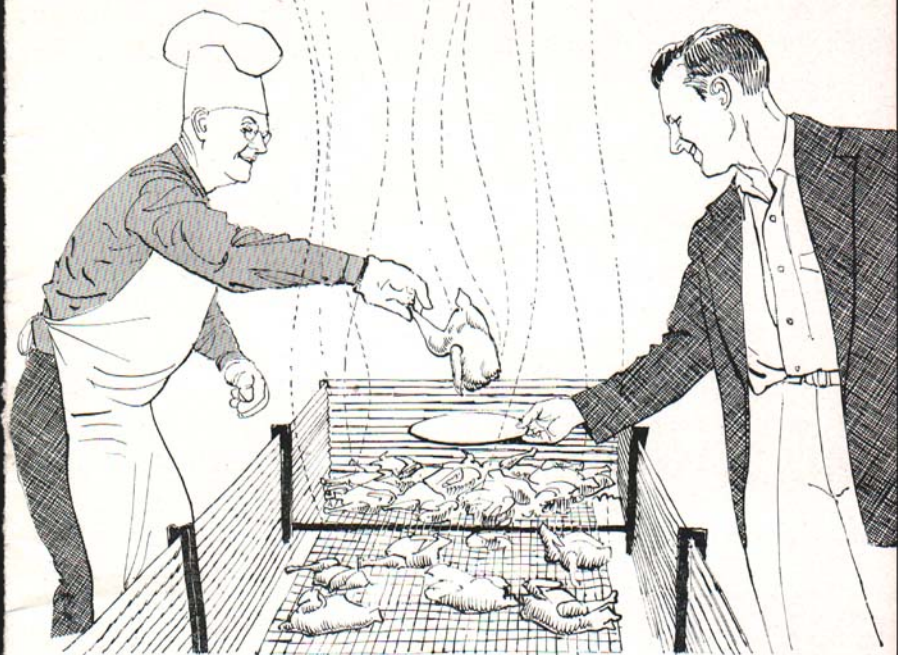


CHARCOAL BROILED CHICKEN



MICHIGAN STATE UNIVERSITY

COOPERATIVE EXTENSION SERVICE • EAST LANSING

TABLE OF CONTENTS

	Page
INTRODUCTION	3
The "Pits"	4
The Grids	7
The Fire	8
The Chicken	11
Equipment Check-off List	11
THE ACTUAL BARBECUE PROCEDURE	11
Time Schedule	11
Turning the Chicken	12
Racking the Chicken	12
Basting the Chicken	12
Salting the Chicken	14
Testing for Doneness	14
Serving the Chicken	15
Recipes	15
Suggested Menus	16
Committee Organization	16

Photographs by J. M. Moore

Charcoal-Broiled Chicken

By Floyd Hicks

Department of Poultry Science

The mixed aroma of wood smoke hovering lazily over pits and grills, and of brown crusted chicken oozing with spicy goodness—butter-basted, charcoal-broiled chicken.

Appetites are sharpened by the fresh air and bright sunshine. Fall seems ideal for outdoor chicken barbecues, but more and more people are enjoying this delicacy year around. Folks seem to develop "outside" appetites for a meal in the open. The taste for barbecuing is inherited—from way back when the cavemen discovered that woodland herbs, roots, and berries added to the savor of cooked meats. Since then, in all ages, barbecues have had a special appeal.

A chicken barbecue is great fun for all ages—it turns an ordinary picnic into a feast! Broilers properly cooked over charcoal are delicious and nutritious. Follow the simple directions and you will have a successful chicken barbecue.

A common mistake in broiling chicken in the open is to cook it too quickly and with a fire much too hot. An undercooked chicken, even though somewhat pleasing on the outside, spoils appetites and discourages future attempts. This poor reaction is hard to overcome, but a tantalizingly flavored, juicy, well-cooked bird will highlight the meal.

There are many publications concerning charcoal-broiled chicken. This bulletin covers one phase, the large barbecue, but the principles can be applied to the small home barbecue.

While an outdoor fireplace is nice for those who have one or can use one at parks and picnic grounds, it really isn't necessary. Anyone can make his own outdoor pit by borrowing one or more steel racks from the family oven, setting them up on bricks or even green forked sticks driven into the ground. You'll probably be more satisfied with the results if you use one of the following arrangements when broiling chicken, because a "no-draft" pit is preferred.

THE "PIT"

● Corrugated metal "pits" can be built so that they are portable (Fig. 1). If you build one, you can use grids or grills across the top.

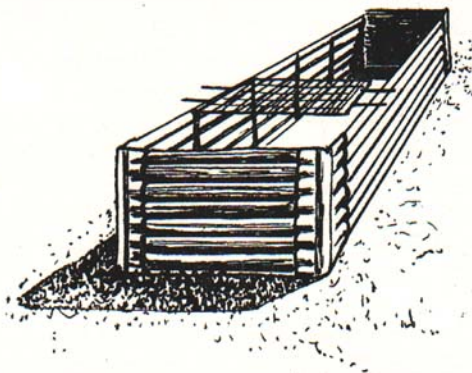


Fig. 1.

To help make it portable, coated wing nuts on the screws will speed the setting-up process. You can drive metal posts into the ground and bolt the metal sides to them, or use self-supporting posts. Place a little dirt around the bottom of the metal sides to seal off drafts.

For the home, you can build a more elaborate pit to suit your own taste. Keep in mind, however, that for chicken barbecuing, 2 feet should be allowed between the charcoal and the chicken.

In pits longer than 15 feet, use a baffle in the middle of the pit. Otherwise, when the pit is covered with chicken, the whole pit will

act as a chimney and it will be very hot in the center. Also, certain wind conditions will make heat distribution poor in a large pit.

● **Fireplaces**, simple or elaborate, must have two essentials: a foundation—either the ground or a fire-box to hold the coals—and a grill to support the meat. Some chimneys add only to lawn decoration; others, better built, carry away most of the smoke.

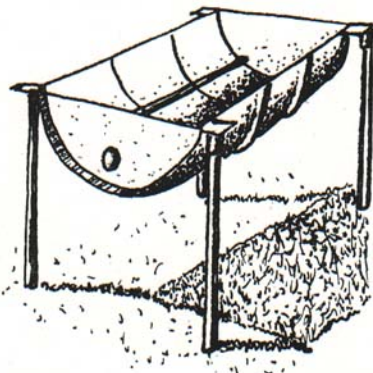


Fig. 2.

● A half-barrel made from a 55 gallon steel drum makes a satisfactory pit (Fig. 2). Weld 32-inch legs to the half-barrel to bring the pit up to a good working height. The size of the cut side is just right for a 2- by 3-foot grid. By locating an angle iron strip halfway up on both sides, you can make the charcoal effective over a wider area.

● **Cinder-block pits** are common (Fig. 3). Build them three 8- by 8- by 16-inch blocks high (without mortar) and wide enough to accommodate a 2- by 3-foot grid. Cinder block is preferred to cement-type block because of the heat, but the heat does not hurt the block to any extent. If you use 4-inch block, drive a few stakes down through the blocks to help support them.

In placing the pit, get a place as level as possible to lay up the block, in order to avoid draft-making cracks. Choose a spot where

you don't mind hurting the lawn. Remove the grass to avoid delay in getting rid of smoke. Unless the ground is level, place a little dirt

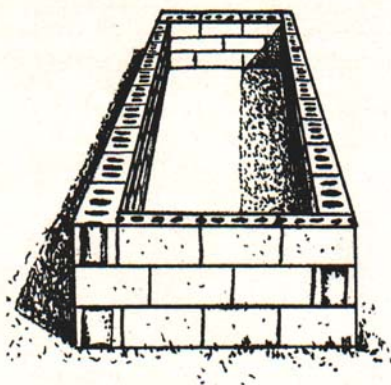


Fig. 3.

around the bottom of the pit to prevent drafts. A roadway works fine if no tar products are present. **Caution:** Do not build on concrete—it may explode!

Table 1 shows the number of blocks to use in your pit. One 2- by 3-foot grid will hold 25 chicken halves.

TABLE 1—Number of blocks to use in pit

Grids	1	2	3	4	5	6	7	8	9	10	20
Total blocks	30	39	48	57	66	75	84	93	102	111	222
Chicken halves	25	50	75	100	125	150	175	200	225	250	500

● A scalding kettle, similar to the old ones used for scalding hogs or cooking feed, makes a practical pit for the backyard (Fig. 4). You can make a hole in the bottom of the kettle to drain water out. Place sand in the bottom to level it off and increase the effect of the charcoal. Stove black, flames painted on the sides, and logs underneath

make for an attractive backyard "conversation piece" as well as a good chicken barbecue pit.

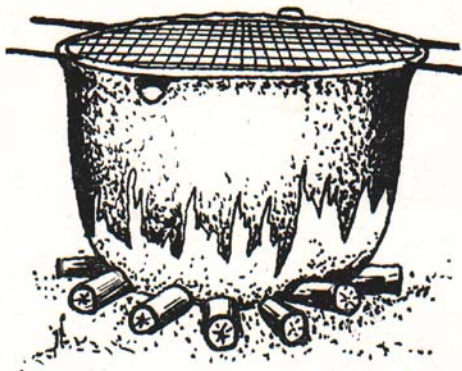


Fig. 4.

● Small commercial barbecue pits are a familiar sight (Fig. 5). Keep the maximum distance between the fire and the chicken. Most people tend to have too hot a fire: keep in mind that you can add briquets later, but the important object is to broil the chicken slowly and thoroughly.

THE GRIDS

You can make the grids by covering a frame of $\frac{3}{8}$ -inch bar stock with 1- by 2-inch welded poultry wire (Fig. 6). (Plans are available from the Department of Poultry Husbandry at Michigan State University, East Lansing.) Add handles to make turning easy.

Make an extra grid so you can turn 25 halves at a time by making a "sandwich." You can have small lugs welded to the edges to prevent chickens from falling out while you turn them. Having the "bar-stock" side of the grid next to the chicken will help prevent the chicken from sliding out when turning. Move the chickens over the other grids while turning to keep those that may fall out from going into the fire.

Turning the grids uses the same principle as swinging a bucket of water in a circle. If you do it quickly, centrifugal force will keep the chicken against the grid. The two people turning the chickens

cross their arms, grasp the handles, and give the grids a quick flip over. This is a good technique, and practice will perfect it so no accidents happen. (Fig. 7).

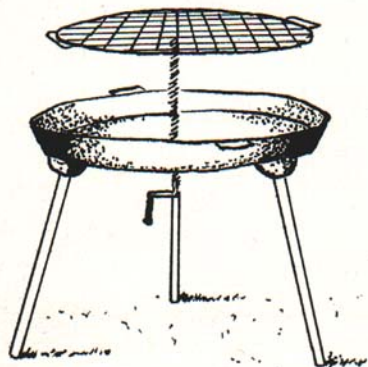


Fig. 5.

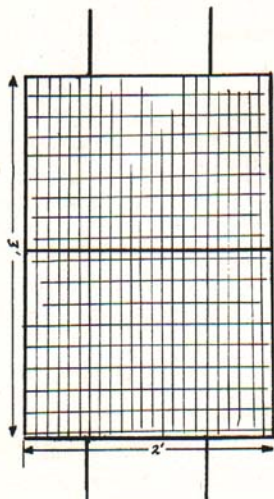


Fig. 6.

Cleaning the grids

Soaking the grids in hot water with trisodium phosphate will help loosen the fat and meat particles from the grids so you can brush them easier. You can build a special "soaking tank" for this purpose, especially if a lot of grids will be cleaned from time to time.

THE FIRE

Fire control is very important.

Chunk charcoal or charcoal briquets burn at a high heat for a long time, giving off little or no smoke. The briquets should not be more than **one deep** and should be about 1 inch apart. They will burn progressively from a small **gray spot**, giving off plenty of even heat. Too much fuel will result in too much heat and will burn the chicken.

Figure on $\frac{3}{4}$ pound of charcoal per chicken half for the cooking process on small barbecues. The more chicken halves, the less charcoal needed—down to $\frac{1}{2}$ pound per chicken half. You won't need to start

all of this at once—perhaps two-thirds of it. About 45 minutes before your schedule calls for serving, lift up a corner of the grid and scatter the rest of the briquets over the fire. They will start easily on contact with the other briquets and will finish broiling the halves nicely.

You can use fuel oil, kerosene, or commercial mixtures to start the fire quickly (Fig. 8). You can use kindling to start piles of charcoal, then transfer the coals by shovel to the pit. If you start it in a pit by this method, place the charcoal in a long narrow pile, sprinkle a little fuel oil on the pile, and then carefully ignite it. Paper will help keep the flames going until some of the briquets show a gray spot. You can use a rake to spread the coals and to move the unlit briquets in contact with those showing gray.

This careful raking will get most of the briquets lit faster. Therefore, you won't need much fuel oil. When spreading coals, make sure all areas are covered, especially around the edges. Be sure no briquet is on top of another.

Let the fuel burn at least 10 or 15 minutes before putting on the chicken to let fuel oil fumes escape.



Fig. 7. To turn, make a "sandwich" and flip grids quickly.

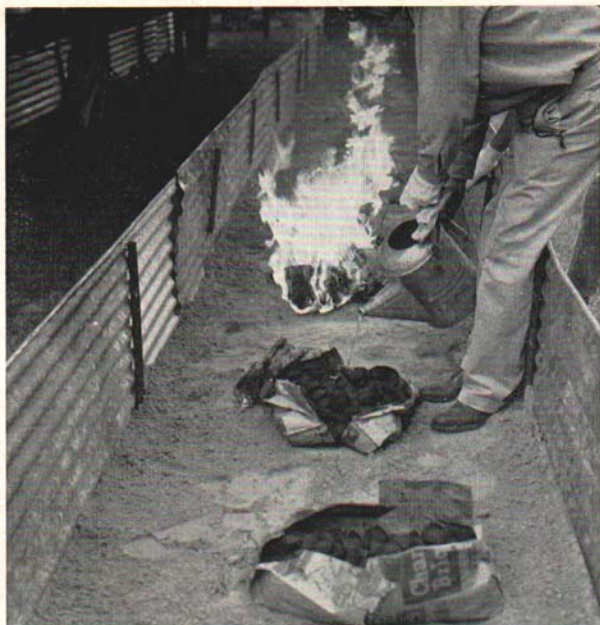


Fig. 8. Fuel oil, kerosene or commercial mixtures give a quick start.

Fuel oil is a fire hazard—be careful with it! Do not use gasoline or alcohol.

A sprinkling can or sprayer full of water will cut down the heat if the birds are burning. When water is used, a fine charcoal ash will be raised which will discolor the chicken halves. Therefore, it would be better to keep the fire small in the first place.

Often, if the fire seems too low as cooking is nearly done, you can create a little extra heat by brushing the white ash from the top of the dying coals.

Even the best cooks can't all cook well over coals. What came naturally to our ancestors—making a cooking fire—has been almost entirely replaced by the use of gas and electricity. Actually, the task should be a simple one, but fire care takes experience—atmosphere conditions, soil moisture, and method of storing charcoal all affect the performance of the fire.

THE CHICKEN

The ideal weight of chicken to be barbecued is 2½ pounds dressed. Birds up to 3 pounds are satisfactory, as are smaller weights. It is quite important, however, to get all the birds as nearly the same weight as possible for uniform cooking and servings.

Split the chicken down the back and breast into two equal sections. The giblets and necks are not barbecued. Check the birds carefully and get them in perfect condition. Protect and ice them until the barbecue.

EQUIPMENT CHECK-OFF LIST

- Chef's hat and apron
- 2 pair white canvas gloves
- 2 2-qt. sauce pans
- Dish mop
- Rake
- Shovel
- Charcoal (¾ pound per chicken half)
- Butter (2 pounds per 100 halves)
- Salt (1 pound per 100 halves)
- Work table
- Starter fuel

THE ACTUAL BARBECUE

Now that we have gathered the equipment and chicken, and have discussed some basic principles, let us actually begin the barbecue.

With experience and more reading, you may want to change your timing, but here is a suggested time schedule in order to eat at 6 p.m.:

3:45 p.m.—Start fire.

4:15 p.m.—Put grids on fire (with chicken).

Turn grids every 10 minutes or as necessary.

Baste after turning.

5:15 p.m.—Increase fire slightly.

(Boost heat under chicken halves not cooking well, such as those along edges.)

5:45 p.m.—Start testing for doneness.

6:00 p.m.—Ready to eat. (Make sure the guests are served promptly.)

GLOVES

Use your clean, white canvas gloves at all times when handling the chicken. It will save your hands from burns and gives a sanitary appearance. Be sure to change to a new pair before serving.

TURNING THE CHICKEN

One of the main things to watch for in barbecuing is the indication of too much heat. That shows up when the bird's skin begins to blister. If this happens, turn all of the birds, and keep doing it if necessary. Constant checking of the birds will show the blistering and will point out those "hot spots" which you will have to watch more closely.

When inspecting the birds, pick them up by the wing to inspect one side and by the backbone to inspect the other. At later stages of cooking, the skin might break away from the meat during checking if picked up carelessly, and some juices will be lost. (We want to preserve this juiciness—that's why we don't use forks or other tools to handle the halves.)

RACKING THE CHICKEN

In placing the chicken on the grid on the "frame side" (not the screen side), be sure that the skin side is up—that is, away from the fire. The juices should be driven toward the barrier of the skin while the "cut" side is being sealed. Place the birds as close together as possible to conserve heat, **but do not overlap**. They will shrink somewhat, so you don't have to worry about their being too close.

Twenty-five halves will fill a 2- by 3-foot grid very well; this makes counting easy. You may prefer to dip the birds in a barbecue sauce before starting, or you can brush it on later, as it will reduce sticking for the first "turn-over."

BASTING THE CHICKEN

Whether you use butter or a barbecue sauce, or both, for basting depends on your taste and experience of guests' reaction. You might want to use a combination of the two. See page 15 for a suggested sauce recipe. There are many different ones available upon request and you may want to try these also. Actually, a butter-basted chicken will appeal to most of the guests in a large group.



Fig. 9. A clean rag dish mop is good for applying the sauce.

In using a combination of butter and sauce, baste with butter alone first; this will give the chicken color quickly. Then baste with the sauce every 10 minutes on each side. Try to baste immediately after turning to let the sauce cook on the bird; if you baste, then turn, you will dump the sauce which has collected in cavities and cracks into the fire. Finish off the birds with the rest of the butter as a final basting. (Use a total of 2 pounds of butter per 100 halves.)

A clean rag dish mop is good for applying the sauce—it holds a good quantity of sauce or butter (Fig. 9). Or use a pastry brush, paint brush, or even a sprayer (for large barbecues). A brush won't hold as much sauce as a mop, though. In using a sprayer, some of the sauce ingredients will clog the screens. In basting with a mop, just give the halves a "lick and a promise," as speed is important; you won't waste much sauce.

SALTING THE CHICKEN

After basting, sprinkle salt on each side of the chicken. Salt it about three times from a height about 2 to 3 feet for evenness of salting. Your next basting will wash some of it off, so allow it to cook on for a while. Your barbecue sauce has salt in it, which helps the flavor. Probably 1 pound of salt will be enough for 125 to 150 halves for average tastes. About three times on each side should be enough, but again, experience will tell.

TESTING FOR DONENESS

The most important step is to be sure the chicken is **thoroughly done!** Nothing will discourage future barbecues more than serving undercooked chicken at this one. People just don't like raw chicken!

Test for doneness by twisting the thigh joint. (Another thick portion is near the breast and wing, but you can feel that joint weaken as you handle the birds.) In testing, grasp the thigh joint between your thumb and index finger and, with your other hand, turn the leg bone. If the joint is broken loose, you can assume that all of the chicken half is well-cooked. (Fig. 10).



Fig. 10. Twist the thigh joint to test for doneness.

You have noted hot spots in your fire. Keep moving large pieces and birds from the edges to these spots, and be sure they cook right along. Check each half for doneness, if possible, but usually if several

are done, most others will also be ready. If, on some halves, the leg is pale, taut, and smooth, check these carefully, early, to note their progress. You may want to move whole grids of chicken to hotter areas.

SERVING THE CHICKEN

Organize your barbecue so that the chicken is served after all the other food and directly from the fire. Any delay in eating after it has been cooked results in loss of maximum goodness. You will want to check on this important point, although you can keep the birds hot on the barbecue fire for a while.

Arrange to have plenty of serving tables on hand, so you can set up more than one serving line if necessary. Serving the other food will be a bad "bottleneck" if this isn't planned, as the chicken can be placed very quickly on the plate. Again, you want to serve it at its best!

Another "bottleneck" is the beverage and dessert serving. Rather than having your guests juggle a cup of coffee and a paper plate of food, let them come back to a special place for coffee, milk, and ice cream after they have found a place to eat.

To separate the chicken into quarters, such as for serving half-portions to children, grasp the cooked chicken along the backbone and break the backbone just ahead of the thigh.

RECIPES

Barbecue Sauce

(10 halves—using butter)

1 pint water	1 tablespoon poultry seasoning
½ cup corn oil	1 teaspoon pepper
½ pint cider vinegar	2 bay leaves
4 tablespoons salt	

Bring to a boil—then let simmer until used.

*1 tablespoon of onion powder or 1 medium onion, grated, may be added.

*1 teaspoon of Worcestershire sauce may be added.

Barbecue Sauce

(300 halves—using butter)

6 quarts water	10 tablespoons poultry seasoning
1½ quarts corn oil	3 tablespoons pepper
3 quarts cider vinegar	30 bay leaves
2 cups salt	

SUGGESTED MENUS

Summer

Bulk potato chips or your favorite potato salad
Barbecued chicken
Cole slaw
Relishes
Buttered rolls
Coffee and milk
Ice Cream (Cookie)

Fall

Potato salad or baked beans and potato chips
Barbecued chicken
Relishes in season:
Cucumber slices, tomato slices, green peppers, carrot sticks, dill pickles,
green onions, radishes, celery
Buttered rolls
Coffee and milk
Ice cream (cookie)

COMMITTEE ORGANIZATION

Committees, appointed well ahead of the date of the barbecue, can handle details better than a few persons. You will want a carefully planned and orderly operation.

Suggested Committees:

Publicity—Advertise and publicize
Finance—Accounting, selling, and collecting tickets
Food—Ordering food and charcoal, preparation of food
Pit, tables, equipment—Blocks, wire, tables, chairs, pans, knives, forks, etc.
Parking—To park cars
Barbecuing—To do actual cooking
Serving—To organize serving
Clean-up—To put everything in good order

Cooperative extension work in agriculture and home economics. Michigan State University and the U.S. Department of Agriculture cooperating. Paul A. Miller, Director, Cooperative Extension Service, Michigan State University, East Lansing. Printed and distributed under Acts of Congress, May 8 and June 30, 1914.

10:58—10M

