</sup> (¶»ñÙ<sup>3</sup> Yç<sup>3</sup> Üç̄ ü»<sup>1</sup> »ñ<sup>3</sup> ī Çí̄ D<sup>3</sup> Ýñ<sup>3</sup> à»ī áðÙÙ<sup>3</sup> Ȳ e»E»Ī ïóçáÝ̄ eáñī »ñ) " Úáðäç̄ī »ñ (Pí̄<sup>1</sup>ç<sup>3</sup> Üç̄ e»E»Ī ïóçáÝ̄ eáñī ):

éêðø-áðð ÉÝ¹çñ ²ñí³ Í, áñà»ë¹ç ³Íxñ³ íç ë»É»íóç³ Úççáóáí ëi »ÓÍí»çÝ  
ëáñi »ñ, áñáYú áðð»Y³ ÚçÝ ²ñáðð³ ÚçÝ ÁÁÍç áo · Hñáðð Á¹çÝ³ É³ i Y»ñç ÷ áùñ á³ ñáðð³ -  
Íáðð Áñðð: ² Ú éáñi ç ³Íxñ³ íç ë»ñlÙ»ñÁ áðð»çÝ¹ »ÓçÝ · áðð: »ÓY³ íáðð ë»ñlÙ»ñç éáñi »ñç  
³í »Íç B³ i Úñðð, áñáï »çÝ áo ÷ áùñ ù³ Y³ Íáðð Ú³ Ùµ µçç³ Yññðð »Y à³ ñáðð³ Íáðð, ù³ Y ë·  
· áððYç ë»ñlÙ»ñÁ:

Î<sup>3</sup> Ù<sup>3</sup> Ý<sup>3</sup> ÍÇ Ó<sup>3</sup>ÀÇ áñ<sup>3</sup> ÍÁ<sup>3</sup> Ù<sup>3</sup> Ý<sup>3</sup> µ<sup>3</sup> ñÔñ<sup>3</sup> ÍÍÇÝÇ, áñù<sup>3</sup> Ý<sup>3</sup> ÙÇã<sup>3</sup> ÍÍÇÝÇ Ýñ<sup>3</sup> à<sup>3</sup> ñáÖÝ<sup>3</sup> -  
ÍáÖÜÙáÖÜÙÍÇÝáÈÝ<sup>3</sup> ÙÇÝ<sup>3</sup> ÅÄáÖÜÙáÖÜÙÍÇÝ<sup>3</sup> ÙÇÝ<sup>3</sup> ÅÄáÖÜÙÍÇÝ<sup>3</sup> ÙÇÝ<sup>3</sup> ÅÄáÖÜÙÍÇÝ<sup>3</sup> »ñÁ:

<sup>2</sup> ñí <sup>3</sup> è<sup>3</sup> NÙ<sup>3</sup> YÙ<sup>3</sup> Ý «» È<sup>3</sup> ÍoÇ<sup>3</sup> Üç<sup>3</sup> èáñi<sup>3</sup> »ñÁ <sup>1/2</sup> ñÍ <sup>3</sup> ÇÝ <sup>3</sup> ñáðí<sup>3</sup> Üç<sup>3</sup> ÁÄÍ Çó, Çé<sup>3</sup> êéÐØ-Ç  
ë<sup>3</sup> » È<sup>3</sup> ÍoÇaÝ<sup>3</sup> èáñi<sup>3</sup> »ñÇó <sup>1</sup> <sup>3</sup> Ø-Á, äñáÜçÝÁ<sup>3</sup> áðÝ<sup>3</sup> » Ý <sup>3</sup> ñáðí<sup>3</sup> Üç<sup>3</sup> ÁÄÍ Ç ó<sup>3</sup> Íñ <sup>1</sup> à<sup>3</sup> ñáðÝ<sup>3</sup> IáðÜñáðÝ<sup>3</sup>:  
Í <sup>3</sup> Ýxñ<sup>3</sup> Iç<sup>3</sup> ÜÙ<sup>3</sup> IáðÜÁ <sup>3</sup> ñí<sup>3</sup> è<sup>3</sup> NÙ<sup>3</sup> YáðÜ<sup>3</sup> Çñ<sup>3</sup> I<sup>3</sup> Ý<sup>3</sup> óYáðÜ<sup>3</sup> » Ý <sup>3</sup> Ù<sup>3</sup> Í <sup>3</sup> IáÝó<sup>3</sup> » Í <sup>3</sup> ñí<sup>3</sup> ðó<sup>3</sup> Üç<sup>3</sup> Üç<sup>3</sup>  
Ü<sup>3</sup> èÇí<sup>3</sup> Ý<sup>3</sup> »ñáí<sup>3</sup> ó<sup>3</sup> Ýù<sup>3</sup> i<sup>3</sup> ññ<sup>3</sup> IáðÜñáðÝ<sup>3</sup> »ñáðÜ<sup>3</sup>: <sup>2</sup> Üé<sup>3</sup> <sup>3</sup> Ù<sup>3</sup> ÝÁ <sup>3</sup> ÁáðÜÉ<sup>3</sup> <sup>3</sup> i<sup>3</sup> Üç<sup>3</sup> Üç<sup>3</sup> è<sup>3</sup> È  
Ù<sup>3</sup> » Ý<sup>3</sup> Ü<sup>3</sup> óí<sup>3</sup> Í <sup>3</sup> i<sup>3</sup> » È<sup>3</sup> Yáñá. Ç<sup>3</sup> I<sup>3</sup> Ý <sup>3</sup> è<sup>3</sup> ñú<sup>3</sup> IáñáðÜÝ<sup>3</sup> » ñ: <sup>3</sup> ð<sup>3</sup> i<sup>3</sup> Ü<sup>3</sup> Üç<sup>3</sup> I<sup>3</sup> Ý <sup>3</sup> <sup>3</sup> ñí<sup>3</sup> » Ý<sup>3</sup> · áÜñáðÜñáðÝ<sup>3</sup>  
ááðÜ<sup>3</sup> » óáðÜ<sup>3</sup> ¶, <sup>3</sup> ð-Ç <sup>3</sup> ÷ <sup>3</sup> áññÁ: <sup>2</sup> Ü<sup>3</sup> » ñíñáðÜ<sup>3</sup> 1982Á.-Çó 1985 Áí<sup>3</sup> I<sup>3</sup> ÝÝ<sup>3</sup> »ñÇÝ<sup>3</sup> I<sup>3</sup> Ýxñ<sup>3</sup> Iáí<sup>3</sup>  
<sup>1/2</sup> ñí<sup>3</sup> Ü<sup>3</sup> óí<sup>3</sup> Í <sup>3</sup> ; ÇÝ<sup>3</sup> » ñíñC<sup>3</sup> áññC<sup>3</sup> ÜÙ<sup>3</sup> I<sup>3</sup> áññC<sup>3</sup> ÜÙ<sup>3</sup> I<sup>3</sup> Ù<sup>3</sup> »ñC<sup>3</sup> 12%-17%-Á [2]:

<sup>2</sup> é<sup>3</sup> ÝÓCÝ i Ýi »éáðAðaðÝ»ñáðU Í<sup>3</sup> Ýxñ<sup>3</sup> Iái ¼<sup>3</sup> Õ»óí<sup>3</sup> Í :ñ ÙB<sup>3</sup> Iiáð Náð<sup>3</sup> i <sup>3</sup> n<sup>3</sup> ÍuÝ»ñC  
25-33%-Á: AÉSÉáðU i <sup>3</sup> Ú Í<sup>3</sup> nÍ ÇùÁ, áñ <sup>3</sup> é<sup>3</sup> ÝÓCÝ i Ýi »éáðAðaðÝ»ñáðU, »Á» Í<sup>3</sup> Ýxñ<sup>3</sup> Iái  
¼<sup>3</sup> Õ»óíáðU i <sup>3</sup> ÙB<sup>3</sup> Iiáð Náð<sup>3</sup> i <sup>3</sup> n<sup>3</sup> ÍuÇ ÙçYä· 10%, <sup>3</sup> á<sup>3</sup> <sup>3</sup> Ú àçëç Í<sup>3</sup> i<sup>3</sup> Í»ñÁ  
i Ýi »ë<sup>3</sup> à»ë» Í<sup>3</sup> Uí <sup>3</sup> u»ñ ICÝ»Eä»Ý Í<sup>3</sup> ñáð:

Üñ<sup>3</sup> Ÿéç<sup>3</sup> óçý»ñç ÷ áñôá, áñá ūáñ<sup>3</sup> íí»é ð 12 i<sup>3</sup> ñçý»ñç áýá<sup>3</sup> óúáðú, ýçüëáðú ð, áñ  
ó<sup>3</sup> ýù<sup>3</sup> sñç<sup>3</sup> ý<sup>3</sup> éacðáð<sup>3</sup> ý ù»ç i<sup>3</sup> ý<sup>3</sup> ñ<sup>3</sup> íç ó<sup>3</sup> ýùëá í<sup>3</sup> ïáðú ð 50% .. ùý<sup>3</sup> ó<sup>3</sup> í 50%<sup>a</sup> ñ<sup>3</sup> ó<sup>3</sup> -  
ñ<sup>3</sup> i<sup>3</sup> çíá: <sup>2</sup> û áçëç á<sup>3</sup> ûí<sup>3</sup> ýý»ñáðú í<sup>3</sup> ý<sup>3</sup> ñ<sup>3</sup> íç ë»ñùç µ»ñù<sup>3</sup> i<sup>3</sup> ááñáðýá ñ»íí<sup>3</sup> ñçó ñ<sup>3</sup> èýáðú  
ð 22-26 ó»ýí ý»ñ:

¶ ÜÐ-áðÙ Ñ³ Ù³ ñáðÙ »Ý, áñ ÁÝ¹Ñ³ Ýáññ ó³ Ýù³ ßñç³ Ý³ éáðñáðÝáðÙ ÁÝ¹áðÝ»Íç { ï³ Ý-  
xñ³ ïç ó³ ÝüéÁ á³ Ñ»É30% ë³ ÑÙ³ ÝÝ»ñáðÙ:

Ó<sup>3</sup> Ýu<sup>3</sup> Rñc<sup>3</sup> Ý<sup>3</sup> éáoÃlāðÝáðU Í<sup>3</sup> Ýxñ<sup>3</sup> I<sup>1</sup> »ñÝ áóÝB<sup>3</sup> Ý<sup>3</sup> IáðÃlāðÝÁ Í<sup>3</sup> Ú<sup>3</sup> ÝáðU ï<sup>3</sup> Ýñ<sup>3</sup> ÝáðU, áñ  
µ<sup>3</sup> ñÓñ<sup>3</sup> óÝáðU ï<sup>3</sup> NáÓç µ»ñù<sup>3</sup> i<sup>1</sup> IáðÃlāðÝÁ, Çç»óÝáðU <sup>13</sup> Bi<sup>1</sup> »ñç ÙáÉ<sup>3</sup> Éáí áí à<sup>3</sup> i<sup>1</sup> í»ñlõ  
í Áí<sup>3</sup> Ý. Ý áó<sup>3</sup> á<sup>3</sup> Náí áðU e»ñù»ñç µ<sup>3</sup> ñÓñ µ»ñù<sup>3</sup> i<sup>1</sup> IáðÃlāðÝ:

Í ³ Ý×ñ³ ïÁ ¹ñ³ ï³ Ý ³ Ý·ñ· áñÍáðÙ ñáðC yçí ñáé³ Íçí ³ ñ³ ï³ Í³ Ý ¹çx³ ïç ¹ñ³,  
 µ³ ñÓñ³ óÝáðÙ ³ ó·Íç ³ ñ¹ ïáðY³ 1» i áðAñáðY Á YáðY i » ÓáðÙ ÙB³ Íáð Ñ»i ³ . 3 . ïáðY³ ·  
 i Ýi » ë³ ï³ Ý ïáðH ám³ Ý»ñç Ñ³ Ù³ ñ: ¶çí ³ ï³ Ý Ñ»i ³ ½ai áðAñáðY»ñáí · áñÍY³ ï³ YáðÙ  
 ³ à³ óáðóí»É ³ Ý×ñ³ ïç ³ ïçñ³ éÙ³ Ý ³ Ýññ³ Å»bi áðAñáðY Ñ³ ó³ Ñ³ i çí ³ ïçY  
 ïáðH ám³ Ý»ñç ó³ Ýù³ ñç³ Ý³ éáðAÙB Ý Ù»ç:

Ó»Ã³ i áõÍ³ Ýxñ³ ÍÁ³ x»óÝáðÙ »Ý ã³ ÷³ íáñ óáññí ÍÍçÙ³ ëáí Ðñáæçé³ ÛçÝ oíñáá³ ïáðÙ:  
2 ßÝ³ Ý³ ó³ Ý Í³ Ýxñ³ ÍÁ ó³ ÝíáðÙ ï û. áëi áëç í»ñççÝ " e»ài »Ùµ»ñç ³ é³ cççÝ  
í ³ eÝûññÙ³ ÍáðÙ: ¶³ ñÝ³ Ý³ ó³ Ý Í³ Ýxñ³ ÍÁ Ðñáæçé³ ÛçÝ oíñáá³ Ûç »ñññÝ»ñáðÙ ó³ ÝíáðÙ ï  
Ù³ ñi ç í»ñççÝ áõ ³ àñçÍç eÍ½µÝ»ñççÝ, çëÍ µ»ñùÁ Ñ³ í ³ ùíáðÙ ï û. áëi áëç Í»e»ñçó ÙçÝä·  
e»ài »Ùµ»ñ:

Í<sup>3</sup> Ýxñ<sup>3</sup> İç (00) eáñii Á<sup>3</sup> ×óíáðÙ i Çüñ<sup>..</sup> eÝÝ<sup>13</sup> ÝkáðÁ áð à<sup>3</sup> ñáðY<sup>3</sup> IáðÙ i ó<sup>3</sup> Íñ Ù<sup>3</sup> Í<sup>3</sup> ñ<sup>13</sup> İç (eáíáñ<sup>3</sup> µ<sup>3</sup> ñ ÙçÝá<sup>..</sup> 1%) ñáðÙ<sup>3</sup> ÜçÝ ÁÁáð (áñÁ<sup>1</sup> Áí<sup>3</sup> ñáðÁ<sup>3</sup> Üµ i lâð<sup>3</sup> óíáðÙ Ù<sup>3</sup> ñ<sup>1</sup>áð ûñ<sup>..</sup> Ýç<sup>1</sup> ÙáðÙ, áð . Üñáð äéçÝáÉ<sup>3</sup> i Ç ó<sup>3</sup> Íñ Ù<sup>3</sup> Í<sup>3</sup> ñ<sup>13</sup> İ (ÍÍÜµç à<sup>3</sup> ñáðY<sup>3</sup> IáðÁlâð<sup>3</sup> Á<sup>13</sup> ñÓÝáðÙ i üÁ<sup>3</sup> Ý<sup>13</sup> İ ÝkáðÁ Á<sup>3</sup> Ý<sup>3</sup> eáðÝÝ»ñç Ñ<sup>3</sup> Ù<sup>3</sup> ñ<sup>3</sup> Ý<sup>3</sup> ñéáØ<sup>3</sup> İ<sup>3</sup> Ý): (00) İ<sup>3</sup> Ýxñ<sup>3</sup> İç eáñii Á à<sup>3</sup> ñáðY<sup>3</sup> IáðÙ i Ù<sup>3</sup> ñ<sup>1</sup>áð Ñ<sup>3</sup> Ù<sup>3</sup> ñ<sup>..</sup> i<sup>3</sup> · áñÍ»Íç Üñáð, ÇÝäà»ë Ý<sup>3</sup> .. Ñ<sup>3</sup> Ý<sup>1</sup> Çë<sup>3</sup> ÝáðÙ i<sup>3</sup> Ý<sup>3</sup> eáðÝÝ»ñç Ñ<sup>3</sup> Ù<sup>3</sup> ñ<sup>..</sup> áñäi »ÇÝç µ<sup>3</sup> ñÓñ à<sup>3</sup> ñáðY<sup>3</sup> IáðÁÜ<sup>3</sup> Üµ eÝÝ<sup>13</sup> ÜñáðÁ:

<sup>2</sup> ñ<sup>1</sup> ïäöY<sup>3</sup> ï»ñ<sup>3</sup> ï<sup>3</sup> Y ïçñ<sup>3</sup> éáðüäöY Á Y»ñ<sup>3</sup> éYáðù ; <sup>1</sup> »ð<sup>3</sup> . áñÍáðüäöY Á oñç<sup>1</sup> ñáðüäöÁ:

Í ³ Ý×ñ³ İÇ µ³ ñÖñ ÿñáö³ ÚçY ÄÄáó à³ ñáöY³ İáÖ eáñi »ñÁ ³ ×»óíáðU »Ý ÿñáö³ ÚçY ÄÄíÇ à³ i ×³ éáí ² 50-60% ïäðU ; à³ ñáöY³ İáðU: 1995 Äí ³ İ ³ YçY oíñáà³ ïäðU 36423 Ñ³ -ç íñ³ ³ ×»óíáðU ; ñ N»Ýó ³ ïe eáñi Ç İ ³ Ý×ñ³ İÁ, áñçó 13234 Ñ³ -ÝaØ»Í ¹ ñçi ³ Yç³ ïäðU:

1997 Áí³ Í³ ÝÇ ó³ Ýù³ i ³ ñ³ ÍáõÙãoÝÝ»ñÇ µ»ñù³ i íáõÙaoÝÁ

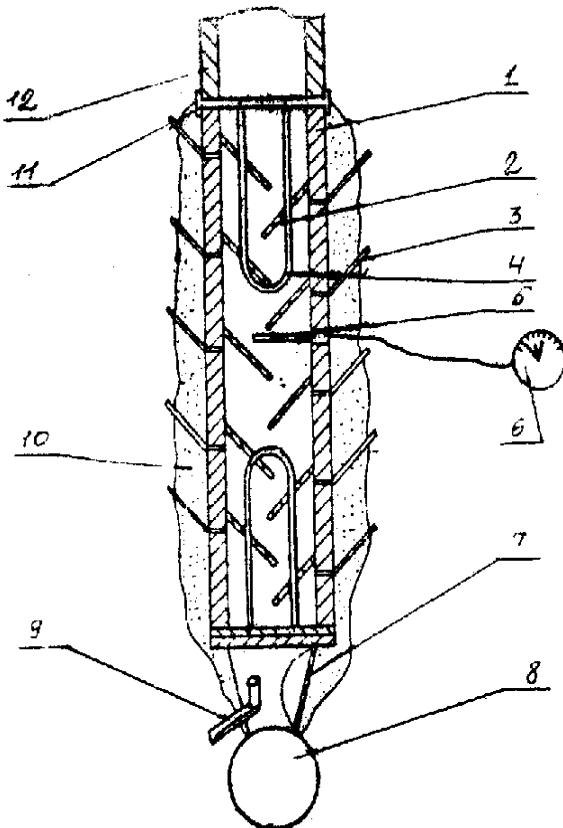
<b>2 íëi ñç³</b>	<b>54,90</b>	<b>1,86</b>
<b>1 »É Ç³ /Èláné» Ùpáñ·</b>	<b>8,00</b>	<b>2,75</b>
<b>3 Ýç³</b>	<b>106,0</b>	<b>2,78</b>
<b>üñ³ Ýéç³</b>	<b>61,5</b>	<b>3,53</b>
<b>üçÝÉ³ Ý¹ç³</b>	<b>988,00</b>	<b>1,50</b>
<b>¶ »ñÙ³ Ýç³</b>	<b>918,00</b>	<b>3,10</b>
<b>Đáð³ eëi ³ Ý</b>	<b>i í Ú³ É»ñ ái³ Ý</b>	<b>i í Ú³ É»ñ ái³ Ý</b>
<b>AéÉ³ Ý¹ç³</b>	<b>4,00</b>	<b>2,50</b>
<b>Aëi ³ Íç³</b>	<b>40,30</b>	<b>1,99</b>
<b>Üç¹»éÉ³ Ý¹Ý»ñ</b>	<b>1,00</b>	<b>3,00</b>
<b>äáñi áó ³ Íç³</b>	<b>i í Ú³ É»ñ ái³ Ý</b>	<b>i í Ú³ É»ñ ái³ Ý</b>
<b>Aëà³ Ýç³</b>	<b>48,70</b>	<b>1,54</b>
<b>Pí»¹ç³</b>	<b>63,00</b>	<b>1,91</b>
<b>Øç³ óÚ³ É</b> <b>Á³ . ³ íáñáðÁñðý</b>	<b>414,00</b>	<b>3,50</b>

(ÆÝáñÙ³ óç³ Ûç ³ ÕmuñáñÁ FAO 1997)

Í ³ Ýxñ³ Íç ́Ó»Áç ³ nñi ³ 1ñáðÁÚ³ Ý i »ÉÝáñ·ç³ Í³ Ý . ÍáðÙ Íçñ³ éáðÙ »Ý e»ñÙ»ñç i ³ û³ óÙ³ Ý »õ³ Ý³ ÍÝ»ñÁ [3]:

ñ³ Ñ³ Ù³ ñ eëi »õÍ»É " û· i ³ ·áñÍáðÙ »Ý ïÉ i ñ³ Ë³ ñÍçä, áñÁ ÁáðÉ ï i ³ Íçë Í ³ Ýxñ³ Íç ́Ó»Áç ³ Ýç³ i áðÙÁ ³ i »É³ óÝ»É 5-6%-áí +80°C +90°C e»ñÙ»ñÁ i ³ û³ óÝ»ñáõ ¹»áùáðÙ: ² Üçñ³ Í³ Ý³ óí»É ï SÐ³ ÝÝ³ | eáñi ç Í³ Ýxñ³ Íçó Ó»Á Ñ³ Ý»ñáõ ¹»áùáðÙ Èçà»óÍç ¶çí ³ Ñ»i ³ ½ai ³ Í³ Ý ßè³ áë! Ó»éÝ³ ñÍáðñáðÙ: Í ³ Ýxñ³ Íç e»ñÙ»ñÁ Ñ³ Ù³ á³ i ³ eË³ ÝáðÙ ðçÝ ÁÍ ÑÒ 10583-76:

¾»Íi ñ³ Ë³ ñÍçá (i »ë ÉÍ.1) µ³ Õi³ ó³ Í ðçñ³ Ýçó (1), áñç Ý»ñùçÝ Íáð³ ÛçÝ Ñ³ ñ ÁáðñáðÝ»ñç i ñ³ ½i »õÍ³ Í »Ý ³ ñ³ ÍÝ»ñ (2), áñáÝù ÁáðÉ»Ý i ³ Íçë Í³ Ýxñ³ Íç e»ñÙ»ñç Ñ³ i ³ e³ ñ³ ã³ ÷ i »õ³ ÷ áÉáðÙÁ ç»ñÙ³ Éóáí ß³ ñÁí»ñáõ Á³ Ù³ Ý³ Í: ñ³ ñ³ ÍÝ»ñç i ³ Í Ý³ Ë³ i »ëí³ Í »Ý³ Ýóù»ñ û¹Á ù³ ßáõ Éáðáí³ ÍÝ»ñáí (3), áñáÝó Ùççáí e»ñÙ»ñç ááñ³ óÙ³ Ý Á³ Ù³ Ý³ Í Ñ»é³ óíáðÙ ð ·áñññçÝ: Añ³ Ýç Ù»ç »ñÍáõ ÍáðÙ»ñçó Í³ ñí³ Í »Ý Éáðáí³ Í³ ÚçÝ ç»éáðçáÍ»ñá ÒÝÍ (4): e»ñÙ»ñç Ñ³ Ù³ ñ Ý³ Ë³ i »ëí³ Í ç»ñÙ³ eç×³ ÝÁ á³ Ñá³ ÝíáðÙ ð ³ i i áÙ³ i áñ»Ý ç»ñÙ³ eëi ç×³ Ý³ ÛçÝ (5) i íçäç áóç»ñÙ³ Í³ ñ· ³ íáñçäç Ùççáóáí (6):

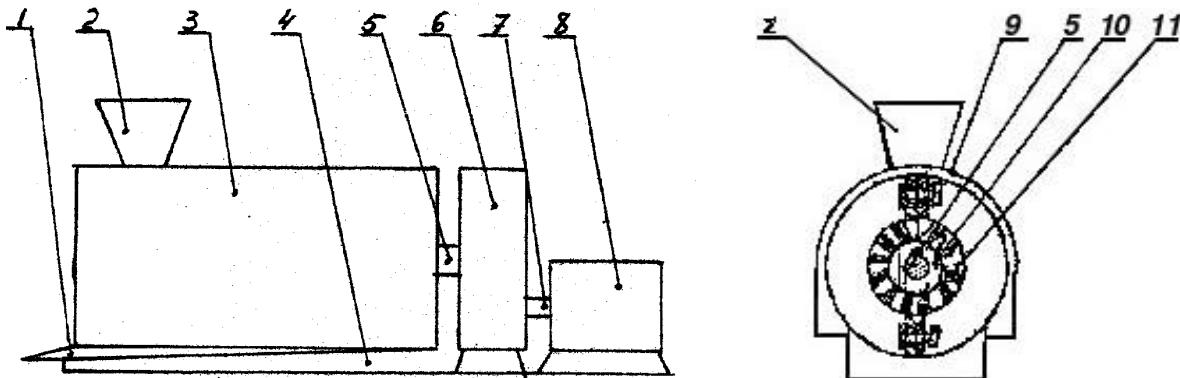


1.  $\hat{I}^3 \tilde{Y} \times \tilde{n}^3 \tilde{I} \tilde{\zeta} \tilde{e} \gg \tilde{n} U \gg \tilde{n} \zeta \tilde{I}^{-3} \tilde{u}^{-3} \tilde{o} U^{-3} Y N^{-3} U^{-3} \tilde{n} I \tilde{\zeta} \tilde{n}^{-3} \tilde{e} \tilde{i} \tilde{a} U \tilde{e} \tilde{b} I \tilde{I}^{-3} \tilde{E}^{-3} \tilde{n} I \tilde{\zeta} \tilde{a}$

3/4»Í i ñ<sup>3</sup> È<sup>3</sup> níÇäç Çñ<sup>3</sup> Ýç áõ (8) Ù<sup>3</sup> ÙÍçäç Ùçç.. ½»i »Ói<sup>3</sup> Í ï µ»éÝ<sup>3</sup> íáñÙ<sup>3</sup> Ý (7) iáÝ  
ÝÙáðß<sup>3</sup> 3 Ýç<sup>3</sup> i ÇäÝ»náí (9): 3/4»Í i ñ<sup>3</sup> È<sup>3</sup> níÇäÝ áõ µ»éÝ<sup>3</sup> íáñÙ<sup>3</sup> Ý iáÝÁ ßñç<sup>3</sup> ï<sup>3</sup> ûçó  
Ù»Íäœ<sup>3</sup> óí<sup>3</sup> Í »Ý<sup>3</sup> á<sup>3</sup> i»Ã»È<sup>3</sup> ÙçÝ ií áñÝ»náí (10) ç»ñÙ<sup>3</sup> ÙçÝ iáñäœiÝ»ñÁ Ý<sup>3</sup> ½»óÝ»iäo  
ñ<sup>3</sup> Ù<sup>3</sup> ñ: áñà»ëíç µ<sup>3</sup> ó<sup>3</sup> éíç i<sup>3</sup> á<sup>3</sup> Íøáô (12) ÷ áññ<sup>3</sup> iç áõ µ»éÝ<sup>3</sup> íáñÙ<sup>3</sup> Ý iáÝ i<sup>3</sup> ù<sup>3</sup> óáðùá,  
1/ñ<sup>3</sup> Ýó ióán<sup>1</sup> Ù<sup>3</sup> Ý ñ<sup>3</sup> ñááðáñáðú áõ ï»Í i ñ<sup>3</sup> È<sup>3</sup> níÇäç Çñ<sup>3</sup> Ýç Ùçä.. Ý<sup>3</sup> È<sup>3</sup> i »éí<sup>3</sup> Í »Ý  
ñ<sup>3</sup> 1çÙ<sup>3</sup> óÍáðÝ ç»ñÙ<sup>3</sup> Ù»ÍäœÇäÝ»ñ (11):

Í ³Ýxñ³ Í ³»óÝáÔ èáæe³ eï ³Ýç i »ëáôÜôóÝ»ñáðÙ Íçñ³ éí »É»Ý Í ³Ýxñ³ Íç ô»Áç áô  
ùáæeàç ³ñi ³ 1ñáðÜ³ Ý e³ ñu³ 1ñáðÙ [4]:

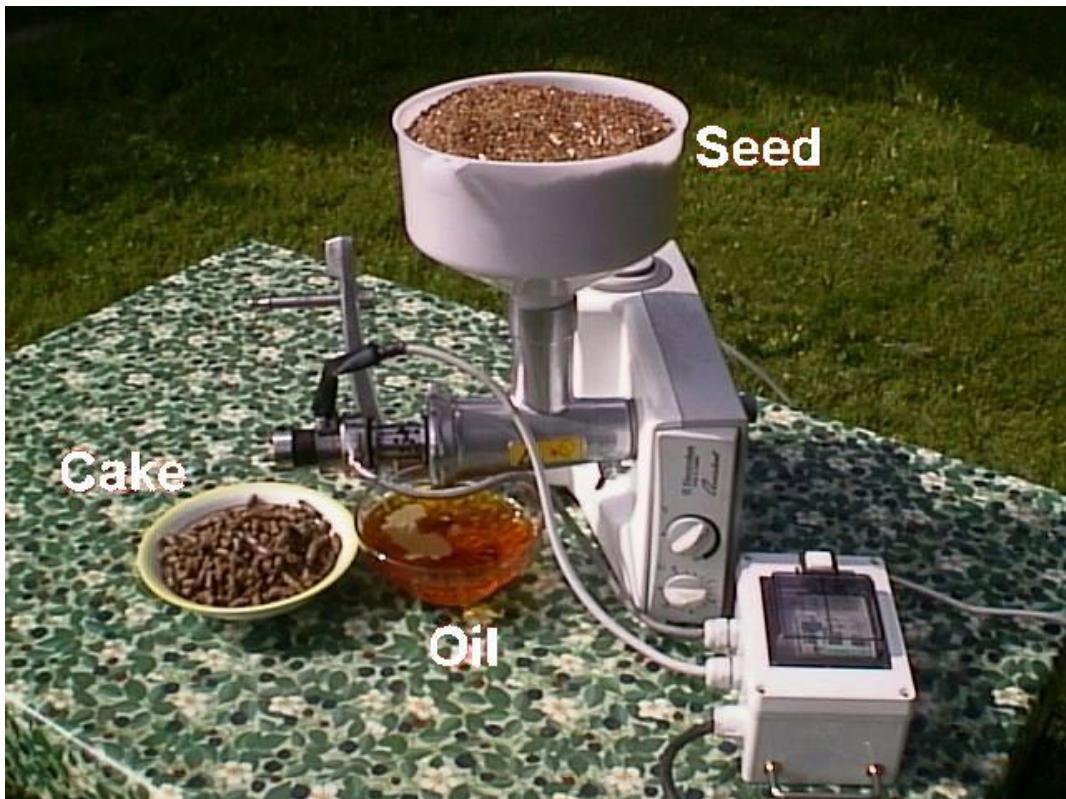
<sup>2</sup> У<sup>1</sup> ё<sup>3</sup> нù<sup>3</sup> í аñáðú` äPØ-250 (ÝI. 2) Çñ»ÝÇó Ý»ñÍ<sup>3</sup> Ù<sup>3</sup> óÝáðú ; У<sup>3</sup> ÙÍçä ÈóÇÍ 3, е»<sup>1</sup> áðí-  
í аñ 6, ꙗÍ<sup>1</sup> н<sup>3</sup> В<sup>3</sup> нАçä 8: Ø<sup>3</sup> У<sup>3</sup> ÈóÇÍÁ µ<sup>3</sup> ØÍ<sup>3</sup> ó<sup>3</sup> И ; И<sup>3</sup> ИÍáðАçó 9, 10 БÝ»Íçó, БÝ»Íç  
Кé»éÇó 5, е»<sup>1</sup> áðíí аñÇ Кé»éÇó 7, Наíáõ В<sup>3</sup>ñí<sup>3</sup> ÓáОÇÍÝ»ñáí е»Óúáõ Çñ<sup>3</sup>Ý 11,  
µ»éÝ<sup>3</sup> íаñУ<sup>3</sup>Ý ÷ аññ<sup>3</sup> И 2, О»Аç Н»é<sup>3</sup> óÙ<sup>3</sup>Ý 1 µ<sup>3</sup> ùÇó `` уáðеáÇ Н»é<sup>3</sup> óÙ<sup>3</sup>Ý 4 АÝ<sup>1</sup>Ý<sup>3</sup> Кó:



2. ä PØ-250 i »Ø³ Ì³ Ø³ ÝùÇ eÈ»Ù³ Ý

Ó»Á Á „ úáœéàÁ éii ³ÝáðÙ »Ý ³é³Ýó Ý³ ÈÝ³ Í³Ý í ³ù³ óÙ³Ý: 1 í áÝÝ³ Í³Ýxñ³ IÇó  
éii ³óíáðÙ; 200 Í. Ó»Á „ 800 Í. úáœéà:

Ü»ñí<sup>3</sup> ñáðüé Ó»ÁÇ Ü<sup>3</sup> ÜÍçäÝ»ñí Ç µ<sup>3</sup> ½áðU Í<sup>3</sup> éáðóí<sup>3</sup> ÍùÝ»ñ · áñáðñáðñÝ áðÝ»Ý, i<sup>3</sup> ñí»ñ<sup>3</sup> ñí<sup>3</sup> ½ñáðñ<sup>3</sup> Í<sup>3</sup> YáðñÜ<sup>3</sup> Y áð i<sup>3</sup> ñí»ñ B<sup>3</sup> ñáð<sup>3</sup> µ»ñÝ»ñáí, eí Í<sup>3</sup> Í ÷ áùñ<sup>3</sup> eí ëçÝùñáY B<sup>3</sup> ñáðçäÝ»ñí Çó, áñáYù Íçñé<sup>3</sup> íáðU »Ý Ëáñ<sup>3</sup> Yáð<sup>3</sup> ÜçÝ ÍáÙµ<sup>3</sup> ÜÝ»ñáðU, ÜçÝá<sup>3</sup> Ç<sup>1</sup>/»É<sup>3</sup> ÜçÝ B<sup>3</sup> ñáðçäÝ»ñáí B<sup>3</sup> ñáð<sup>3</sup> µ»ñÝ»ñáí: eí áñ<sup>3</sup>, YÍ<sup>3</sup> ñ 3-áðU, 4-áðU<sup>3</sup> 5-áðU µ»ñí<sup>3</sup> Í »Ý 1ñ<sup>3</sup> Yóçó Üç ù<sup>3</sup> YçéÁ. Rí<sup>1</sup> »Í<sup>3</sup> Y SKEPSKTA MASKIN AB. VEG-Conversion, VEG-TUNING ÁÝÍ»ñáðñÜ<sup>3</sup> Y<sup>3</sup> ñí<sup>3</sup> ½ñáðñáðñÁ:

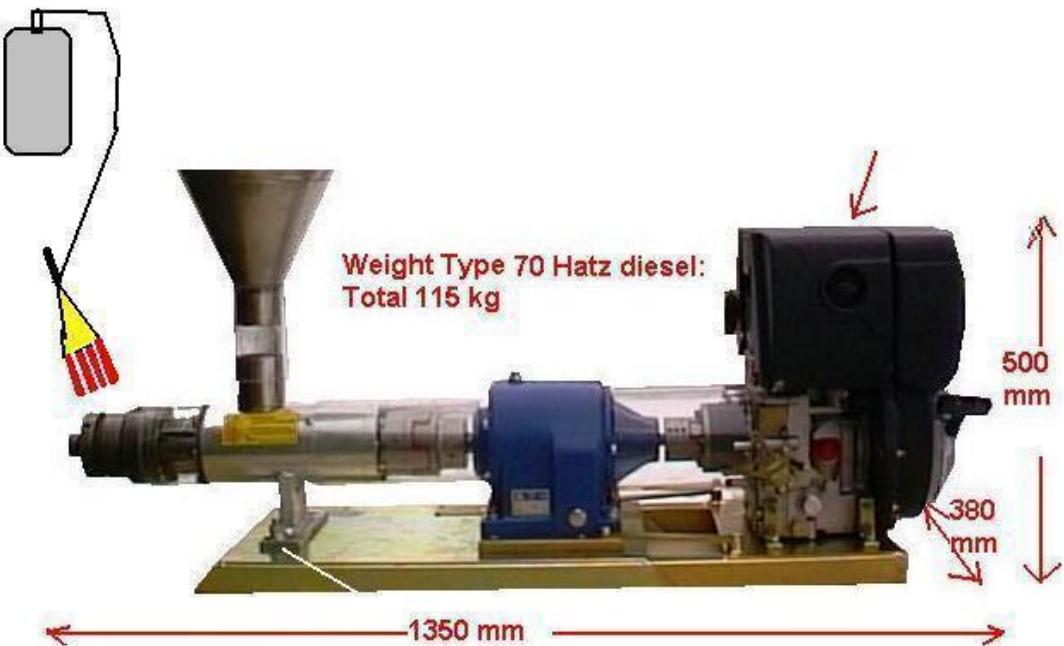


3. Type 20 **Þí**<sup>13</sup> **Í**<sup>3</sup> **Ý** Ó»**Á****C** **BÝ**»**Í**<sup>3</sup> **Ú****CÝ** **Ù**<sup>3</sup> **Ù****Cã**, **á****nA** **N**<sup>3</sup> **ñ****Ù**<sup>3</sup> **ñ**»**ó****í**<sup>3</sup> **Í** **ç** **%****E**»**Í**<sup>3</sup> **ñ**<sup>3</sup> **H****á****ñ****ú****e** **A****Ý**»**ñ****á****ð****Ù**<sup>3</sup> **Ý** **É****ñ****A**<sup>3</sup> **Ý****á****ð**<sup>3</sup> **Ù****CÝ** **Í****a****Ù****µ**<sup>3</sup> **Ù****CÝ**:



4.  $\hat{E}^3 \acute{E}^3 \acute{A} \hat{U}^3 \hat{U}\hat{M}^3$   $\hat{Y} 55 i \hat{C} \hat{a} \hat{C} \hat{B} i$ <sup>13</sup>  $\hat{I}^3 \hat{Y} \hat{B} \hat{Y}$ <sup>3</sup>  $\hat{I}^3 \hat{C} \hat{Y} \hat{U}^3 \hat{U}\hat{K} \hat{a}$ ,  $\hat{O}^3 \hat{E} \hat{C} \hat{o}^3 \hat{E} \hat{B} \hat{I}^3 \hat{I}^3 \hat{Y} \hat{B}^3 \hat{n} \hat{A} \hat{C} \hat{a} \hat{a} \hat{I}$ ,  
 $\hat{C} \hat{C} \hat{o}^3 \hat{Y} \hat{a} \hat{c} \hat{C} \hat{C} + \hat{a} \hat{u} \hat{n} \hat{C} \hat{I} \hat{Y} \hat{n} \hat{u} \hat{C} \hat{Y}^3 \hat{U} \hat{U}^3 \hat{Y} \hat{B}^3 \hat{n} \hat{A} \hat{C} \hat{a} \hat{a} \hat{I}$ :

Đ<sup>3</sup> Ủ<sup>3</sup> i<sup>3</sup> n̄<sup>3</sup> Í<sup>1</sup> C<sup>1/2</sup>É<sup>3</sup> óáđÙÁ<sup>3</sup> μ»ñ<sup>3</sup> ó<sup>3</sup> áÔç<sup>3</sup> B<sup>3</sup>E<sup>3</sup> n̄NáđÙ<sup>1</sup> C<sup>1/2</sup>É<sup>3</sup> ÚÇÝ<sup>3</sup> é<sup>3</sup> É<sup>3</sup> YÙđÃ<sup>3</sup>  
 à<sup>3</sup> N<sup>3</sup> Yç<sup>3</sup> n̄IÇ<sup>3</sup> I<sup>3</sup> náđÙ<sup>3</sup> x: °n̄IñC<sup>3</sup> ÁY<sup>1</sup>»ñùçó<sup>3</sup> eë<sup>3</sup> óíáÔ<sup>3</sup> NáđÙ<sup>3</sup> Y<sup>3</sup> íAÇ<sup>1</sup> »ñ<sup>3</sup> Ủ<sup>3</sup> IáđÙçó<sup>3</sup> Í<sup>3</sup> n̄IÇ<sup>3</sup>  
 i<sup>3</sup> N<sup>3</sup> Ủ<sup>3</sup> à<sup>3</sup> i<sup>3</sup> eëE<sup>3</sup> Y<sup>3</sup> μ<sup>3</sup> Õ<sup>3</sup> 1ñáđÃ<sup>3</sup> Ủ<sup>3</sup> Ù<sup>3</sup> eë<sup>3</sup> Y<sup>3</sup> É<sup>3</sup> Í<sup>3</sup> Y<sup>3</sup> yñ<sup>3</sup> Ióç<sup>3</sup> Y<sup>3</sup> ñ<sup>3</sup>,<sup>1</sup> C<sup>1/2</sup>É<sup>3</sup> ÚÇÝ<sup>3</sup>  
 í<sup>3</sup> é<sup>3</sup> É<sup>3</sup> YÙđÃ<sup>3</sup> μ»YÙÇÝ<sup>3</sup>:



»é<sup>3</sup>ë 50-<sup>3</sup> Í<sup>3</sup> Ý Áí<sup>3</sup> Í<sup>3</sup> ÝÝ»ñÇó èÍeí»óÇÝ µáöe<sup>3</sup> Í<sup>3</sup> Ý Ó»Ã»ñÇ ÷áñÓÝ<sup>3</sup> Í<sup>3</sup> Ý  
ÍÇñ<sup>3</sup> éáðñÅöýÁ 1Ç½É³ ÛçÝ B³ ñÅÇäÝ»ñáðÙ: 70-<sup>3</sup> Í<sup>3</sup> Ý Áí<sup>3</sup> Í<sup>3</sup> ÝÝ»ñÇó " 80-<sup>3</sup> Í<sup>3</sup> Ý  
Áí<sup>3</sup> Í<sup>3</sup> ÝÝ»ñÇÝ í»ñçÝ<sup>3</sup> Í<sup>3</sup> Ý<sup>3</sup> à»ë à<sup>3</sup> ñ½<sup>1</sup><sup>3</sup> ñÖ<sup>3</sup> í, áñ<sup>3</sup> Ù<sup>1</sup>»ñáðÙ<sup>3</sup> Ù»Ý<sup>3</sup> É³ í óáð<sup>3</sup> ÝÇßÝ»ñ  
áðýÇ Í<sup>3</sup> Ý×ñ<sup>3</sup> ÍÇ Ó»ÃÁ:

· Ç½»È ÜÇÝ B³ ñÅÇÄÝ»ñÇó »ëİ½µÇó »ñİ İ ³ İ B³ ñÅÇÄÝ»ñÇ İñ³ ÷ ãñÓ³ ñİÍ»ó, N³ İ İ ³ á»ë  
· ÜäðÖ³ i Yi »éáðÅÜäðÅÜ İÇñ³ éíáÖ »ñİ İ ³ İ ¹Ç½»È ÜÇÝ B³ ñÅÇÄÝ»ñáðÜ, ³ ÜáðÑ»i  
İ ³ İ ³ ní³ İ ÷ ãñÓÁ i ³ ñ³ İí»ó ù³ e³ İ ³ İi ¹Ç½»È ÜÇÝ B³ ñÅÇÄÝ»ñÇ İñ³ :

Í<sup>3</sup> Ýxñ<sup>3</sup> İÇ Ö»AA Ý<sup>3</sup> Èüñáu ï<sup>3</sup> ù<sup>3</sup> óí<sup>3</sup> Í<sup>1</sup> Ç%»É ÜÇÝ B<sup>3</sup> ñÅÇÄÝ i ï<sup>3</sup> ñíáðÙ N<sup>3</sup> i áðí<sup>3</sup> ï<sup>3</sup> ù<sup>3</sup> óíáÖ µ<sup>3</sup> ûçó, áñii »Ö I<sup>3</sup> Ýxñ<sup>3</sup> İÇ Ö»AA i<sup>3</sup> ù<sup>3</sup> óíáðÙ i ÜÇÝä<sup>+</sup> +87° C: Ç%»É ÜÇÝ B<sup>3</sup> ñÅÇÄÝ 3 BE<sup>3</sup> i áðÙ; ÝanÙ<sup>3</sup> È<sup>..</sup> N<sup>3</sup> Ù<sup>3</sup> ã<sup>3</sup> ÷ aí áðí<sup>3</sup> Áí»ñáí:



**Pí»<sup>1</sup>Ç<sup>3</sup> ïäðÙ, ¶»ñÙ<sup>3</sup> ÝÇ<sup>3</sup> ïäðÙ, <sup>2</sup>íëi ñÇ<sup>3</sup> ïäðÙ .. üñ<sup>3</sup> ÝëÇ<sup>3</sup> ïäðÙ í»ñ<sup>3</sup> ï<sup>3</sup> ñ·<sup>3</sup> íáñí<sup>3</sup> Í  
<sup>1</sup>Ç<sup>1½</sup> ï<sup>3</sup> ÜÇÝ <sup>2</sup>ñÅçÄÝ»ñÇ N<sup>3</sup> Ù<sup>3</sup> ñ Èñ<sup>3</sup> óåööÇä <sup>2</sup>ñÙ<sup>3</sup> íáñáðÜÝ»ñÇ <sup>3</sup>ñÅ»ùÁ I<sup>3</sup> ï<sup>3</sup> ïäðÙ ; 700-800  
<sup>2</sup>ØÜ-Ç <sup>1</sup>áÈ<sup>3</sup> ñ, .. <sup>3</sup>é<sup>3</sup> çÇÝ N»ñÅçÝ <sup>3</sup>Ü i Ýi »ë<sup>3</sup> à»ë Çñ»Ý <sup>3</sup>ñ<sup>13</sup> ñ<sup>3</sup> óÝäðÙ ;  
<sup>3</sup> . ñá<sup>3</sup> ñ<sup>1</sup> ïäð<sup>3</sup> µ»ñáðÜÝ áññíi áðÙ; Đ<sup>3</sup> i I<sup>3</sup> à»ë xÇñ ; <sup>3</sup> . ñá<sup>3</sup> ñ<sup>1</sup> ïäð<sup>3</sup> µ»ñáðÜÝ**

í »Ę́YáŁa. Ç³ Y»ńáðU İÇñ³ eí áO U»ù»Y³ Ü³ óU³ Y áŁańi Ç ¹Ç¹»E³ ÜçY B³ nAÇaY»nÇ  
İ³ N³ ińńáðU Á³ Ü M³ óaóðCä e³ nń³ ińńáðUá:

ДД-АДУ Ѕ П ІЧН<sup>3</sup> еáдú ёї ³ о³ І µÝ<sup>3</sup> І<sup>3</sup> Ý . ³ ½áí ³ RE<sup>3</sup> i áð ³ i í áí ñ³ Ýéàáñi Ç i »È-ÝC<sup>3</sup> I<sup>3</sup> Ý µÝáð<sup>3</sup> . ñ»ñC N»i ù<sup>3</sup> ç I<sup>3</sup> ÝáÃ IÇn<sup>3</sup> еáÓÝ»ñA . Çi »Ý, áñ ßñç<sup>3</sup> á<sup>3</sup> i Ç ç»ñÙ<sup>3</sup> ёї Çx<sup>3</sup> Ýç Ii ñáðí Çç»óÙ<sup>3</sup> Ý<sup>1</sup> »àùáðú, ёї ¼µçó Ý»ñüçÝ ³ ñÙ<sup>3</sup> Ý ß<sup>3</sup> ñÅçãÁ ÁÝ<sup>3</sup> óùç »Ý . óáðú µ»Ý¼çÝáí " ³ ÚáðN»i " i »õ<sup>3</sup> ÷ ÁE<sup>3</sup> Í µÝ<sup>3</sup> I<sup>3</sup> Ý »ÓÙ<sup>3</sup> Í . ³ ½áí ³ RE<sup>3</sup> i »Éáí:

Øái³ í áñ³ à»ë ÝáðÝ Ø·ç i³ BE³ i áðU Í³ Ýxñ³ Iç Ø»Ãáí³ BE³ i áð ¹ç½»ÉÙçÝ  
þ³ ñÅçãÁ:

ä<sup>3</sup> i Í»ñí<sup>3</sup> Í ë<sup>3</sup> ñù<sup>3</sup> í áñÙ<sup>3</sup> Y ßYáñÑçí, áñii »õ Í<sup>3</sup> Y<sup>3</sup> „ ïÉ»Íi ñ<sup>3</sup> Ù<sup>3</sup>. YÇë<sup>3</sup> Í<sup>3</sup> Y ÷<sup>3</sup> Í<sup>3</sup> Y ..



*ÜI<sup>3</sup> ñ 7-áðÙ Ý>ñI<sup>3</sup> Ù<sup>3</sup> óí<sup>3</sup> Í á<sup>3</sup> I Í>ñÝ>ñC · áí<sup>3</sup> ½<sup>1</sup>C ÑCÙÝ<sup>3</sup> I<sup>3</sup> Ý·<sup>3</sup> Ø<sup>3</sup> ÷<sup>3</sup> ñÝ<sup>3</sup> ð<sup>4</sup>I<sup>3</sup> ù I<sup>3</sup> Ý×ñ<sup>3</sup> I<sup>3</sup>C Ø>ÁÁ<sup>1</sup>» áC I<sup>3</sup> ù ¹C» Ë<sup>3</sup> Û<sup>3</sup> Ý<sup>3</sup> ß<sup>3</sup> ñAC<sup>3</sup>:*

ç»ñÙ<sup>3</sup> ëii Ç×<sup>3</sup> ÝÇ ii íÇã, <sup>1</sup>Ç½»ÉÙ ÚÝ B<sup>3</sup> ñÅÇäÇ Ù»ÍÝ<sup>3</sup> ñÍÇó Ñ»ii á, »ñµ ç»ñÙ<sup>3</sup> eÇ×<sup>3</sup> ÝÁ Ñ<sup>3</sup> eÝáðÙ ð  
Ýññ<sup>3</sup> Å»ßi ã<sup>3</sup> ÷<sup>3</sup> ÝÇßÝ, ïÉ»ii ñ<sup>3</sup> Ù<sup>3</sup> · ÝÇe<sup>3</sup> ï<sup>3</sup> Ý ÷<sup>3</sup> ï<sup>3</sup> ÝÁ · ãñÍ<sup>3</sup> ñlÍáðÙ ð, ÷<sup>3</sup> ïáðÙ ð  
<sup>1</sup>Ç½»ÉÙ ÚÝ ï<sup>3</sup> é»ÉÙ ÝåðÄÇ Ùáði ùÁ <sup>1</sup>»àÇ ÷ áßç<sup>3</sup> ðÝáð ï<sup>3</sup> ÷ ïåðÝ»ñÁ áð <sup>1</sup>»àÇ <sup>3</sup> Ù  
ï<sup>3</sup> ÷ ïåðÝ»ñÝ ð, ÙòáðÙ ï<sup>3</sup> Ýxñ<sup>3</sup> ïÇ Ó»ÅÁ ii <sup>3</sup> ù 1Ç×<sup>3</sup> ïáðÙ:

áœe<sup>3</sup> ï<sup>3</sup> Y ûâõ»ñÁ Çmñ<sup>1</sup> Ç½ E ÛçY í<sup>3</sup> é»E Ýûâõ Á û· i<sup>3</sup> . áñÍ Ù<sup>3</sup> Y x<sup>3</sup> Ý<sup>3</sup> à<sup>3</sup> ñÑçY ÙY<sup>3</sup> ó»E  
 ï Ùç ïâõç ÉäãY<sup>1</sup> ãi : ä»i ù ï ã<sup>3</sup> ñ½ E Á»<sup>3</sup> ñ<sup>1</sup> ûù<sup>3</sup> Ù áÇeç í<sup>3</sup> é»E Ýûâõ Á Áí<sup>3</sup> ßE<sup>3</sup> i áõ  
 1 Ç½ H»ñç<sup>3</sup> ñi<sup>3</sup> Ý»i í<sup>3</sup> I<sup>3</sup> ½ ñç µ<sup>3</sup> ð<sup>3</sup> 1 ñ<sup>3</sup> ï<sup>3</sup> ïA Á N<sup>3</sup> Ù<sup>3</sup> à<sup>3</sup> i<sup>3</sup> èE<sup>3</sup> YáðU ; Ùçç<sup>3</sup> ½<sup>3</sup> ÚçY  
 YáñÙ»ñçY, Á» áá [6]:

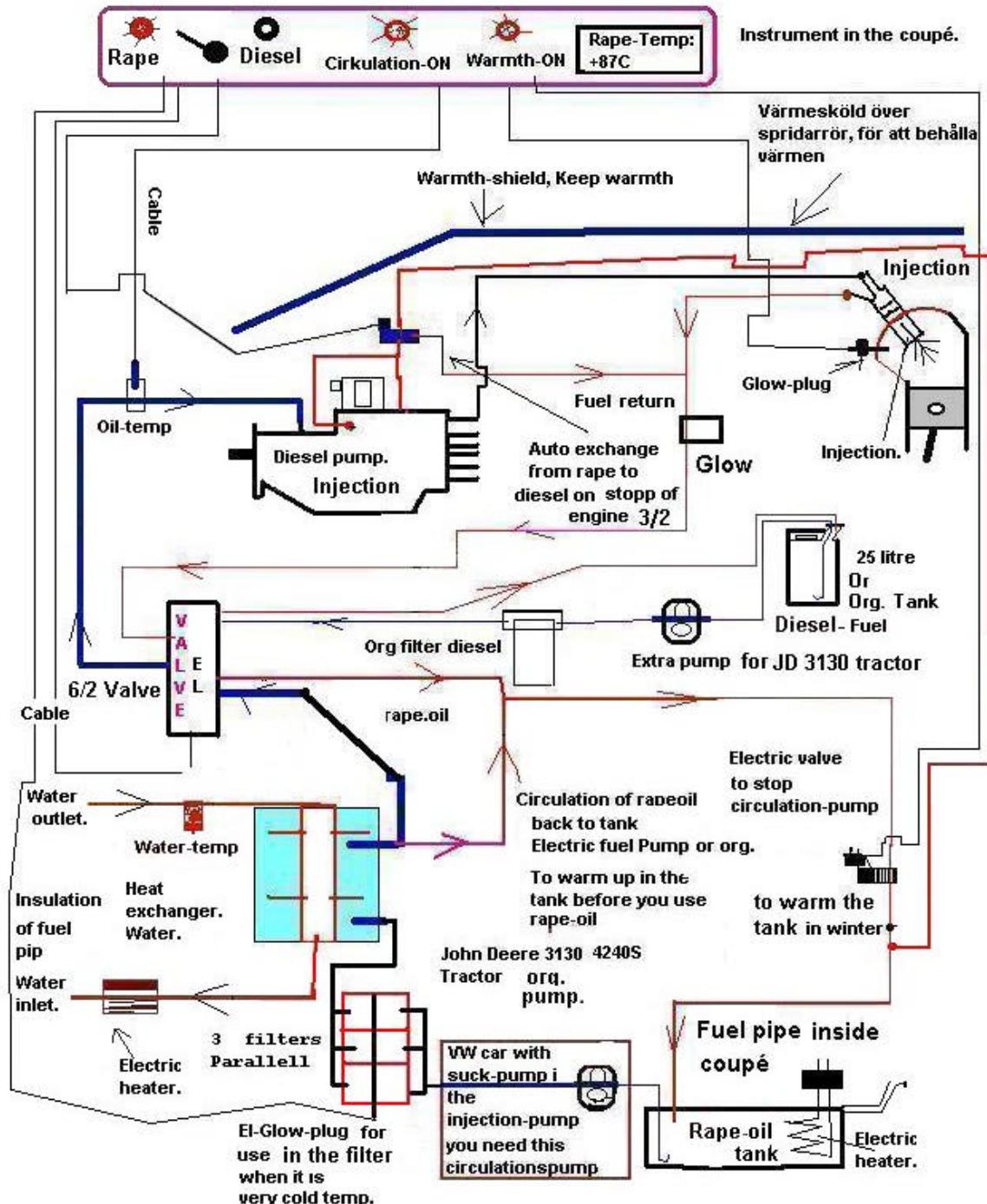
1993 Áí ³ Í ³ ÝÇÝ Ñ»í ³ ½ái áÓÝ»ñ èÇéÝ áó ã ³ í »ñéáÝÁ Çñ ³ Í ³ Ý ³ óñ»óÇÝ 1992 Áí ³ Í ³ ÝÇ  
³ ñii ³ 1ñáðÅÙ³ Y “ , á¹ç” Ù³ ÍÝÇæç “Í ³ ÙÇÝÇ½” 5,9 Íçí ñ µ³ Ýíáñ ³ Í ³ Y Í ³ 1³ Éí



ÜÍ ³ ñ 8-áðÙ á ³ i Í »ñí ³ I »Ý µáðañ ³ ÜÝ Üñ ³ óáðóÇä e ³ ñù ³ í áñáðÙY»ñÁ, áñáÝù á »í ù ç ³ I »É³ óÝ»É  
¹Ç½»É³ ÜçY ß³ ñÅÇäÇÝ, áñá »é½ç ³ ÜÝ ³ BÉ³ i Ç Í ³ Yxñ ³ İÇ Ö»Ááí:

í áññµá÷ ãÙ³ Üµ ¹Ç½»É³ ÜçY ß³ ñÅÇäÇ ³ ñii ³ Ý»í Í ³ . ³ ½»ñáðÙ Íç÷ Á³ ÷ ³ ÝóÇÍáðÅÙ³ Y  
áœéáðÙY³ èÇñáðÅÙðØÁ Í ³ Yxñ ³ İÇ Ö»Á û. i ³ . áñÍ»Éé: Ð³ Ü Ü³ µ»ñ»óÇÝ, áñ Í ³ Yxñ ³ İÇ Ö»Áç  
¹»áùáðÙ Í Èç Á³ ÷ ³ ÝóÇÍáðÅÙðØÁ á ³ Í ³ éáðÙ ç 63%-áí .. ß³ ñÅÇäÇ Ñ%áñáðÅÙðØÁ á ³ Í ³ éáðÙ  
ç 9%-áí:

»é»é 1984 Áí ³ Í ³ ÝÇÝ Ü»Í áññÇß Ñ»í ³ ½ái áÓa ¶»í »ñÁ, ÷ áñÓ»ñÁ Í ³ i ³ ñ»Éí Ü»Í  
ÜÉáó³ Yáo Ñ»í ³ ½ái ³ Í ³ Y 0,36 İçí ñ µ³ Ýíáñ ³ Í ³ Y Í ³ Í ³ Éí ¹Ç½»É³ ÜçY ß³ ñÅÇäÇ ³ ñi ³,  
»Í ³ i ³ ÜY »½ñ ³ Í ³ óáðÅÙ³ Y, áñ ³ ñii ³ Üñi ³ Í . ³ ½»ñáðÙ ³ É»Ñç¹Y»ñÁ ³ Üñ ³ Ü»Ü³ i ³ Í »Éç  
µ³ ñÓñ »Ý ¹Ç½»É³ ÜçY Í ³ é»É³ ÜñáðÅç ¹»áùáðÙ, ÇéÍ µáœe ³ Í ³ Y ÜñáðÅ»ñç ¹»áùáðÙ ³ ÜY ùçä ç:  
áœe ³ Í ³ Y ÜñáðÅ»ñç i ³ I Ñ³ eI ³ óíáðÙ »Ýµ³ Üµ³ İç Ö»Á, ³ ñ»³ Í ³ Õİç Ö»Á:



áó êáñ»ÝéáYÁ, áñ »Ã» µéÝIáðUÁ ³ ÙíÙ³ YÉóáðUÙCùCá áðB³ óíC .. YáðUÁ Í³ i³ ³ níC ³ ÙíÙ³ Y ³ n³ . áðAÙ³ Y Ñ»i, ³ à³ NO-Ç à³ náðY³ IáðUáðYÁ »ñIáó ¹»àù»ñáðU ðEYáðUÁ ïKÝC:  
 ² nÅ³ Y³ ÑCß³ i³ I »Y “Cummius Engine Company” ÁYÍ»ñáðU³ Y Ñ»i ³ ½i ³ I³ Y ³ BÈ³ i³ YúY»ñÁ 5,9 Íi n µ³ Yíáñ³ I³ Y B³ nÅCääí, i áðñµá÷âÙ³ Ùµ áó û¹C ÙCç³ YIÙ³ E Ñáí³ óÙ³ Ùµ ¹C%»B ïCÝ B³ nÅCäç íñ³: ² Ûe Ñ»i ³ ½i áðUáðYÁ»ñÁ Í³ i³ n»E »Y Ð»ÙýñCÝ .. PáðU³ È»ñÁ 1994 Áí³ I³ YCÝ:

<sup>2</sup> ñ<sup>1</sup> ïññùÝ»ñÁ µ<sup>3</sup> í<sup>3</sup> ï<sup>3</sup> ÝÇÝ Ñ»í<sup>3</sup> ùñùñ<sup>3</sup> ï<sup>3</sup> Ý »Ý.

1. <sup>1</sup> ÈÇ à<sup>3</sup> İ<sup>3</sup> e»óáðÙ ÙÇÝä.. 83%;
  2. <sup>2</sup> ÍÈ<sup>3</sup> çñ<sup>3</sup> ÍÇÝÝ»ñç (HC) Çç»óáðÙ ÙÇÝä.. 48%;
  3. <sup>2</sup> ½ai Ç ÙáÝñùëÇ¹Ç<sup>3</sup> x ÙÇÝä.. 14%;
  4. Ø»È<sup>3</sup> ÝÇİ<sup>3</sup> İ<sup>3</sup> Ý Ü<sup>3</sup> eÝÇİÝ»ñç Ýí<sup>3</sup> ½adÙÁ<sup>1</sup> Ç<sup>1</sup>»È<sup>3</sup> ÜçÝ<sup>3</sup> ß<sup>3</sup> nÅçäç<sup>3</sup> nii<sup>3</sup> Ý»i Ü<sup>3</sup> Ý<sup>3</sup> n.<sup>3</sup> - eÇùÝ»ñáðÙ ÙÇÝä.. 20%:

ÜÜ<sup>3</sup> i Ç áóÝ»Ý<sup>3</sup> Éáí 3 BÉ<sup>3</sup> n̄NádÙ . 3 ÚáðÚáðÓY áóÝ»óáÖ Ñ»i 3 ½ai ááðÚáðÓY»n̄ÇÝ Yí Çní 3 Í . n̄<sup>3</sup> Í<sup>3</sup> YáðÁÙ<sup>3</sup> Y i »éáðÚáðÓY Í<sup>3</sup> n̄Íç i . 3 É 3 ÚáÇëÇ »½n̄<sup>3</sup> N̄<sup>3</sup> Y. Ù<sup>3</sup> Y, án ïÁÇE<sup>3</sup> ÜÇÝ áóÙ»ÁÇE<sup>3</sup> ÜÇÝ Ù<sup>3</sup> e»n̄Á muáe<sup>3</sup> Í<sup>3</sup> Y Úáð»n̄ádÙ N̄ÇÙY<sup>3</sup> Í<sup>3</sup> YáðÙ YáðÓY »Y Çñ»Yó ïÙÇëÇáY muááðA<sup>3</sup> . n̄ n̄áí 1 C<sup>1</sup>/E<sup>3</sup> ÜÇÝ 1<sup>3</sup> é»E<sup>3</sup> YÚáðAC N»i :

È³Ý³ÛÉÐ³ñáðÅÛáðÝÛ³Ý  
Î»ËÝÇI³I³Ý·ÇIáðÅÛáðÝ»ñÇÃ»IÝ³Íáð

## ¶ n³ Í³ YádÃñáð

1. P. E. Í ñâáñâéââ, Ä. N. Äaäàâââ, Ò. A. Í ðí ëí âââ, Í. A. Ñëáï öââ - Í ñâááí í ñòè âûðâùèââí èý í çèí ïââ è ýðí âââ ðâí ñâ í à êí ðí ïâûâ öâëë. //Í ñêââ, 1988 á, ÁÍ ÈÈÓYÈââðí ðí ðí ï.

2. A. Í. Í ã÷ëí ï ðâí ï. //Èí ðâí ñèôèââöëý í ðí ìçââ ãñòâââ ì àñëëí í ïââ ðâí ñâ çâ ðóââæí ï. ÁAÑÓÍ ÈÈ, Í áçí ðí àý èí ïââ ðí àöëëý, 1984 á.

3. Yéâéòðí æâðí âí ý äëëý í ââðâââí èý ñâí ýí ðâí ñâ. Èëí àöëëé ì àæí òðâñëââí é òâððèòí ðèâëüí ûé õâí ðâí í àó÷í ï -òâõí è÷âñëí é èí ïââ ðí àöëë è í ðí ïââí äú Êí ïââ ðí àöëëí í ï ûé èëñòí ê N29-88.

4. Óñòâí ïââ ï ðí -250 äëëý í ï ëö÷âí èý ðâí ñâ âââ ì àñëâ. Èâëóæñëëé ì àæí òðâñëââí é òâððèòí ðèâëüí ûé õâí ðâí í àó÷í ï -òâõí è÷âñëí é èí ïââ ðí àöëë è í ðí ïââí äú. Êí ïââ ðí àöëëí í ï ûé èëñòí ê N223-88.

5.

### Web Page Matches (1 - 20 of about 1150)

- Veg-Conversion your **diesel** engine to Straight Vegetable oil ...

... **rape-oil**. SKEPPSTA MASKIN AB. VEG- CONVERSION, VEG-TUNING Warm **rape-oil** to warm **diesel-engine**. Data about **rape-oil** Engines Running on Straight Vegetable **Oil**...  
[http://www.oilpress.com/drive\\_your\\_diesel.htm](http://www.oilpress.com/drive_your_diesel.htm) [[More results from www.oilpress.com](#)]

- Veg-Conversion your **diesel** engine to Straight Vegetable oil ...

... Vegetable **rape-oil**. SKEPPSTA MASKIN AB. VEG- CONVERSION Warm **rape-oil** to warm **diesel-engine**.

Engines Running on Straight Vegetable **Oil**. The Agriculture Fuel ...

[http://home.swipnet.se/~w-26371/drive\\_your\\_diesel.htm](http://home.swipnet.se/~w-26371/drive_your_diesel.htm) [[More results from home.swipnet.se](#)]

- AB Nov 01, 1995 **DIESEL** FROM PLANT **OIL**

... can power any standard **diesel** engine without modification. ... chemical reaction whereby the **oil** is mixed with methylalcohol ... company now uses **rape-seed oil** because ...

<http://web3.asia1.com.sg/timesnet/data/ab/docs/ab0537.html>

- [areafour](#)

... transport buses have been undertaken. The fuels tested were Compressed Natural Gas (CNG), **rape seed oil**, and a mixture of **rape seed oil** and regular **diesel** ...

<http://indigo.ie/~entrance/areafour.htm>

- Results of engine and vehicle testing of semi-refined ...

... and **rape** methyl ester mixtures ie using **rape** methyl ester instead of **diesel** to lower the viscosity of the rapeseed **oil**. This was compared with both **diesel** and ...

<http://www.regional.org.au/papers/rapeseed/unallocated/214.htm>

- <http://www.derwent.com/data/au/itaupol.pdf>

... agricultural vehicle engines (3) for fresh plant **oil**, additive concentrate (6) and **diesel oil/rape oil-methylester** (24). The tank (6) is connected to a fresh ...

<http://www.derwent.com/data/au/itaupol.pdf> [[More results from www.derwent.com](#)]

- [Teagasc - Project Report - 4355 - Bio-Diesel Production from ...](#)

... in Ireland arrived at the conclusion that a small-scale bio-**diesel** plant based on **rape-seed oil** could not be viable because of high raw material cost. The ...

<http://www.teagasc.ie/research/reports/crops/4355/eopr-4355.htm> [[More results from www.teagasc.ie](#)]

- [Arbeitsgruppe Pflanzen - Verntlichungsliste, ...](#)

... Emissions from **Diesel**-Engines Driven by **Rape Seed Oil** Methyl Ester, **Rape Seed Oil** and **Diesel** Fuel - an Evaluation of Laboratory and Vehicle Fleet Test Results ...

<http://www.tec.agrar.tu-muenchen.de/pflanzoel/veroeff-list.html> [[More results from www.tec.agrar.tu-muenchen.de](#)]

- **FUELING DIESEL ENGINES WITH BLENDS OF METHYL ESTER SOYBEAN ...**

... Tritthart, P, and Junek, H. (1985). **Diesel** fuel derived from vegetable oils, II: emission tests using **rape oil** methyl ester. Energy Agriculture. 4: 208-215. ...

<http://www.missouri.edu/~pavt0689/ASAED94.htm> [[More results from www.missouri.edu](#)]

- **Pflanzliche Öle und andere Kraftstoffe (summary)**

... pollution. Substituting mineral **oil diesel** with biodiesel from **rape-seed oil** in **diesel** engines is one way of reducing environmental pollution. This option has ...

<http://www.tab.fzk.de/en/projekt/zusammenfassung/AB53.htm>

- <http://www.iea.org/workshop/engecon/ziesing.pdf>

... IMPROVED CNG ELECTRIC LPG CNG **RAPE SEEDOIL** LPG Long-distance **RAPE SEED OIL** Trucks **DIESEL FUELCELL DIESEL** IMPROVED BUSES **DIESEL CNG DIESEL** IMPROVED **RAPE SEEDOIL** ...

<http://www.iea.org/workshop/engecon/ziesing.pdf> [[More results from www.iea.org](#)]

- **EECInetwork - Austria**

... But the development of **rape oil** and **diesel** fuel price lead to a critically situation, because the price of **rape oil** rose higher than the price of **diesel** fuel. ...

<http://btgs1.ct.utwente.nl/eeci/countries/AT.html> [[More results from btgs1.ct.utwente.nl](#)]

- [http://www.blt.bmlf.gv.at/english/bio\\_nawa/biodies/c4.pdf](http://www.blt.bmlf.gv.at/english/bio_nawa/biodies/c4.pdf)

... be avoided. FRIEDRICH from UBA Berlin [6] concludes that the use of **rape oil** methyl ester instead of **diesel** fuel leads to a reduction of the greenhouse effect. ...

[http://www.blt.bmlf.gv.at/english/bio\\_nawa/biodies/c4.pdf](http://www.blt.bmlf.gv.at/english/bio_nawa/biodies/c4.pdf)

- **carrying out**

... machine **oil** and lamp **oil** (both made of **rape oil**), "bio-**Diesel**", (**rape oil** methylester), washing agent and universal cleansing agent (made prevailing of soap ...

<http://www.rwg-bayreuth.de/chemie/unterricht/carrying.htm>

- **Department of Agriculture and Forestry**

... etc.) will be available at the University. Preparation of Bio-**diesel** 2000g **Rape Seed Oil** (RSO) 300g Methanol 20g Aqueous Potassium Hydroxide Solution (50%) 1 ...

[http://www.newtonrigg.ac.uk/Agric\\_Forestry/Chemistry.htm](http://www.newtonrigg.ac.uk/Agric_Forestry/Chemistry.htm) [[More results from www.newtonrigg.ac.uk](#)]

- **togashi2**

... ASAE Paper No.1033. 3) Hamasaki, K. et al. (1987): An application of **rape-seed oil** fuel to a small **diesel** engine. Res. Rep. Fac. Eng. Kagoshima Univ., 29,17-24 ...

<http://ss.jircas.affrc.go.jp/engpage/jarq/33-2/Togashi/togashi2.html>

- **Greenhouse Issues. No. 31 July 1997**

... assimilated from the atmosphere by the **rape** or soya plants. However, the CO2 ... still positive compared to conventional **diesel oil** thus depends on the amount ...

<http://www.ieagreen.org.uk/july31.htm>

- <http://www.zeus-europe.org/FILES/summary/VehicleEvaluation.pdf>

... RME is produced by mixing **rape** seed **oil** with metha- nol ... component to be mixed with **diesel** MIDDLE: RME BUS IN LUXEMBOURG BOTTOM: ELECTRIC CAR IN **oil** or as a neat ...

...

<http://www.zeus-europe.org/FILES/summary/VehicleEvaluation.pdf> [[More results from www.zeus-europe.org](#)]

- <http://www.inrets.fr/infos/cost319/MEETdeliverable20.pdf>

... Emissions Trials Mittelbach M. et al, 1983 **Diesel** Fuel Derived from Vegetable Oils: Preparation and Use of **Rape Oil** Methyl Ester. Energy in Agriculture, 2, 369 ...

<http://www.inrets.fr/infos/cost319/MEETdeliverable20.pdf> [[More results from www.inrets.fr](#)]

- Storage Facilities

... motor spirit, naphtha, lub. **oil**, high speed **diesel** and light **diesel oil**, aviation gas. Vegetables oils - **rape seed oil**, soyabeen **oil** palm **oil**, fatty acids and ...

<http://www.portofcalcutta.com/storfacility.html> [More results from www.portofcalcutta.com]

6. Emission characteristics of ethyl and methyl ester of rapesed oil compared with low sulfur diesel control fuel in a chassis dinamometer test of a pickup truck.

[http://rredc.nrel.gov/biomass/doe/rbep/hs\\_diesel/twelve.html](http://rredc.nrel.gov/biomass/doe/rbep/hs_diesel/twelve.html)

ÊÙµ<sup>3</sup> · Çñ .. ëñµ<sup>3</sup> · ñÇã ¾ ê<sup>3</sup> ñ· ëÙ<sup>3</sup> Ý

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Ì<sup>3</sup>í<sup>3</sup> ÍÍ<sup>a</sup>1,2 üáñÙ<sup>3</sup> í <sup>a</sup>60x84 1/8  
úà»ñ<sup>3</sup> í Çí ááÍç· ñ<sup>3</sup> ýç<sup>3</sup> Ùç µ<sup>3</sup> ÁçÝ  
375051, °ñ<sup>3</sup> Ý, ÍáÙçí<sup>3</sup> èç ááõ. 49/3  
Ð<sup>3</sup> Ú] 1 È¶ÐÆ

**Ð² Ú² ëi² Üæ|æ² i¹ ° ÆÜæ² i² Ü Ëð² i¹ àò ÁÚàò² Ü |æ² ðo¹² i¹² ài² i² Ü ÆÜëi|æ àò i¹  
(Ð³ Û|i¹ È|æ)**

**Д<sup>2</sup>ÜД<sup>2</sup>а<sup>0</sup>І<sup>2</sup>І<sup>2</sup>Ü **¶АІ<sup>2</sup>І<sup>0</sup>ЕÜАІ<sup>2</sup>І<sup>2</sup>Ü ¶ð<sup>2</sup>, <sup>2</sup>ð<sup>2</sup>Ü (Ф¶і¶)****

**D<sup>3</sup> ÚJÍÉTÉY NČÙÝ<sup>3</sup> 1ñí »É<sub>j</sub> 1961 ÁÍ<sup>3</sup> Í<sup>3</sup> YČY: AÉeii Cí ámí Y úÁi í<sup>3</sup> Í i Néi<sup>3</sup> ÚB<sup>3</sup> I<sup>3</sup> Y Úm<sup>3</sup> i I<sup>3</sup> Y**  
**á<sup>3</sup> B<sup>3</sup> nÝ»ñái, Čn I<sup>3</sup> ÁlálóU ádY<sup>3</sup> Y<sup>3</sup> Hái D<sup>3</sup> Újí Y, ańC yáY<sup>3</sup> Á N<sup>3</sup> líádU<sup>3</sup> i a<sup>3</sup> Ná<sup>3</sup> YádU<sup>3</sup> Y Rnáñc 21,5 UÉY**  
**ÚC<sup>3</sup> íáñ (³ ní aY<sup>3</sup> · n»ñ, eëi ³ Y<sup>13</sup> ní Y<sup>3</sup> ñ, ³ n<sup>1</sup> lálóY<sup>3</sup> µ) »n<sup>3</sup> I<sup>3</sup> Y I<sup>3</sup> i s<sup>3</sup> Eñ. Y<sup>3</sup> ñ, á<sup>3</sup> nµ»n<sup>3</sup> I<sup>3</sup> Y »oH<sup>3</sup> i I<sup>3</sup> I<sup>3</sup> Y**  
**Nñ<sup>3</sup> i ³ n<sup>3</sup> I<sup>3</sup> dñádY<sup>3</sup> ñ, · nù»ñ »o<sup>3</sup> UÉY):**

ÆÜêî Æî àôî Æ ¶àðÌ àôÜº àôÂÚ² Ü ÐæøÜ² Ì² Ü àÈàðÌ Üº ðÀ






· 2 ðÆ ¶ 2 È àô- ê î Ð³ Û] î È ¶ ÐÆ

**Գ»ն Ն» էօ» Յ. ՃՃ, 375051, Ա. օ՞ն» Յ, Ի աԱՌ է էԾ հաՌ. 49/3**  
**Ճ» է Էաէ Յ» Ա. 23-67-74 ի Յն» Յ Ա կ ն է Յ**  
**23-82-78 . Չ է 3 ի » Ե Կ է 3 Ի 3 Յ մ 3 ի 1 ա օ Ա Յ Յ Ս 3 ի Ա շ Յ. Վ պ 3 Ա շ Յ**  
**23-85-12 Ճ յ լ ա Յ ա ւ չ է 3 կ է . Ի ա 1 ի 1 Ս 3 ի հ է կ պ 3 1/2 Յ » ն է կ պ 3 Ա շ Յ**  
**23-67-69 Ճ յ 1 » ի 1 ա օ 3 է է » ։ 3 ի 3 յ ա օ Ա Յ պ 3 պ 3 1/2 Յ » ն է կ պ 3 Ա շ Յ**  
**23-80-37 1 » ն կ է ա օ Ա Յ ։ ա ն օ 3 . Չ է ա օ Ա Յ պ 3 Ա շ Յ**  
**23-61-38 Ի 3 է 3 ի 3 ի Ս 3 ի Ա շ Յ » ն է կ պ 3 1/2 Յ » ն է կ պ 3 Ա շ Յ**  
**Ա 3 ս է. (37439) 06196**  
**E-mail: anin@arm.ran.am**

**Ð<sup>2</sup>Ú<sup>2</sup>ê<sup>1</sup>²ÙÆ¶Æ<sup>2</sup>í<sup>1</sup>ºÈÙÆ<sup>2</sup>í<sup>2</sup>Ü Èð<sup>2</sup>í<sup>1</sup> àðÅÚ<sup>2</sup>Ü ¶Æ<sup>2</sup>Ð<sup>2</sup>í<sup>2</sup>½àí<sup>2</sup>í<sup>2</sup>Ü AEÜê<sup>1</sup>Æ<sup>1</sup> àðí  
(Ð<sup>3</sup>Ù<sup>1</sup>í<sup>1</sup>Æ<sup>1</sup>Ð<sup>2</sup>)**

Д<sup>2</sup>ÜД<sup>2</sup>ä<sup>0</sup>î<sup>2</sup>Î<sup>2</sup>Ü ¶Å<sup>2</sup>î<sup>0</sup>ÊÜÅ<sup>2</sup>Î<sup>2</sup>Ü ¶ð<sup>2</sup>,<sup>2</sup>ð<sup>2</sup>Ü (Д¶î¶)

ĐHQI ¶ -Ý ³ é ³ ç ³ ñ Ì á ð Ù ð



· 2 ðÆ ¶ 2 È à ô - ê î ø ° ð ¶ ð 2 2 ð 2 Ü

Q»ñ Ñ³ ëó»Ý. Đ Đ, 375051, ù. °ñ..³Ý, Í áÙCi ³ëC àáõ. 49/3

Þ»é<sup>3</sup> ËáéÝ»ñ. 23-56-20 éà<sup>3</sup> è<sup>3</sup> ñíÙ<sup>3</sup> Ý u<sup>3</sup> ÁCÝ

**23-63-23; 23-80-69** Ù<sup>3</sup> ñùÀCY. C óáóó<sup>3</sup> Ñ<sup>3</sup> Ý<sup>1</sup>»ëÝ»ñC μ<sup>3</sup> ÅCY

**23-71-03 · nù<sup>3</sup> ÚY yáY<sup>1</sup>C Ù<sup>3</sup> eY<sup>3</sup> ×tādō**

**23-48-70 à<sup>3</sup> ññ»ñ<sup>3</sup> ī<sup>3</sup> Y Ññi<sup>3</sup> ñ<sup>3</sup> īáðññññY»ñC yáY<sup>1</sup>C Ù<sup>3</sup> eÝ<sup>3</sup> xñññ**

23-71-02; 23-65-54 <sup>3</sup> nī áY<sup>3</sup> · n<sup>3</sup> UY yáY<sup>1</sup>C Ù<sup>3</sup> eY<sup>3</sup> xUá

**23-61-95** **ÝáñÙ<sup>3</sup> i Çí-i »ËÝÇİ<sup>3</sup> İ<sup>3</sup> Ý ÷<sup>3</sup> eï<sup>3</sup> ÄÖÄ»ñÇ ýáÝ<sup>1</sup>Ç Ù<sup>3</sup> eÝ<sup>3</sup> xÙäØ**

23-63-27 Ù<sup>3</sup> · YÇë<sup>3</sup> - ï È ï i ñáY<sup>3</sup> ÜÇÝ Ññ<sup>3</sup> i<sup>3</sup> ñ<sup>3</sup> IáôÜñôY»ñÇ ýáY<sup>1</sup>Ç Ù<sup>3</sup> eÝ<sup>3</sup> ×ñô

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ANSWER

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