ПРОГРАММА ДЛЯ ЭВМ «АРМ-АГРОМЕТПРОГНОЗ – ПОДСИСТЕМА ВИЗУАЛИЗАЦИИ ДАННЫХ» В СОСТАВЕ «РЕГИОНАЛЬНОЙ АВТОМАТИЗИРОВАННОЙ СИСТЕМЫ «АРМ-АГРОМЕТПРОГНОЗ» ДЛЯ УРАЛЬСКОГО УГМС»

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Фрагменты исходного текста программы

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Декадный бюллетень, период вегетации, метеоданные за декаду

```
begin
select y.yyyy, y.nd
from got_year y
into :yyyy, :nd;
delete from bio_dek_veg_admt;
insert into bio_dek_veg_admt
select a.jjiii, a.nobl, d.ttt, d.txtx, d.tntn, d.rrr, d.tgtg
from cat_catst a, cat_catobl b, odb_adm d
where
   a.nobl   = b.nobl  and
   b.marked = '+' and
   d.jjiii = a.jjiii and
   d.yyyy = :yyyy and
   d.nd = :nd;
end
```

Декадный бюллетень, период вегетации, агрометеорологические данные

```
begin
select y.yyyy, y.nd
from got_year y
into :yyyy, :nd;
yyyyp = yyyy - 1;
pdd = date1bynd(nd, yyyy) + (cddbynd(nd, yyyy) - 1);
pddp = date1bynd(nd, yyyy - 1) + (cddbynd(nd, yyyy - 1) - 1);
delete from bio_dek_veg_agrt;
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure bio_dek_veg_agrp pdd, jjiii, 0
   returning_values duptv0, dupto0, sumt0;
   execute procedure bio_dek_veg_agrp pdd, jjiii, 5
   returning_values duptv5, dupto5, sumt5;
```

```
   execute procedure bio_dek_veg_agrp pddp, jjiii, 0
   returning_values duptv0p, dupto0p, sumt0p;
   execute procedure bio_dek_veg_agrp pddp, jjiii, 5
   returning_values duptv5p, dupto5p, sumt5p;
   select sum(d.r24r24r24) from odb_aem d
   where d.jjiii = :jjiii and d.yyyy = :yyyy and
   d.ddmm >= cast('01.05.400' as date) and d.ddmm <= datefromddmm(:pdd, 400)
   into :sumr;
   select sum(d.r24r24r24) from odb_aem d
   where d.jjiii = :jjiii and d.yyyy = :yyyyp and
   d.ddmm >= cast('01.05.400' as date) and d.ddmm <= datefromddmm(:pddp, 400)
   into :sumrp;
   insert into bio_dek_veg_agrt values (:jjiii, :nobl,
      :dupto0, :duptv0, :dupto0p, :duptv0p, :sumt0, :sumt0p, :dupto5, :duptv5, :dupto5p,
:duptv5p, :sumt5, :sumt5p, :sumr, :sumrp);
end
end
```

Декадный бюллетень, период вегетации, расчет даты оттаивания почвы

```
begin
   dvp = null;
   dop = null;
   sumt = null;
   yyyy = extract(year from pdd);
   mind = cast('01.04.' || yyyy as date);
   maxd = cast('30.06.' || yyyy as date);
   if (pdd < maxd) then maxd = pdd;
   execute procedure pro_calcdupv2 jjiii, tp, mind, maxd
   returning_values dvp, errmsg;
   mind = cast('01.09.' || yyyy as date);
   maxd = cast('30.10.' || yyyy as date);
   if (pdd > mind) then
   begin
      if (pdd < maxd) then maxd = pdd;
      execute procedure pro_calcdupo2 jjiii, tp, mind, maxd
      returning_values dop, errmsg;
   end
   if (dvp > pdd) then dvp = pdd;
   if (dop is null or dop > pdd) then dop = pdd;
   if (dvp is not null and dop is not null) then
   begin
      select sum(d.t24t24t24 - :tp) from odb_aem d
```

```
      where d.jjiii = :jjiii and d.yyyy = :yyyy and
      d.ddmm >= datefromddmm(:dvp, 400) and d.ddmm <= datefromddmm(:dop, 400) and
d.t24t24t24 > :tp
      into :sumt;
   end
End
```

Декадный бюллетень, период вегетации, состояние посевов сельскохозяйственных культур

```
begin
select y.yyyy, y.nd
from got_year y
into :yyyy, :nd;
delete from bio_dek_veg_spkt;
insert into bio_dek_veg_spkt
select a.jjiii, a.nobl, d.nnn, d.kkk, Date1ByNDdD(d.nd, d.yyyy, d.ya - 1), null, null, null, null,
null, null, null
from cat_catst a, cat_catobl b, odb_adff d
where
   a.nobl   = b.nobl  and
   b.marked = '+' and
   d.jjiii = a.jjiii and
   ((d.yyyy = :yyyy and d.kkk <> 9) or (d.yyyy = :yyyy - 1 and d.kkk = 9)) and
   d.ff in (10) and
   d.ya is not null;
update bio_dek_veg_spkt u
set u.ff = (select max(d.ff) from odb_adff d where d.yyyy = :yyyy and d.nd = :nd and d.nnn =
u.nnn and d.jjiii = u.jjiii and d.kkk = u.kkk),
   u.dff = (select max(iif(d.ya is not null, Date1ByNDdD(d.nd, d.yyyy, d.ya - 1), null)) from
odb_adff d where d.yyyy = :yyyy and d.nd = :nd and d.nnn = u.nnn and d.jjiii = u.jjiii and d.kkk
= u.kkk),
…
   u.ckckck = (select max(d.ckckckck) from odb_ad93 d where d.yyyy = :yyyy and d.nnn =
u.nnn and d.jjiii = u.jjiii and d.kkk = u.kkk and d.nd = :nd);
end
```

Декадный бюллетень, период вегетации, сумма эффективных температур от разных сроков сева

```
begin
err = '';
dat1 = obsdate;
```

```
dat2 = dat1 + 7;
dat3 = dat2 + 7;
dat4 = dat3 + 7;
select y.yyyy, y.nd
from got_year y
into :yyyy, :ndlast;
delete from bio_dek_veg_tport;
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure bio_dek_veg_tpor_sumt dat1, :ndlast, :jjiii
   returning_values sumt1;
…
   if (sumt1 is not null and sumt2 is not null and sumt3 is not null and sumt4 is not null) then
   insert into bio_dek_veg_tport values (:jjiii, :nobl, :sumt1, :sumt2, :sumt3, :sumt4, :dat1);
end
end
```

Декадный бюллетень, период вегетации, сумма эффективных температур от разных сроков сева (вспомогательная процедура)

```
begin
   yyyy = extract(year from dat);
   ndi = ndbydate(dat);
   sumt = 0;
   kdd1 = cddbydate(dat) - nddbydate(dat);
   while (ndi <= ndlast)
   do
   begin
      ttt = null;
      select c.ttt from odb_adm c
      where c.yyyy = :yyyy and c.nd = :ndi and c.jjiii = :jjiii
      into :ttt;
      if (ttt is not null) then
         sumt = sumt + (ttt - 5) * kdd1; --iif(kdd1 = 0, 1, kdd1);
      else
      begin
```

```
            sumt = null;
            exit;
        end
        ndi = ndi + 1;
        kdd1 = cddbynd(ndi, yyyy);
    end
end
```

Декадный бюллетень, период вегетации, запасы продуктивной влаги

```
begin
select y.yyyy, y.nd
from got_year y
into :yyyy, :nd;
delete from bio_dek_veg_zpvt;
for
    select a.jjiii, a.nobl from cat_catst a, cat_catobl b
    where a.nobl = b.nobl and b.marked = '+'
    into :jjiii, :nobl
do
begin
    ------------
    nmax = 0;
    ncur = 1;
    for
        select c.nnn, c.w2w2, c.w5w5w5, c.w10w10w10
        from odb_ad94 c
        where c.yyyy = :yyyy and c.nd = :nd and c.kkk in (9) and c.jjiii = :jjiii
        into :nnn, :w2, :w5, :w10
    do
    begin
        insert into bio_dek_veg_zpvt (jjiii, nobl, n, d1n, d1w2, d1w5, d1w10) values (:jjiii, :nobl,
:ncur, :nnn,  :w2, :w5, :w10);
        ncur = ncur + 1;
    end
    select count(*) from bio_dek_veg_zpvt where jjiii = :jjiii into :nmax;
    ncur = 1;
    for
        select c.nnn, c.w2w2, c.w5w5w5, c.w10w10w10
        from odb_ad94 c
        where c.yyyy = :yyyy and c.nd = :nd and c.kkk in (7, 3, 15, 1) and c.jjiii = :jjiii
        into :nnn, :w2, :w5, :w10
    do
```

```
  begin
    if (ncur > nmax) then
      insert into bio_dek_veg_zpvt (jjiii, nobl, n, d2n, d2w2, d2w5, d2w10) values (:jjiii, :nobl,
:ncur, :nnn,  :w2, :w5, :w10);
    else
      update bio_dek_veg_zpvt d set
        d.d2n = :nnn, d.d2w2 = :w2, d.d2w5 = :w5, d.d2w10 = :w10
      where d.n = :ncur and d.jjiii = :jjiii;
    ncur = ncur + 1;
  end
  select count(*) from bio_dek_veg_zpvt where jjiii = :jjiii into :nmax;
  ncur = 1;
  for
    select c.nnn, c.w2w2, c.w5w5w5, c.w10w10w10
    from odb_ad94 c
    where c.yyyy = :yyyy and c.nd = :nd and c.kkk in (77) and c.jjiii = :jjiii
    into :nnn, :w2, :w5, :w10
  do
  begin
    if (ncur > nmax) then
      insert into bio_dek_veg_zpvt (jjiii, nobl, n, d3n, d3w2, d3w5, d3w10) values (:jjiii, :nobl,
:ncur, :nnn,  :w2, :w5, :w10);
    else
      update bio_dek_veg_zpvt d set
        d.d3n = :nnn, d.d3w2 = :w2, d.d3w5 = :w5, d.d3w10 = :w10
      where d.n = :ncur and d.jjiii = :jjiii;
    ncur = ncur + 1;
  end
  select count(*) from bio_dek_veg_zpvt where jjiii = :jjiii into :nmax;
  ncur = 1;
  for
    select c.nnn, c.w2w2, c.w5w5w5, c.w10w10w10
    from odb_ad94 c
    where c.yyyy = :yyyy and c.nd = :nd and c.kkk in (959, 481, 957) and c.jjiii = :jjiii
    into :nnn, :w2, :w5, :w10
  do
  begin
    if (ncur > nmax) then
      insert into bio_dek_veg_zpvt (jjiii, nobl, n, d4n, d4w2, d4w5, d4w10) values (:jjiii, :nobl,
:ncur, :nnn,  :w2, :w5, :w10);
    else
      update bio_dek_veg_zpvt d set
        d.d4n = :nnn, d.d4w2 = :w2, d.d4w5 = :w5, d.d4w10 = :w10
```

```
        where d.n = :ncur and d.jjiii = :jjiii;
      ncur = ncur + 1;
   end
   select count(*) from bio_dek_veg_zpvt where jjiii = :jjiii into :nmax;
   ncur = 1;
   for
      select c.nnn, c.w2w2, c.w5w5w5, c.w10w10w10
      from odb_ad94 c
      where c.yyyy = :yyyy and c.nd = :nd and c.kkk in (975) and c.jjiii = :jjiii
      into :nnn, :w2, :w5, :w10
   do
   begin
      if (ncur > nmax) then
         insert into bio_dek_veg_zpvt (jjiii, nobl, n, d5n, d5w2, d5w5, d5w10) values (:jjiii, :nobl,
:ncur, :nnn,  :w2, :w5, :w10);
      else
         update bio_dek_veg_zpvt d set
            d.d5n = :nnn, d.d5w2 = :w2, d.d5w5 = :w5, d.d5w10 = :w10
         where d.n = :ncur and d.jjiii = :jjiii;
      ncur = ncur + 1;
   end
end
end
```

Декадный бюллетень, зимний период, метеоданные по декадам

```
begin
select y.yyyy, y.nd
from got_year y
into :yyyy, :nd;
delete from got_gotr;
delete from got_gotr_11;
i = 0;
while (i <= 2) do
begin
   insert into got_gotr
   select c.jjiii, 1 + :i * 3, c.ttt
      from cat_catst a, cat_catobl b, odb_adm c
      where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + :i and c.yyyy = : yyyy and a.jjiii
= c.jjiii;
   insert into got_gotr
   select c.jjiii, 2 + :i * 3, c.txtx
      from cat_catst a, cat_catobl b, odb_adm c
```

```
      where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + :i and c.yyyy = : yyyy and a.jjiii
= c.jjiii;
   insert into got_gotr
   select c.jjiii, 3 + :i * 3, c.tntn
      from cat_catst a, cat_catobl b, odb_adm c
      where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + :i and c.yyyy = : yyyy and a.jjiii
= c.jjiii;
   insert into got_gotr
   select c.jjiii, 10 + :i, c.tgtg
      from cat_catst a, cat_catobl b, odb_adm c
      where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + :i and c.yyyy = : yyyy and a.jjiii
= c.jjiii;
   i = i + 1;
end
execute procedure got_make_f36;
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Декадный бюллетень, зимний период, глубина промерзания почвы на последний день декады

```
begin
select y.yyyy, y.nd
from got_year y
into :yyyy, :nd;
delete from got_gotr;
delete from got_gotr_11;
i = 0;
while (i <= 2) do
begin
   insert into got_gotr
   select c.jjiii, 1 + :i, c.rrr
      from cat_catst a, cat_catobl b, odb_adm c
      where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + :i and c.yyyy = : yyyy and a.jjiii
= c.jjiii;
   insert into got_gotr
   select c.jjiii, 4 + :i, c.sss
      from cat_catst a, cat_catobl b, odb_ad95 c
      where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + :i and c.yyyy = : yyyy and a.jjiii
= c.jjiii;
   insert into got_gotr
   select c.jjiii, 7 + :i, c.nq
      from cat_catst a, cat_catobl b, odb_ad95 c
```

```
      where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + :i and c.yyyy = : yyyy and a.jjiii
= c.jjiii and c.nq is not null;
   i = i + 1;
end
insert into got_gotr
select c.jjiii, 10, c.hphphp
   from cat_catst a, cat_catobl b, odb_ad95 c
   where a.nobl = b.nobl and b.marked = '+' and c.nd = :nd + 2 and c.yyyy = : yyyy and a.jjiii =
c.jjiii and c.hphphp is not null;
execute procedure got_make_f36;
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Декадный бюллетень, зимний период, агрометеорологические данные

```
begin
select y.yyyy, y.nd + 2
from got_year y
into :yyyy, :nd;
yyyyp = yyyy - 1;
pdd = date1bynd(nd, yyyy) + (cddbynd(nd, yyyy) - 1);
pddp = date1bynd(nd, yyyyp) + (cddbynd(nd, yyyyp) - 1);

delete from bio_dek_zim_agrt;
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure bio_dek_zim_agrp pdd, jjiii, 0
   returning_values dvp0, dop0, sumt0;
   execute procedure bio_dek_zim_agrp pddp, jjiii, 0
   returning_values dvp0p, dop0p, sumt0p;

   sss = null;
   sssp = null;
      select max(d.sss) from odb_ad95 d
      where d.jjiii = :jjiii and d.yyyy = :yyyy and d.nd = ndbydate(:pdd)
      into :sss;
```

```
      select max(d.sss) from odb_ad95 d
      where d.jjiii = :jjiii and d.yyyy = :yyyyp and d.nd = ndbydate(:pddp)
      into :sssp;
   if (sumt0 is not null or sumt0p is not null or sss is not null or sssp is not null) then
      insert into bio_dek_zim_agrt values (:jjiii, :nobl,
         :dop0, :dvp0, :sumt0, :dop0p, :dvp0p, :sumt0p, :sss, :sssp);
end
end
```

Декадный бюллетень, зимний период, сумма отрицательных температур

```
begin
   dvp = null;
   dop = null;
   sumt = null;
   yyyy = extract(year from pdd);
   yyyyp = yyyy - 1;
   mind = cast('01.09.' || yyyyp as date);
   maxd = cast('30.11.' || yyyyp as date);
   -- if (pdd < maxd) then maxd = pdd;
   execute procedure pro_calcdupo2 jjiii, tp, mind, maxd
   returning_values dop, errmsg;

   mind = cast('01.03.' || yyyy as date);
   maxd = cast('30.06.' || yyyy as date);
   if (pdd > mind) then
   begin
      if (pdd < maxd) then maxd = pdd;
      execute procedure pro_calcdupv2 jjiii, tp, mind, maxd
      returning_values dvp, errmsg;
   end
   -- if (dop > pdd) then dop = pdd;
   if (dvp is null or dvp > pdd) then dvp = pdd;
   if (dvp is not null and dop is not null) then
   begin
      nd1 = ndbydate(dop);
      nd2 = ndbydate(dvp);
      ndc = nd1;
      sumt = 0;
      for select d.ttt, d.nd, d.yyyy from odb_adm d
         where d.jjiii = :jjiii and
            ((d.yyyy = extract(year from :dop) and d.nd >= :nd1) or
             (d.yyyy = extract(year from :dvp)  and d.nd <= :nd2)) and d.ttt is not null
```

```
        order by d.yyyy, d.nd
      into :ttt, :nd, :y
      do
      begin
        if (nd <> ndc) then
        begin
          sumt = null;
          break;
        end
        if (nd = nd1) then
          d = cddbydate(dop) - nddbydate(dop);
        else if (nd = nd2) then
          d = nddbydate(dvp);
        else d = cddbydate(date1bynd(nd, y));
        if (ttt < tp) then sumt = sumt + ttt * d;
        ndc = ndc + 1;
        if (ndc = 37) then ndc = 1;
      end
    end
end
```

Годовой обзор, сумма осадков по месяцам и сезонам

```
begin
delete from got_gotr;
delete from got_gotr_11;
select *
from got_year
into :yearr;
pyear = yearr - 1;
insert into got_gotr
select c.jjiii, 1, iif(count(*)=3, sum(c.rrr), null)
    from cat_catst a, cat_catobl b, odb_adm c
    where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      c.rrr is not null and
      (c.yyyy = :pyear and c.nd >= 25 and c.nd <= 27)
    group by c.jjiii;
insert into got_gotr
select c.jjiii, 2, iif(count(*)=3, sum(c.rrr), null)
```

```
    from cat_catst a, cat_catobl b, odb_adm c
    where
        a.nobl   = b.nobl  and
        b.marked = '+'     and
        c.jjiii = a.jjiii  and
        c.rrr is not null and
        (c.yyyy = :pyear and c.nd >= 28 and c.nd <= 30)
    group by c.jjiii;
insert into got_gotr
select c.jjiii, 3, iif(count(*)=3, sum(c.rrr), null)
    from cat_catst a, cat_catobl b, odb_adm c
    where
        a.nobl   = b.nobl  and
        b.marked = '+'     and
        c.jjiii = a.jjiii  and
        c.rrr is not null and
        (c.yyyy = :pyear and c.nd >= 31 and c.nd <= 33)
    group by c.jjiii;
insert into got_gotr
…
select c.jjiii, 12, iif(count(*)=3, sum(c.rrr), null)
    from cat_catst a, cat_catobl b, odb_adm c
    where
        a.nobl   = b.nobl  and
        b.marked = '+'     and
        c.jjiii = a.jjiii  and
        c.rrr is not null and
        (c.yyyy = :yearr and c.nd >= 22 and c.nd <= 24)
    group by c.jjiii;
execute procedure got_make_f36;
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Годовой обзор, сведения о заморозках

```
begin
delete from got_gotr;
delete from got_gotr_11;
select y.yyyy
from got_year y
into :yearr;
pyear = yearr - 1;
```

```
delete from bio_go_hsg_zamt;
for select a.nobl, a.jjiii
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   group by a.nobl, a.jjiii
   into :nobl, :jjiii
do
begin
   lastvdate = null;
   lastvttn = null;
   lastvdatep = null;
   lastvttg = null;
   firstottn = null;
   firstottg = null;
   estosen = 0;
   nodata = 1;
   for select c.t_nt_n, c.t_gt_g, c.ddmm from odb_aem c
      where (c.t_nt_n <= 0 or c.t_gt_g < 0) and c.yyyy = :yearr and c.jjiii = :jjiii
      into :t_nt_n, :t_gt_g, :ddmm
   do
   begin
      nodata = 0;
      nottn = iif(t_nt_n is null or (t_nt_n > 0), 1, 0);
      nottg = iif(t_gt_g is null or (t_gt_g >= 0), 1, 0);
      if (ddmm < '1.07.400') then
      begin
         if (nottn = 0) then
         begin
            lastvdate = ddmm;
            lastvttn = t_nt_n;
         end
         if (nottg = 0) then
         begin
            lastvdatep = ddmm;
            lastvttg = t_gt_g;
         end
      end
      else
      begin
         if (firstottn is null and nottn = 0) then
         begin
```

```
            firstottn = t_nt_n;
            firstodate = ddmm;
            estosen = estosen + 1;
         end
         if (firstottg is null and nottg = 0) then
         begin
            firstottg = t_gt_g;
            firstodatep = ddmm;
            estosen = estosen + 1;
         end
         if (estosen = 2) then break;
      end
   end
   if (nodata = 1) then
      delete from bio_go_hsg_zamt d where d.jjiii = :jjiii;
   else
   begin
      pbzp = iif(firstodate is not null and lastvdate is not null, firstodate - lastvdate - 1, null);
      pbzpp = iif(firstodatep is not null and lastvdatep is not null, firstodatep - lastvdatep - 1,
null);
      insert into bio_go_hsg_zamt
      values (:jjiii, :nobl, :lastvdate, :lastvttn, :firstodate, :firstottn, :pbzp, :lastvdatep, :lastvttg,
:firstodatep, :firstottg, :pbzpp);
   end
end
end
```

Годовой обзор, период вегетации, даты устойчивого перехода температуры через 0, 5, 10, 15 °C

```
begin
select *
from got_year
into :yyyy;
yyyyp = yyyy - 1;
delete from bio_go_veg_agr_dupt;
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
```

```
do
begin
   execute procedure pro_calcdupo jjiii, 5, cast('01.09.' || yyyy as date), cast('30.10.' || yyyy as
date)
   returning_values dupto5, errmsg;
…
   pp5 = iif(dupto5 is not null and duptv5 is not null, datediff (day, duptv5, dupto5), null);
   pp5p = iif(dupto5p is not null and duptv5p is not null, datediff (day, duptv5p, dupto5p), null);
   pp10 = iif(dupto10 is not null and duptv10 is not null, datediff (day, duptv10, dupto10), null);
   pp10p = iif(dupto10p is not null and duptv10p is not null, datediff (day, duptv10p, dupto10p),
null);
   pp15 = iif(dupto15 is not null and duptv15 is not null, datediff (day, duptv15, dupto15), null);
   pp15p = iif(dupto15p is not null and duptv15p is not null, datediff (day, duptv15p, dupto15p),
null);
   delete from bio_go_veg_agr_dupt where
      dupto5 is null and duptv5 is null and dupto5p is null and duptv5p is null and
      dupto10 is null and duptv10 is null and dupto10p is null and duptv10p is null and
      dupto15 is null and duptv15 is null and dupto15p is null and duptv15p is null;
   insert into bio_go_veg_agr_dupt values (:jjiii, :nobl,
      :dupto5, :duptv5, :dupto5p, :duptv5p, :pp5, :pp5p,
      :dupto10, :duptv10, :dupto10p, :duptv10p, :pp10, :pp10p,
      :dupto15, :duptv15, :dupto15p, :duptv15p, :pp15, :pp15p);
end
end
```

Годовой обзор, период вегетации, число дней с осадками 1 мм и 5 мм

```
begin
delete from got_gotr;
delete from got_gotr_11;
select *
from got_year
into :yearr;
pyear = yearr - 1;
--------------------------
insert into got_gotr
select c.jjiii, 1, sum(c.nr1)
   from cat_catst a, cat_catobl b, odb_adm c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      c.nr1 is not null and
```

```
      (c.yyyy = :yearr and c.nd >= 19 and c.nd <= 21)
   group by c.jjiii;
insert into got_gotr
…
select c.jjiii, 8, sum(c.nr5)
   from cat_catst a, cat_catobl b, odb_adm c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      c.nr5 is not null and
      (c.yyyy = :pyear and c.nd >= 19 and c.nd <= 27)
   group by c.jjiii;
execute procedure got_make_f36;
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Годовой обзор, период вегетации, тепло- и влагообеспеченность

```
begin
select *
from got_year
into :yyyy;
yyyyp = yyyy - 1;
delete from bio_go_veg_agr_tvot;
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure pro_calcdupo jjiii, 5, cast('01.09.' || yyyy as date), cast('30.10.' || yyyy as
date)
   returning_values dupto5, errmsg;
…
   if (dupto10 is not null and duptv10 is not null) then
   begin
      dupto10 = datefromddmm(dupto10, 400);
      duptv10 = datefromddmm(duptv10, 400);
      select sum(d.t24t24t24) from odb_aem d
```

```
      where d.jjiii = :jjiii and d.yyyy = :yyyy and
      d.ddmm >= :duptv10 and d.ddmm < :dupto10 and d.t24t24t24 > 0
      into :st10;
      select sum(d.r24r24r24) from odb_aem d
      where d.jjiii = :jjiii and d.yyyy = :yyyy and
      d.ddmm >= :duptv10 and d.ddmm < :dupto10
      into :sr10;
      select sum(d.t24t24t24 - 10) from odb_aem d
      where d.jjiii = :jjiii and d.yyyy = :yyyy and
      d.ddmm >= :duptv10 and d.ddmm < :dupto10 and d.t24t24t24 > 10
      into :st_10;
   end
   if (dupto5 is not null and duptv5 is not null) then
   begin
      dupto5 = datefromddmm(dupto5, 400);
      duptv5 = datefromddmm(duptv5, 400);
      select sum(d.t24t24t24 - 5) from odb_aem d
      where d.jjiii = :jjiii and d.yyyy = :yyyy and
      d.ddmm >= :duptv5 and d.ddmm < :dupto5 and d.t24t24t24 > 5
      into :st_5;
   end
   if (dupto15 is not null and duptv15 is not null) then
   begin
      dupto15 = datefromddmm(dupto15, 400);
      duptv15 = datefromddmm(duptv15, 400);
      select sum(d.t24t24t24 - 15) from odb_aem d
      where d.jjiii = :jjiii and d.yyyy = :yyyy and
      d.ddmm >= :duptv15 and d.ddmm < :dupto15 and d.t24t24t24 > 15
      into :st_15;
   end
   execute procedure pro_calcdupo jjiii, 5, cast('01.09.' || yyyyp as date), cast('30.10.' || yyyyp as
date)
   returning_values dupto5, errmsg;
…
   if (dupto5 is not null and duptv5 is not null) then
   begin
      dupto5 = datefromddmm(dupto5, 400);
      duptv5 = datefromddmm(duptv5, 400);
      select sum(d.t24t24t24 - 5) from odb_aem d
      where d.jjiii = :jjiii and d.yyyy = :yyyyp and
      d.ddmm >= :duptv5 and d.ddmm < :dupto5 and d.t24t24t24 > 5
      into :st_5p;
   end
```

```
   if (dupto15 is not null and duptv15 is not null) then
   begin
      dupto15 = datefromddmm(dupto15, 400);
      duptv15 = datefromddmm(duptv15, 400);
      select sum(d.t24t24t24 - 15) from odb_aem d
      where d.jjiii = :jjiii and d.yyyy = :yyyyp and
      d.ddmm >= :duptv15 and d.ddmm < :dupto15 and d.t24t24t24 > 15
      into :st_15p;
   end
   insert into bio_go_veg_agr_tvot values (:jjiii, :nobl,
      :st10, :st10p, :sr10, :sr10p, :st_5, :st_5p, :st_10, :st_10p, :st_15, :st_15p);
end
end
```

Годовой обзор, период вегетации, фазы развития кульутр

```
begin
if (kkk in (6, 9, 14)) then
begin
   for
      select a.jjiii, a.kkk, a.nnn
      from odb_adff a, cat_catobl b, cat_catst c
      where   a.kkk = :kkk and
            ((a.yyyy = :yearr and (a.ff in (10,0,1,13,2,3,17,18)) and a.nd > 18 ) or
              (a.yyyy = (:yearr + 1) and (a.ff in (18,13,2,3,4,19,5,6,7,8,9,90)) and a.nd < 25 )) and
            a.ya is not null and
            c.nobl = b.nobl and
            a.jjiii = c.jjiii and
            b.marked = '+'
            group by a.jjiii, a.kkk, a.nnn
      into :jjiii, :kkk, :nnn
   do
   begin
      f01 = null;
…
      f90 = null;
      for
         select nd, ff, ya from odb_adff
         where kkk = :kkk and
         ((yyyy = :yearr and (ff in (10,0,1,13,2,3,17,18)) and nd > 18 ) or
           (yyyy = (:yearr + 1) and (ff in (18,13,2,3,4,19,5,6,7,8,9,90)) and nd < 25 )) and
         jjiii = :jjiii and ya is not null and nnn is not distinct from :nnn
         into :nd, :ff, :ya
```

```
        do
        begin
           d = ((:nd-1) - floor((:nd-1)/3)*3)*10 + :ya;
           m = floor((:nd-1)/3) + 1;
           if ( m in (1,3,5,7,8,10,12) ) then
           begin
              if( d > 31 ) then
                 d = 31;
           end
           if ( m in (4, 6, 9, 11 ) ) then
           begin
              if( d > 30 ) then
                 d = 30;
           end
           if ( m = 2 ) then
           begin
              if( mod(yearr,4) = 0 ) then
              begin
                 if( d > 29 ) then
                    d = 29;
              end
              else
              begin
                 if( d > 28 ) then
                    d = 28;
              end
           end
           fd = :d || "." || :m  || "." || :yearr;
           if( ff = 1 ) then
              f01 = fd;
           else if( ff = 3 and nd >= 21) then
              f03 = fd;
…
        end
        insert into agr_ff ( jjiii, kkk, nnn, f01, f03, f04, f05, f06, f07, f08, f09, f10, f90)
        values (:jjiii, :kkk, :nnn, :f01, :f03, :f04, :f05, :f06, :f07, :f08, :f09, :f10, :f90);
     end
end
else
begin
     for
        select a.jjiii, a.kkk, a.nnn
        from odb_adff a, cat_catobl b, cat_catst c
```

```
      where   a.kkk = :kkk and
              a.yyyy = :yearr and
              a.ya is not null and
              c.nobl = b.nobl and
              a.jjiii = c.jjiii and
              b.marked = '+'
              group by a.jjiii, a.kkk, a.nnn
      into :jjiii, :kkk, :nnn
   do
   begin
      f01 = null;
…
      f90 = null;
      for
         select nd, ff, ya from odb_adff
         where kkk = :kkk and yyyy = :yearr and jjiii = :jjiii and ya is not null and nnn is not dis-
tinct from :nnn
         into :nd, :ff, :ya
      do
      begin
         d = ((:nd-1) - floor((:nd-1)/3)*3)*10 + :ya;
         m = floor((:nd-1)/3) + 1;

         if ( m in (1,3,5,7,8,10,12) ) then
         begin
            if( d > 31 ) then
               d = 31;
         end
         if ( m in (4, 6, 9, 11 ) ) then
         begin
            if( d > 30 ) then
               d = 30;
         end
         if ( m = 2 ) then
         begin
            if( mod(yearr,4) = 0 ) then
            begin
               if( d > 29 ) then
                  d = 29;
            end
            else
            begin
               if( d > 28 ) then
```

```
                d = 28;
            end
        end
        fd = :d || "." || :m  || "." || :yearr;
        if( ff = 1 ) then
            f01 = fd;
…
        else if( ff = 90 ) then
            f90 = fd;
    end
    insert into agr_ff ( jjiii, kkk, nnn, f01, f03, f04, f05, f06, f07, f08, f09, f10, f90)
    values (:jjiii, :kkk, :nnn, :f01, :f03, :f04, :f05, :f06, :f07, :f08, :f09, :f10, :f90);
  end
end
end
```

Годовой обзор, период вегетации, структура урожая картофеля

```
begin
select y.yyyy
from got_year y
into :yearr;
delete from bio_go_veg_kar_sut;
for
  select a.nobl, c.jjiii
  from  cat_catst a, cat_catobl b, odb_adff c
  where
    b.marked = '+'    and
    a.nobl   = b.nobl and
    c.jjiii  = a.jjiii and c.yyyy = :yearr and c.kkk = 77-- and c.ff = 8
  group by a.nobl, c.jjiii
  into :nobl, :jjiii
do
begin
  riri = null;
  lele = null;
  c0c0c0c0 = null;
  cpcpcpcp = null;

  select first 1 d.riri, d.lele, d.c0c0c0c0
  from   odb_ad93 d
  where
    d.jjiii  = :jjiii and d.yyyy = :yearr and d.kkk = 77 and --d.nd = c.nd and d.nnn = c.nnn and
    (d.riri is not null or d.lele is not null or d.c0c0c0c0 is not null)
```

```
      order by d.nd desc
   into :riri, :lele, :c0c0c0c0;
   select first 1 d.cpcpcpcp
   from   /*odb_adff c,*/ odb_ad92 d
   where
      d.jjiii  = :jjiii and d.yyyy = :yearr and d.kkk = 77 and --d.nd = c.nd and d.nnn = c.nnn and
      d.cpcpcpcp is not null
      order by d.nd desc
   into :cpcpcpcp;
   if ( riri is not null or lele is not null or c0c0c0c0 is not null or cpcpcpcp is not null ) then
      insert into bio_go_veg_kar_sut (nobl, jjiii, riri, lele, c0c0c0c0, cpcpcpcp)
      values (:nobl, :jjiii, :riri, :lele, :c0c0c0c0, :cpcpcpcp);
end
end
```

Годовой обзор, период вегетации, температурный режим почвы под картофелем

```
begin
delete from got_gotr;
delete from got_gotr_11;
select *
from got_year
into :yearr;
insert into got_gotr
select c.jjiii, c.nd, c.t_10t_10
   from cat_catst a, cat_catobl b, odb_adm c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      c.yyyy = :yearr and
      c.nd >= 16 and c.nd <= 27;
execute procedure got_make_f36;
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Годовой обзор, период вегетации, влагозапасы

```
begin
delete from agr_w;
delete from agr_gotr;
insert into agr_gotr
select c.jjiii, c.nnn, c.nd, c.w1w1
   from cat_catst a, cat_catobl b, odb_ad94 c
   where
```

```
   a.nobl   = b.nobl and
   b.marked = '+'    and
   c.yyyy   = :yearr  and
   c.kkk   = :kkk    and
   c.nd > 9 and
   c.nnn is not null and
   a.jjiii  = c.jjiii;

execute procedure agr_make_f36;
insert into agr_w select k, :kkk, nnn, 1, f7, f8, f9, f10, f11, f12, f13, f14, f15, f16,
                        f17, f18, f19, f20, f21, f22, f23, f24, f25, f26, f27, f28, f29, f30,
                        f31, f32, f33, f34, f35, f36
                        from agr_gotr_f36;
delete from agr_gotr;
insert into agr_gotr
select c.jjiii, c.nnn, c.nd, c.w2w2
   from cat_catst a, cat_catobl b, odb_ad94 c
   where
   a.nobl   = b.nobl and
   b.marked = '+'    and
   c.yyyy   = :yearr  and
   c.kkk   = :kkk    and
   c.nd > 9 and
   c.nnn is not null and
   a.jjiii  = c.jjiii;
…
execute procedure agr_make_f36;
insert into agr_w select k, :kkk, nnn, 10, f7, f8, f9, f10, f11, f12, f13, f14, f15, f16,
                        f17, f18, f19, f20, f21, f22, f23, f24, f25, f26, f27, f28, f29, f30,
                        f31, f32, f33, f34, f35, f36
                        from agr_gotr_f36;
end
```

Годовой обзор, период вегетации, продуктивность колоса зерновых культур

```
begin
select *
from got_year
into :yearr;
yearr = 2014;
delete from bio_go_veg_zkk_pkt;
for
   select a.nobl, c.jjiii, c.kkk
```

```
    from  cat_catst a, cat_catobl b, odb_adff c
    where
       b.marked = '+'    and
       a.nobl   = b.nobl and
       c.jjiii  = a.jjiii and c.yyyy = :yearr and c.kkk in (9, 7, 15, 3)-- and c.ff in (7, 8)
    group by a.nobl, c.jjiii, c.kkk
    into :nobl, :jjiii, :kkk
do
begin
    riri = null;
    rk = null;
    rerere = null;
    abababab = null;
    ababababp = null;
    select first 1 d.lele, d.rk, d.rerere
    from    odb_ad93 d
    where
       --c.jjiii  = :jjiii and c.yyyy = :yearr and c.kkk = :kkk and c.ff = 7 and
       d.jjiii  = :jjiii and d.yyyy = :yearr and d.kkk = :kkk and --d.nd = c.nd and d.nnn = c.nnn and
       (d.lele is not null or d.rk is not null or d.rerere is not null)
       order by d.nd desc
    into :riri, :rk, :rerere;
    select first 1 d.abababab
    from   odb_ad93 d
    where
       --c.jjiii  = :jjiii and c.yyyy = :yearr and c.kkk = :kkk and c.ff = 8 and
       d.jjiii  = :jjiii and d.yyyy = :yearr and d.kkk = :kkk and --d.nd = c.nd and d.nnn = c.nnn and
       d.abababab is not null
       order by d.nd desc
    into :abababab;
    select first 1 d.abababab
    from   odb_ad93 d
    where
       --c.jjiii  = :jjiii and c.yyyy = :yearr-1 and c.kkk = :kkk and c.ff = 8 and
       d.jjiii  = :jjiii and d.yyyy = :yearr-1 and d.kkk = :kkk and --d.nd = c.nd and d.nnn = c.nnn
and
       d.abababab is not null
       order by d.nd desc
    into :ababababp;
    if ( riri is not null or rk is not null or rerere is not null or abababab is not null or ababababp is
not null) then
       insert into bio_go_veg_zkk_pkt (nobl, jjiii, kkk, riri, rk, rerere, abababab, ababababp)
       values (:nobl, :jjiii, :kkk, :riri, :rk, :rerere, :abababab, :ababababp);
```

```
end
end
```

Зимний период, агрометеорологические показатели зимы

```
begin
delete from got_gotr;
delete from got_gotr_11;
select y.yyyy
from got_year y
into :yearr;
pyear = yearr - 1;
insert into got_gotr
select c.jjiii, 1, min(c.tntn)
   from cat_catst a, cat_catobl b, odb_adm c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      c.tntn is not null and
      (c.yyyy = :pyear and c.nd >= 31 and c.nd <= 33)
   group by c.jjiii;
insert into got_gotr
select c.jjiii, 2, min(c.tntn)
   from cat_catst a, cat_catobl b, odb_adm c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      c.tntn is not null and
      (c.yyyy = :pyear and c.nd >= 34 and c.nd <= 36)
   group by c.jjiii;
insert into got_gotr
…
select c.jjiii, 16, c.hphphp
   from cat_catst a, cat_catobl b, odb_ad95 c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      c.hphphp is not null and
      (c.yyyy = :yearr and c.nd = 12);
execute procedure got_make_f36;
```

```
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Зимний период, характеристика зимнего периода

```
begin
select y.yyyy
from got_year y
into :yearr;
pyear = yearr - 1;
ppyear = yearr - 2;
delete from bio_go_zim_hzpt;

for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure PRO_CALCDUPO2 jjiii, 0, cast('01.09.' || pyear as date), cast('30.10.' ||
pyear as date)
   returning_values dupto, errmsg;
   execute procedure PRO_CALCDUPV2 jjiii, 0, cast('01.04.' || yearr as date), cast('30.06.' ||
yearr as date)
   returning_values duptv, errmsg;
   execute procedure PRO_CALCDUPO2 jjiii, 0, cast('01.09.' || ppyear as date), cast('30.10.' ||
ppyear as date)
   returning_values duptop, errmsg;
   execute procedure PRO_CALCDUPV2 jjiii, 0, cast('01.04.' || pyear as date), cast('30.06.' ||
pyear as date)
   returning_values duptvp, errmsg;
   pzp = iif(dupto is not null and duptv is not null, datediff (day, dupto, duptv), null);
   pzpp = iif(duptop is not null and duptvp is not null, datediff (day, duptop, duptvp), null);
   sot = null;
   avgt = null;
   hp = null;
   zw = null;
   if (dupto is not null and duptv is not null) then
   begin
      select sum(d.t24t24t24) from odb_aem d
```

```
      where d.jjiii = :jjiii and
      ((d.yyyy = :pyear and d.ddmm >= datefromddmm(:dupto, 400)) or
      (d.yyyy = :yearr and d.ddmm <= datefromddmm(:duptv, 400))) and d.t24t24t24 < 0
      into :sot;
      select avg(d.t24t24t24) from odb_aem d
      where d.jjiii = :jjiii and
      ((d.yyyy = :pyear and d.ddmm >= datefromddmm(:dupto, 400)) or
      (d.yyyy = :yearr and d.ddmm <= datefromddmm(:duptv, 400))) and d.t24t24t24 is not null
      into :avgt;
   end
   select max(d.sss), max(d.sss * d.mpmp * 10) from odb_ad95 d
   where d.jjiii = :jjiii and d.sss is not null and d.mpmp is not null and --d.nnn is not null and
   ((d.yyyy = :pyear and d.nd >= 31) or (d.yyyy = :yearr and d.nd <= 9))
   into :hp, :zw;
   if (dupto is not null or duptv is not null or hp is not null or zw is not null) then
   insert into bio_go_zim_hzpt values (:jjiii, :nobl, :dupto, :duptv, :pzp, :pzpp, :sot, :avgt, :hp,
:zw);
end
end
```

Зимний период, высота снежного покрова

```
begin
delete from got_gotr;
delete from got_gotr_11;
select *
from got_year
into :yearr;
pyear = yearr - 1;
insert into got_gotr
select c.jjiii, c.nd, c.sss
   from cat_catst a, cat_catobl b, odb_ad95 c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.jjiii = a.jjiii  and
      ((c.yyyy = :pyear and c.nd >= 31 and c.nd <= 36) or
      (c.yyyy = :yearr and c.nd >= 1 and c.nd <= 12));
execute procedure got_make_f36;
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Период вегетации, суточные данные: средний дефицит насыщения воздуха за прошедшие сутки

```
begin
delete from got_gotr;
delete from got_gotr_11;
select yyyy from got_year into :yearr;
select mn from got_month into :mn;
insert into got_gotr
select c.jjiii, extract(day from c.ddmm)-1, c.DEDE
   from cat_catst a, cat_catobl b, odb_aem c
   where
      a.nobl   = b.nobl  and
      b.marked = '+'     and
      c.yyyy   = :yearr  and
      ((extract(month from c.ddmm) = :mn and extract(day from c.ddmm) <> 1) or
       (extract(month from c.ddmm) = :mn + 1 and extract(day from c.ddmm) = 1))
      and a.jjiii  = c.jjiii;
lastd = cddbynd(:mn * 3, yearr) + 20;
update got_gotr set nd = :lastd where nd = 0;
execute procedure got_make_f36;
insert into got_gotr_11 select * from got_gotr_f36;
end
```

Период вегетации, средний дефицит влажности воздуха

```
BEGIN
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11;
SELECT *
FROM GOT_YEAR
INTO :yearr;
INSERT INTO GOT_GOTR
SELECT C.JJIII, C.ND, C.DDDD
   FROM CAT_CATST A, CAT_CATOBL B, ODB_ADM C
   WHERE
      A.NOBL   = B.NOBL  AND
      B.MARKED = '+'     AND
      C.ND     >= 10     AND
      C.ND     <= 30     AND
      C.YYYY   = :yearr  AND
      A.JJIII  = C.JJIII;
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11 SELECT * FROM GOT_GOTR_F36;
END
```

Период вегетации, дата перехода температуры воздуха через 0, 5, 10, 15 °С

```
begin
select y.yyyy
from got_year y
into :yyyy;
delete from veg__dupt;
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure pro_calcdupv2 jjiii, 0, cast('01.04.' || yyyy as date), cast('30.06.' || yyyy as
date)
   returning_values dpv0, errmsg;
…
   returning_values dpo15, errmsg;
   if (:dpv0 is not null or :dpo0 is not null) then
   select sum(d.t24t24t24) from odb_aem d
      where d.jjiii = :jjiii and d.yyyy = :yyyy and
      d.ddmm >= datefromddmm(:dpv0, 400) and d.ddmm <= datefromddmm(:dpo0, 400) and
d.t24t24t24 > 0
      into :sumt0;
   if (:dpv0 is not null or :dpo0 is not null or
      :dpv5 is not null or :dpo5 is not null or
      :dpv10 is not null or :dpo10 is not null or
      :dpv15 is not null or :dpo15 is not null) then
      insert into veg__dupt values (:jjiii, :nobl,
         :dpv0, :dpo0, :dpv5, :dpo5, :dpv10, :dpo10, :dpv15, :dpo15, :sumt0);
end
end
```

Период вегетации, сумма положительных температур воздуха

```
BEGIN
SELECT yyyy
FROM GOT_YEAR
INTO :yearr;
DELETE FROM GOT_GOTR;
```

```
DELETE FROM GOT_GOTR_11;
select max(o.nd) from odb_adm o
where o.yyyy = :yearr and o.ttt > 0 into :maxnd;
pdd = date1bynd(:maxnd, :yearr) + (cddbynd(:maxnd, :yearr) - 1);
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure VEG__SUMTP pdd, jjiii, 0;
end
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11 SELECT * FROM GOT_GOTR_F36;
END
```

Период вегетации, сумма положительных температур воздуха (вспомогательная процедура)

```
begin
   dvp = null;
   dop = null;
   sumt = null;
   yyyy = extract(year from pdd);
   yyyyp = yyyy - 1;
   mind = cast('02.04.' || yyyy as date);
   maxd = cast('30.08.' || yyyy as date);
   if (pdd < maxd) then maxd = pdd;
   execute procedure pro_calcdupv2 jjiii, tp, mind, maxd
   returning_values dvp, errmsg;
   mind = cast('01.09.' || yyyy as date);
   maxd = cast('30.11.' || yyyy as date);
   if (pdd > mind) then
   begin
      if (pdd < maxd) then maxd = pdd;
      execute procedure pro_calcdupo2 jjiii, tp, mind, maxd
      returning_values dop, errmsg;
   end
   if (dop is null or dop > pdd) then dop = pdd;

   if (dvp is not null and dop is not null) then
```

```
  begin
    nd1 = ndbydate(dvp);
    nd2 = ndbydate(dop);
    dvp = dvp + 1;
    dop = dop + 1;
    dvp = datefromddmm(dvp, 400);
    dop = datefromddmm(dop, 400);
    ndc = nd1;
    sumt = 0;
    while (ndc <= nd2) do
    begin
      ttt = null;
      select sum(a.t24t24t24) from odb_aem a where
          a.ddmm >= :dvp and a.ddmm <= :dop and a.yyyy = :yyyy and
          ndbydate(datefromddmm(a.ddmm, :yyyy) - 1) = :ndc and
          a.t24t24t24 > :tp and
          a.jjiii = :jjiii
      into :ttt;
      if (ttt is not null) then
        sumt = sumt + ttt;
      insert into got_gotr values (:jjiii, :ndc, :sumt);
      ndc = ndc + 1;
    end
  end
end
```

Период вегетации, средняя температура воздуха за декаду

```
BEGIN
SELECT *
FROM GOT_YEAR
INTO :yearr;
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11;
INSERT INTO GOT_GOTR
SELECT C.JJIII, C.ND, C.ttt
  FROM CAT_CATST A, CAT_CATOBL B, ODB_ADM C
  WHERE
    A.NOBL   = B.NOBL  AND
    B.MARKED = '+'     AND
    C.ND     >= 10     AND
    C.ND     <= 30     AND
    C.YYYY   = :yearr  AND
    A.JJIII  = C.JJIII;
```

```
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11 SELECT * FROM GOT_GOTR_F36;
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11N;
INSERT INTO GOT_GOTR
SELECT C.jjiii, C.nd, C.t
   FROM CAT_CATST A, CAT_CATOBL B, norms_nm_cd C
   WHERE
      A.NOBL   = B.NOBL  AND
      B.MARKED = '+'     AND
      C.ND     >= 10     AND
      C.ND     <= 30     AND
      A.JJIII  = C.JJIII;
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11N SELECT * FROM GOT_GOTR_F36;
END
```

Период вегетации, максимальная температура воздуха за декаду

```
BEGIN
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11;
SELECT *
FROM GOT_YEAR
INTO :yearr;
INSERT INTO GOT_GOTR
SELECT C.JJIII, C.ND, C.TXTX
   FROM CAT_CATST A, CAT_CATOBL B, ODB_ADM C
   WHERE
      A.NOBL   = B.NOBL  AND
      B.MARKED = '+'     AND
      C.ND     >= 10     AND
      C.ND     <= 30     AND
      C.YYYY   = :yearr  AND
      A.JJIII  = C.JJIII;
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11 SELECT * FROM GOT_GOTR_F36;
END
```

Зимний период, дата перехода через 0° С осенью и весной

```
begin
select y.yyyy
from got_year y
into :yyyy;
```

```
yyyyp = yyyy - 1;
delete from zim__dupt;
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure pro_calcdupo2 jjiii, 0, cast('01.09.' || yyyyp as date), cast('30.10.' || yyyyp as
date)
   returning_values dpo0, errmsg;
   execute procedure pro_calcdupv2 jjiii, 0, cast('02.04.' || yyyy as date), cast('30.06.' || yyyy as
date)
   returning_values dpv0, errmsg;
   sumt0 = null;
   if (:dpo0 is not null and :dpv0 is not null) then
   begin
      nd1 = ndbydate(dpo0);
      nd2 = ndbydate(dpv0);
      ndc = nd1;
      sumt0 = 0;
      for select d.ttt, d.nd, d.yyyy from odb_adm d
         where d.jjiii = :jjiii and
            ((d.yyyy = extract(year from :dpo0) and d.nd >= :nd1) or
             (d.yyyy = extract(year from :dpv0)  and d.nd <= :nd2)) and d.ttt is not null
         order by d.yyyy, d.nd
      into :ttt, :nd, :y
      do
      begin
         if (nd <> ndc) then
         begin
            sumt0 = null;
            break;
         end
         if (nd = nd1) then
            d = cddbydate(dpo0) - nddbydate(dpo0);
         else if (nd = nd2) then
            d = cddbydate(dpv0) - nddbydate(dpv0);
         else d = cddbydate(date1bynd(nd, y));
```

```
        if (ttt < 0) then sumt0 = sumt0 + ttt * d;
        ndc = ndc + 1;
        if (ndc = 37) then ndc = 1;
      end
   end
   if (:dpv0 is not null or :dpo0 is not null) then
      insert into zim__dupt values (:jjiii, :nobl,
        :dpo0, :dpv0, :sumt0);
end
end
```

Зимний период, результаты отращивания озимых культур и трав

```
BEGIN
DELETE FROM ZIM_EE;
DELETE FROM ZIM_EE3;
DELETE FROM ZIM_EE4;
DELETE FROM ZIM_EE6;
DELETE FROM ZIM_EE7;
SELECT y.yyyy
FROM GOT_YEAR y
INTO :yearr;
INSERT INTO ZIM_EE3
SELECT C.jjiii, C.kkk,  C.nnn, c.e1e1, c.e2e2, c.e3e3, c.e4e4, c.p, c.p5,  c.k5k5
   FROM CAT_CATST A, CAT_CATOBL B, ODB_AD95 C
   WHERE
      A.NOBL   = B.NOBL     AND
      B.MARKED = '+'        AND
      C.YYYY = :yearr      AND C.ND = 3 AND c.nnn is not null and
      (c.e1e1 is not null or c.e2e2 is not null or c.e3e3 is not null or c.e4e4 is not null) and
      A.JJIII  = C.JJIII;
…
insert into zim_ee
select jjiii, kkk, nnn from zim_ee3;
insert into zim_ee
select jjiii, kkk, nnn from zim_ee4;
insert into zim_ee
select jjiii, kkk, nnn from zim_ee6;
insert into zim_ee
select jjiii, kkk, nnn from zim_ee7;
end
```

Зимний период, сумма отрицательных температур (вспомогательная процедура)

```
begin
```

```
dvp = null;
dop = null;
sumt = null;
yyyy = extract(year from pdd);
yyyyp = yyyy - 1;
mind = cast('01.09.' || yyyyp as date);
maxd = cast('30.11.' || yyyyp as date);
if (pdd < maxd) then maxd = pdd;
execute procedure pro_calcdupo2 jjiii, tp, mind, maxd
returning_values dop, errmsg;
mind = cast('02.04.' || yyyy as date);
maxd = cast('30.08.' || yyyy as date);
if (pdd > mind) then
begin
   if (pdd < maxd) then maxd = pdd;
   execute procedure pro_calcdupv2 jjiii, tp, mind, maxd
   returning_values dvp, errmsg;
end
if (dvp is null or dvp > pdd) then dvp = pdd;
if (dvp is not null and dop is not null) then
begin
   nd1 = ndbydate(dop);
   nd2 = ndbydate(dvp);
   ndc = nd1;
   sumt = 0;
   for select d.ttt, d.nd, d.yyyy from odb_adm d
      where d.jjiii = :jjiii and
         ((d.yyyy = extract(year from :dop) and d.nd >= :nd1) or
          (d.yyyy = extract(year from :dvp)  and d.nd <= :nd2)) and d.ttt is not null
      order by d.yyyy, d.nd
   into :ttt, :nd, :y
   do
   begin
      if (nd <> ndc) then
      begin
         sumt = null;
         break;
      end
      if (nd = nd1) then
         d = cddbydate(dop) - nddbydate(dop);
      else if (nd = nd2) then
         d = nddbydate(dvp);
      else d = cddbydate(date1bynd(nd, y));
```

```
        if (ttt < tp) then sumt = sumt + ttt * d;
        INSERT INTO GOT_GOTR values (:jjiii, :nd, :sumt);
        ndc = ndc + 1;
        if (ndc = 37) then ndc = 1;
      end
   end
end
```

Зимний период, сумма отрицательных температур

```
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11;
select max(o.nd) from odb_adm o
where o.yyyy = :yearr and o.nd < 18 and o.ttt < 0 into :maxnd;
pdd = date1bynd(:maxnd, :yearr) + (cddbynd(:maxnd, :yearr) - 1);
for
   select a.jjiii, a.nobl
   from cat_catst a, cat_catobl b
   where
      a.nobl   = b.nobl  and
      b.marked = '+'
   into :jjiii, :nobl
do
begin
   execute procedure ZIM__SUMTP pdd, jjiii, 0;
end
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11 SELECT * FROM GOT_GOTR_F36;
END
```

Зимний период, средняя температура воздуха по декадам

```
BEGIN
SELECT *
FROM GOT_YEAR
INTO :yearr;
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11;
INSERT INTO GOT_GOTR
SELECT C.JJIII, C.ND, C.ttt
   FROM CAT_CATST A, CAT_CATOBL B, ODB_ADM C
   WHERE
      A.NOBL   = B.NOBL  AND
      B.MARKED = '+'     AND
```

```
      ((C.ND    >= 28    AND  C.YYYY   = :yearr - 1) OR
      (C.ND    <= 9 AND C.YYYY   = :yearr)) AND
      C.TTT IS NOT null AND
      A.JJIII  = C.JJIII;
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11 SELECT * FROM GOT_GOTR_F36;
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11N;
INSERT INTO GOT_GOTR
SELECT C.jjiii, C.nd, C.t
   FROM CAT_CATST A, CAT_CATOBL B, norms_nm_cd C
   WHERE
      A.NOBL   = B.NOBL  AND
      B.MARKED = '+'    AND
      (C.ND >= 28 OR C.ND <= 9) AND
      C.t is not null AND
      A.JJIII  = C.JJIII;
EXECUTE PROCEDURE GOT_MAKE_F36;
INSERT INTO GOT_GOTR_11N SELECT * FROM GOT_GOTR_F36;
END
```

Зимний период, запас воды в снеге

```
BEGIN
DELETE FROM GOT_GOTR;
DELETE FROM GOT_GOTR_11;
DELETE FROM GOT_GOTR_EXT;
SELECT *
FROM GOT_YEAR
INTO :yearr;
INSERT INTO GOT_GOTR
SELECT C.JJIII, C.ND, C.sss * C.mpmp * 10
   FROM CAT_CATST A, CAT_CATOBL B, ODB_AD95 C
   WHERE
      A.NOBL   = B.NOBL  AND
      B.MARKED = '+'    AND
      ((C.ND    >= 28    AND  C.YYYY   = :yearr - 1) OR
      (C.ND    <= 12 AND C.YYYY   = :yearr)) AND
      C.SSS IS NOT NULL AND
      C.MPMP IS NOT null AND
      A.JJIII  = C.JJIII;
INSERT INTO got_gotr_ext (jjiii, ext1)
SELECT K, MAX(T) from got_gotr group by K;
EXECUTE PROCEDURE GOT_MAKE_F36;
```

```
INSERT INTO GOT_GOTR_11 SELECT * FROM GOT_GOTR_F36;

END
```

Высота растений

```
BEGIN
SELECT y.yyyy
FROM GOT_YEAR y
INTO :yyyy;
DELETE FROM AGR_BBB;
   INSERT INTO AGR_BBB
   SELECT C.JJIII,  C.ND, c.kkk,  C.NNN, C.bbb, c.bbb2
      FROM CAT_CATST A, CAT_CATOBL B, ODB_AD92 C
      WHERE
      A.NOBL   = B.NOBL AND
      B.MARKED = '+'    AND
      C.ND     >= 9     AND
      C.YYYY   = :yyyy  AND
      C.KKK   = :kkk    AND
      C.bbb2  is not null    AND
      C.bbb  is not null    AND
      A.JJIII  = C.JJIII;
DELETE FROM AGR_W;
   DELETE FROM AGR_GOTR;
   INSERT INTO AGR_GOTR
   SELECT C.JJIII, C.NNN, C.ND, C.bbb
      FROM CAT_CATST A, CAT_CATOBL B, ODB_AD92 C
      WHERE
      A.NOBL   = B.NOBL AND
      B.MARKED = '+'    AND
      C.ND     >= 9     AND
      C.YYYY   = :yyyy  AND
      C.KKK   = :kkk    AND
      C.bbb  is not null  AND c.nnn is not null and
      A.JJIII  = C.JJIII;
EXECUTE PROCEDURE AGR_MAKE_F36;
INSERT INTO AGR_W SELECT K, :KKK, NNN, 1, F7, F8, F9, F10, F11, F12, F13, F14, F15,
F16,
                  F17, F18, F19, F20, F21, F22, F23, F24, F25, F26, F27, F28, F29, F30,
                  F31, F32, F33, F34, F35, F36
                  FROM AGR_GOTR_F36;

END
```

Фазы развития культур

```
BEGIN
if ( KKK in (6, 9, 14) ) then
begin
   EXECUTE procedure agr__ob_ff2_proc( KKK );
   exit;
end
SELECT y.yyyy
FROM GOT_YEAR y
INTO :yyyy;
DELETE FROM AGR_FF;
   INSERT INTO AGR_FF ( JJIII, KKK, NNN )
   SELECT A.JJIII, A.KKK, A.NNN
   FROM ODB_ADFF A, CAT_CATOBL B, cat_catst C
   WHERE   A.KKK = :KKK and
         A.YYYY = :yyyy and
         A.YA IS NOT NULL AND
         C.NOBL = B.NOBL AND
         A.jjiii = C.jjiii AND
         B.MARKED = '+'
         GROUP BY A.JJIII, A.KKK, A.NNN;
   update agr_ff set nnn = 0 where nnn is null;
   FOR
      SELECT ND, FF, JJIII, NNN,YA FROM ODB_ADFF
      WHERE KKK = :KKK and YYYY = :yyyy and YA IS NOT NULL
      INTO :ND, :FF, :JJIII, :NNN, :YA
   DO
   BEGIN
      if (NNN is null) then NNN = 0;
      D = ((:ND-1) - FLOOR((:ND-1)/3)*3)*10 + :YA;
      M = FLOOR((:ND-1)/3) + 1;
      if ( M IN (1,3,5,7,8,10,12) ) then
      begin
         if( D > 31 ) then
            D = 31;
      end
      if ( M IN (4, 6, 9, 11 ) ) then
      begin
         if( D > 30 ) then
            D = 30;
      end
      if ( M = 2 ) then
```

```
      begin
         if( MOD(YYYY,4) = 0 ) then
         begin
            if( D > 29 ) then
               D = 29;
         end
         else
         begin
            if( D > 28 ) then
               D = 28;
         end
      end
      DATESTR = :D || "." || :M  || "." || :YYYY;
      IF( FF = 0 ) THEN
         UPDATE AGR_FF
         SET
            F00 = :DATESTR
         WHERE KKK = :KKK AND NNN = :NNN AND JJIII = :JJIII;
      ELSE
      IF( FF = 1 ) THEN
         UPDATE AGR_FF
         SET
            F01 = :DATESTR
         WHERE KKK = :KKK AND NNN = :NNN AND JJIII = :JJIII;
…
      ELSE
      IF( FF = 90 ) THEN
         UPDATE AGR_FF
         SET
            F90 = :DATESTR
         WHERE KKK = :KKK AND NNN = :NNN AND JJIII = :JJIII;
   END
END
```

Программа для передачи данных для рисования карт

```
begin
   res = '';
   err = '';
   cnt = 0;
   minval = 10000;
   maxval = -10000;
   endl = ASCII_CHAR(13) || ASCII_CHAR(10);
```

```
res = 'x,y,z' || endl;
update cat_catobl
set marked = null;
if (:nobl > 0) then update cat_catobl set marked = '+' where nobl = :nobl;
else update cat_catobl set marked = '+' where nobl in (138, 139, 140, 141);
if (prog = 'TTT') then
begin
   nd2 = iif(formonth = 1, nd + 2, nd);
   for
      select k.x1, k.y1, avg(d.ttt) from odb_adm d, cat_catst c, cat_stcoords k, cat_catobl b
      where d.nd >= :nd and d.nd <= :nd2 and d.yyyy = :yyyy and d.ttt is not null
         and d.jjiii = c.jjiii and c.nobl = b.nobl and b.marked = '+' and d.jjiii = k.jjiii
         group by k.x1, k.y1
   into :x1, :y1, :ttt
   do
   begin
   minval = iif(minval > ttt, ttt, minval);
   maxval = iif(maxval < ttt, ttt, maxval);
   cnt = cnt + 1;
      res = res || floattostr(x1,  '%14.2f') || ','
         || floattostr(y1,  '%14.2f') || ','
         || floattostr(ttt,  '%10.1f') || endl;
   end
   if (cnt = 0) then
      err = '*** Нет данных по декадной температуре за ' || nd || ' декаду ' || YYYY || ' года';
end
else if (prog = 'RRR') then
begin
   nd2 = iif(formonth = 1, nd + 2, nd);
   for
      select k.x1, k.y1, sum(d.rrr) from odb_adm d, cat_catst c, cat_stcoords k, cat_catobl b
      where d.nd >= :nd and d.nd <= :nd2 and d.yyyy = :yyyy and d.rrr is not null
         and d.jjiii = c.jjiii and c.nobl = b.nobl and b.marked = '+' and d.jjiii = k.jjiii
         group by k.x1, k.y1
   into :x1, :y1, :rrr
   do
   begin
   minval = iif(minval > rrr, rrr, minval);
   maxval = iif(maxval < rrr, rrr, maxval);
   cnt = cnt + 1;
      res = res || floattostr(x1,  '%14.2f') || ','
         || floattostr(y1,  '%14.2f') || ','
         || floattostr(rrr,  '%10.1f') || endl;
```

```
    end
    if (cnt = 0) then
      err = '*** Нет данных по сумме осадков ' || nd || ' декаду ' || YYYY || ' года';
  end
  else if (prog = 'SSS') then
  begin
    for
      select k.x1, k.y1, d.sss from odb_ad95 d, cat_catst c, cat_stcoords k, cat_catobl b
      where d.nd = :nd and d.yyyy = :yyyy and d.sss is not null
        and d.jjiii = c.jjiii and c.nobl = b.nobl and b.marked = '+' and d.jjiii = k.jjiii
    into :x1, :y1, :sss
    do
    begin
    minval = iif(minval > sss, sss, minval);
    maxval = iif(maxval < sss, sss, maxval);
    cnt = cnt + 1;
      res = res || floattostr(x1,  '%14.2f') || ','
        || floattostr(y1,  '%14.2f') || ','
        || floattostr(sss,  '%10.1f') || endl;
    end
    if (cnt = 0) then
      err = '*** Нет данных по высоте снежного покрова ' || nd || ' декаду ' || YYYY || '
года';
  end
  else if (prog = 'W2W2') then
  begin
    for
      select k.x1, k.y1, AVG(d.w2w2) from odb_ad94 d, cat_catst c, cat_stcoords k, cat_catobl
b
      where d.nd = :nd and d.yyyy = :yyyy and d.w2w2 is not null and d.kkk IN (7, 3, 15, 1)
        and d.jjiii = c.jjiii and c.nobl = b.nobl and b.marked = '+' and d.jjiii = k.jjiii group by
k.x1, k.y1
    into :x1, :y1, :w2w2
    do
    begin
    minval = iif(minval > w2w2, w2w2, minval);
    maxval = iif(maxval < w2w2, w2w2, maxval);
    cnt = cnt + 1;
      res = res || floattostr(x1,  '%14.2f') || ','
        || floattostr(y1,  '%14.2f') || ','
        || floattostr(w2w2,  '%10.1f') || endl;
    end
    if (cnt = 0) then
```

```
        err = '*** Нет данных по влагозапасам  ' || nd || ' декаду ' || YYYY || ' года';
    end
    else
       err = '*** Нет программы расчета для прогноза ' || prog;
    res = res || endl;
end
```

Программа для рисования карт

```
!DOCTYPE qgis PUBLIC 'http://mrcc.com/qgis.dtd' 'SYSTEM'>
<qgis projectname="" version="2.14.5-Essen">
  <title></title>
  <layer-tree-group expanded="1" checked="Qt::PartiallyChecked" name="">
    <customproperties/>
    <layer-tree-layer expanded="1" checked="Qt::Checked" id="kontyr20160913115929813"
name="kontyr">
      <customproperties/>
    </layer-tree-layer>
    <layer-tree-layer expanded="1" checked="Qt::Checked" id="rf_region20160905140927703"
name="rf_region">
      <customproperties/>
    </layer-tree-layer>
    <layer-tree-layer expanded="0" checked="Qt::Checked"
id="Sver_копия20160905100826796" name="maska">
      <customproperties/>
    </layer-tree-layer>
    <layer-tree-layer expanded="1" checked="Qt::Checked" id="isoline20160930133530890"
name="isoline">
      <customproperties/>
    </layer-tree-layer>
    <layer-tree-layer expanded="0" checked="Qt::Checked" id="stancij20160817113352363"
name="stancij">
      <customproperties/>
    </layer-tree-layer>
    <layer-tree-layer expanded="0" checked="Qt::Checked" id="data20160817101646894"
name="data">
      <customproperties/>
    </layer-tree-layer>
    <layer-tree-layer expanded="0" checked="Qt::Unchecked" id="Sver20160817094441102"
name="oblast">
      <customproperties/>
    </layer-tree-layer>
    <layer-tree-layer expanded="1" checked="Qt::Checked" id="inter20160817101824378"
name="rast">
      <customproperties>
```

<property key="overview" value="0"/>
</customproperties>
</layer-tree-layer>
</layer-tree-group>
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<ymin>6232867.06542202550917864</ymin>
<xmax>7818152.1812776830047369</xmax>
<ymax>7987928.10286992508918047</ymax>
</extent>
<rotation>0</rotation>
<projections>1</projections>
<destinationsrs>
<spatialrefsys>
<proj4>+proj=merc +lon_0=0 +k=1 +x_0=0 +y_0=0 +datum=WGS84 +units=m
+no_defs</proj4>
<srsid>1353</srsid>
<srid>3395</srid>
<authid>EPSG:3395</authid>
<description>WGS 84 / World Mercator</description>
<projectionacronym>merc</projectionacronym>
<ellipsoidacronym>WGS84</ellipsoidacronym>
<geographicflag>false</geographicflag>
</spatialrefsys>
</destinationsrs>
<rendermaptile>0</rendermaptile>
<layer_coordinate_transform_info>
<layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1"
layerid="SVER_BEC_Kontyr20160905142410718"/>
<layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:4326"
srcDatumTransform="-1" destDatumTransform="-1" layerid="rf_region20160905140927703"/>
<layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:3395"
srcDatumTransform="-1" destDatumTransform="-1" layerid="isoline20160929154028968"/>
<layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1" layerid="isoline20160930133530890"/>
<layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1"
layerid="Izol_Obrez20160905125247828"/>
<layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:4326"
srcDatumTransform="-1" destDatumTransform="-1" layerid="stancij20160817113352363"/>

```
    <layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1"
layerid="Sver_копия20160905100826796"/>
    <layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1" layerid="Sver20160817094441102"/>
    <layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:3395"
srcDatumTransform="-1" destDatumTransform="-1" layerid="isoline20160930132101406"/>
    <layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1" layerid="inter20160817101824378"/>
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srcDatumTransform="-1" destDatumTransform="-1" layerid="isoline20160817120857524"/>
    <layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1" layerid="kontyr20160913115929813"/>
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srcDatumTransform="-1" destDatumTransform="-1" layerid="OBREZ20161205151600468"/>
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srcDatumTransform="-1" destDatumTransform="-1" layerid="obrezka20161020142606765"/>
    <layer_coordinate_transform destAuthId="EPSG:3395" srcAuthId="EPSG:102012"
srcDatumTransform="-1" destDatumTransform="-1" layerid="data20160817101646894"/>
   </layer_coordinate_transform_info>
  </mapcanvas>
  <layer-tree-canvas>
   <custom-order enabled="0">
    <item>stancij20160817113352363</item>
    <item>data20160817101646894</item>
    <item>Sver_копия20160905100826796</item>
    <item>Sver20160817094441102</item>
    <item>inter20160817101824378</item>
    <item>rf_region20160905140927703</item>
    <item>kontyr20160913115929813</item>
    <item>isoline20160930133530890</item>
   </custom-order>
  </layer-tree-canvas>
  <legend updateDrawingOrder="true">
   <legendlayer drawingOrder="-1" open="true" checked="Qt::Checked" name="kontyr"
showFeatureCount="0">
    <filegroup open="true" hidden="false">
     <legendlayerfile isInOverview="0" layerid="kontyr20160913115929813" visible="1"/>
    </filegroup>
   </legendlayer>
   <legendlayer drawingOrder="-1" open="true" checked="Qt::Checked" name="rf_region"
showFeatureCount="0">
    <filegroup open="true" hidden="false">
     <legendlayerfile isInOverview="0" layerid="rf_region20160905140927703" visible="1"/>
    </filegroup>
```

```
   </legendlayer>
   <legendlayer drawingOrder="-1" open="false" checked="Qt::Checked" name="maska"
showFeatureCount="0">
    <filegroup open="false" hidden="false">
     <legendlayerfile isInOverview="0" layerid="Sver_копия20160905100826796" visi-
ble="1"/>
    </filegroup>
   </legendlayer>
   <legendlayer drawingOrder="-1" open="true" checked="Qt::Checked" name="isoline"
showFeatureCount="0">
    <filegroup open="true" hidden="false">
     <legendlayerfile isInOverview="0" layerid="isoline20160930133530890" visible="1"/>
    </filegroup>
   </legendlayer>
   <legendlayer drawingOrder="-1" open="false" checked="Qt::Checked" name="stancij"
showFeatureCount="0">
    <filegroup open="false" hidden="false">
     <legendlayerfile isInOverview="0" layerid="stancij20160817113352363" visible="1"/>
    </filegroup>
   </legendlayer>
   <legendlayer drawingOrder="-1" open="false" checked="Qt::Checked" name="data"
showFeatureCount="0">
    <filegroup open="false" hidden="false">
     <legendlayerfile isInOverview="0" layerid="data20160817101646894" visible="1"/>
    </filegroup>
   </legendlayer>
   <legendlayer drawingOrder="-1" open="false" checked="Qt::Unchecked" name="oblast"
showFeatureCount="0">
    <filegroup open="false" hidden="false">
     <legendlayerfile isInOverview="0" layerid="Sver20160817094441102" visible="0"/>
    </filegroup>
   </legendlayer>
   <legendlayer drawingOrder="-1" open="true" checked="Qt::Checked" name="rast"
showFeatureCount="0">
    <filegroup open="true" hidden="false">
     <legendlayerfile isInOverview="0" layerid="inter20160817101824378" visible="1"/>
    </filegroup>
   </legendlayer>
  </legend>
  <Composer title="MAKET" visible="0">
   <Composition resizeToContentsMarginLeft="0" snapping="0" showPages="1"
guidesVisible="1" resizeToContentsMarginTop="0" alignmentSnap="1" printResolution="300"
paperWidth="210" gridVisible="0" snapGridOffsetX="0" smartGuides="1"
snapGridOffsetY="0" resizeToContentsMarginRight="0" snapTolerancePixels="5"
```

printAsRaster="0" generateWorldFile="0" paperHeight="297" numPages="1" snapGridResolution="10" resizeToContentsMarginBottom="0">
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<layer pass="0" class="SimpleFill" locked="0">
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<prop k="color" v="255,255,255,255"/>
<prop k="joinstyle" v="miter"/>
<prop k="offset" v="0,0"/>
<prop k="offset_map_unit_scale" v="0,0,0,0,0,0"/>
<prop k="offset_unit" v="MM"/>
<prop k="outline_color" v="0,0,0,255"/>
<prop k="outline_style" v="no"/>
<prop k="outline_width" v="0.26"/>
<prop k="outline_width_unit" v="MM"/>
<prop k="style" v="solid"/>
</layer>
</symbol>
<ComposerLabel valign="32" marginX="1" marginY="1" labelText="Челябинская область" htmlState="0" halign="4">
<LabelFont description="Times New Roman,16,-1,5,50,0,0,0,0,0" style=""/>
<FontColor red="0" blue="0" green="0"/>
<ComposerItem pagey="4.81315" page="1" id="" lastValidViewScaleFactor="-1" positionMode="0" positionLock="true" x="55.8326" y="4.81315" visibility="1" zValue="4" background="false" transparency="0" frameJoinStyle="miter" blendMode="0" width="111.184" outlineWidth="0.3" excludeFromExports="0" uuid="{f1d864e0-7bc1-4bf9-8344-00b258ff1e6e}" height="9.14499" itemRotation="0" frame="false" pagex="55.8326">
<FrameColor alpha="255" red="0" blue="0" green="0"/>
<BackgroundColor alpha="255" red="255" blue="255" green="255"/>
<customproperties/>
</ComposerItem>
</ComposerLabel>
<ComposerLabel valign="64" marginX="1" marginY="1" labelText="
Сумма осадков за ##ND декаду ##MONTH2 ##YEAR года" htmlState="0" halign="4">
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<FrameColor alpha="255" red="0" blue="0" green="0"/>
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<customproperties/>
</ComposerItem>
</ComposerLabel>

<ComposerLegend symbolWidth="7" title="" rasterBorderWidth="0" titleAlignment="1" map="0" wmsLegendWidth="50" rasterBorderColor="0,0,0,255" wrapChar="" fontColor="#000000" columnCount="1" wmsLegendHeight="25" columnSpace="2" symbolHeight="4" equalColumnWidth="0" resizeToContents="1" splitLayer="0" boxSpace="2" rasterBorder="1">
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</style>
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</styles>
<layer-tree-group expanded="1" checked="Qt::Checked" name="">
<customproperties/>
<layer-tree-layer expanded="1" checked="Qt::Checked" id="inter20160817101824378" name="rast">
<customproperties>
<property key="legend/title-label" value="Легенда"/>
<property key="overview" value="0"/>
</customproperties>
</layer-tree-layer>
</layer-tree-group>
<ComposerItem pagey="212.836" page="1" id="" lastValidViewScaleFactor="-1" positionMode="8" positionLock="true" x="162.8" y="212.836" visibility="1" zValue="2" background="true" transparency="6" frameJoinStyle="miter" blendMode="0" width="45.2" outlineWidth="0.3" excludeFromExports="0" uuid="{44f0ef73-3bc2-45a5-b980-0084ce1eddcb}" height="65.3" itemRotation="0" frame="true" pagex="162.8">
<FrameColor alpha="255" red="0" blue="0" green="0"/>
<BackgroundColor alpha="255" red="255" blue="255" green="255"/>
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</ComposerItem>
</ComposerLegend>
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```
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ymax="7623588.94462921004742384" xmax="7068969.48988235369324684"/>
      <LayerSet/>
      <Grid/>
…
     <DistanceUnits type="QString">meters</DistanceUnits>
     <AreaUnits type="QString">m2</AreaUnits>
   </Measurement>
   <WMSUrl type="QString"></WMSUrl>
  </properties>
  <visibility-presets/>
</qgis>
```